

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 07, 2024

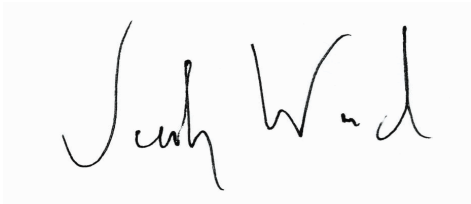
Paul Henchan  
Fremont Environmental  
PO Box 1289  
Wellington, CO 80549

RE: Noble - Huntsman G 13-9

Work Order #2401384

Enclosed are the results of analyses for samples received by Summit Scientific on 01/23/24 15:04. 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 large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury  
President



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
Project Manager: Paul Henchan

**Reported:**  
03/07/24 10:33

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01@4.0'	2401384-01	Soil	01/23/24 00:00	01/23/24 15:04
FL02@3.5'	2401384-02	Soil	01/23/24 00:00	01/23/24 15:04
FL07@4.0'	2401384-03	Soil	01/23/24 00:00	01/23/24 15:04

Summit Scientific

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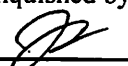
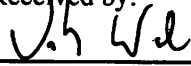
# SUMMIT SCIENTIFIC

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

Lab ID	Page 1 of 1
2401384	

Client: Fremont Env	Project Manager: Paul Henchen	Company: Noble
Address:	E-Mail: Paulh@fremontenv.com	Project Name/Location: Huntsman G 13-9
City/State/Zip:	Jeffj@fremontenv.com Ethenh@fremontenv.com	AFE#:
Phone:	Project Name: Huntsman G 13-9	PO/Billing Codes: UWRWE-A3502-ABN
Sampler Name: JG	Project Number:	Contact:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Air-Canister #	Analysis Requested						Special Instructions
					HCl	HNO3	None	Other	Water	Soil		Other	BTEX+N	TMBs (915)	DRO,ORO,GRO	PAHs (915)	EC,PH,SAR, Bore	
1	FLO1@ 4.0'	01/23/24		2			X			X		X	X	X	X	X		
2	FLO2@ 3.5'	↓		↓			↓					↓	↓	↓	↓	↓		
3	FLO7@ 4.0'	↓		↓			↓					↓	↓	↓	↓	↓		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Relinquished by: 	Date/Time: 01/23/24 1504	Received by: 	Date/Time: 1/23/24 15:04	TAT Business Days	Field DO	Notes:  Bill to Noble
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 16.1	Corrected Temperature	IR gun #: 2	HNO3 lot #:			

S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 2401384

Client: Fremont Client Project ID: Huntsman 6 13-9

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other [ ] Airbill #: [ ]

[X] [ ] [ ] [ ] [ ]

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

Temp (°C) 16.1 Thermometer # 2

Table with 5 columns: Question, Yes, No, N/A, Comments (if any). Rows include: If samples require cooling, is the temperature < 6°C? (1), If custody seals are present, are they intact? (1), Are samples due within 48 hours present?, Are water samples with short hold times present?, Is a chain-of-custody (COC) form present and filled out completely? (1), Is the COC properly relinquished by the client w/ date and time recorded? (1), Were all samples received intact? (1), Was adequate sample volume provided? (1), Does the COC agree with the number and type of sample bottles received? (1), Do the sample IDs on the bottle labels match the COC? (1), For volatiles in water - is there headspace present? If yes, contact client and note in narrative., Are samples preserved that require preservation (excluding cooling)? (1), If samples are acid preserved for metals, is the pH <= 2? (1), If dissolved metals are requested, were samples field filtered?

Additional Comments (if any):

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

J. J. Wild Custodian Printed Name

1/23/24 15:04 Date/Time



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
Project Manager: Paul Henchan

**Reported:**  
03/07/24 10:33

**FL01@4.0'**  
**2401384-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0861	01/24/24	01/25/24	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: **01/23/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0394	98.6 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	99.9 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0397	99.2 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0863	01/24/24	01/24/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.78	62.2 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
Project Manager: Paul Henchan

**Reported:**  
03/07/24 10:33

**FL01@4.0'**  
**2401384-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0889	01/25/24	01/25/24	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: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0194	58.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0277	83.2 %	40-150		"	"	"	"	

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

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHA0844	01/24/24	01/25/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/23/24 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 - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
Project Manager: Paul Henchan

**Reported:**  
03/07/24 10:33

**FL01@4.0'**  
**2401384-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	6.98	0.200	mg/kg dry	1	BHA1008	01/29/24	01/31/24	EPA 6020B
Barium	105	0.400	"	"	"	"	"	"
Cadmium	0.353	0.200	"	"	"	"	"	"
Copper	5.49	0.400	"	"	"	"	"	"
Lead	11.8	0.200	"	"	"	"	"	"
Nickel	6.81	0.400	"	"	"	"	"	"
Silver	0.0252	0.0200	"	"	"	"	"	"
Zinc	25.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0846	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	16.8	0.0500	mg/L dry	1	BHA0901	01/25/24	01/26/24	EPA 6020B	
Magnesium	11.4	0.0500	"	"	"	"	"	"	
Sodium	18.0	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.831	0.00100	units	1	BHA0999	01/29/24	01/30/24	Calculation	

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

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Wellington CO, 80549

Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 03/07/24 10:33

**FL01@4.0'**  
**2401384-01 (Soil)**

**Summit Scientific**

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

% Solids	88.8	%	1	BHA0824	01/24/24	01/24/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/23/24 00:00**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.258	0.0100	mmhos/cm	1	BHA0921	01/26/24	01/26/24	EPA 120.1	

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

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.43		pH Units	1	BHA0920	01/26/24	01/26/24	EPA 9045D	

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Wellington CO, 80549

Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
Project Manager: Paul Henchan

**Reported:**  
03/07/24 10:33

**FL02@3.5'**  
**2401384-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0861	01/24/24	01/25/24	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: **01/23/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0421	105 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0397	99.3 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0863	01/24/24	01/24/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	6.92	55.3 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Wellington CO, 80549

Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
Project Manager: Paul Henchan

**Reported:**  
03/07/24 10:33

**FL02@3.5'**  
**2401384-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0889	01/25/24	01/25/24	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: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0168	50.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0230	69.0 %	40-150		"	"	"	"	

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

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHA0844	01/24/24	01/25/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
Project Manager: Paul Henchan

**Reported:**  
03/07/24 10:33

**FL02@3.5'**  
**2401384-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.95	0.200	mg/kg dry	1	BHA1008	01/29/24	01/31/24	EPA 6020B	
Barium	80.1	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.02	0.400	"	"	"	"	"	"	
Lead	6.15	0.200	"	"	"	"	"	"	
Nickel	5.13	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	19.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0846	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.7		%	1	BHA0824	01/24/24	01/24/24	Calculation	

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

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	5.14	0.0100	mmhos/cm	1	BHA0921	01/26/24	01/26/24	EPA 120.1	

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

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.29		pH Units	1	BHA0920	01/26/24	01/26/24	EPA 9045D	

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Project: Noble - Huntsman G 13-9  
Project Number: UWRWE-A3502-ABN  
Project Manager: Paul Henchan

**Reported:**  
03/07/24 10:33

**FL02@3.5'**  
**2401384-02 (Soil)**

**Summit Scientific**

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

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Project: Noble - Huntsman G 13-9  
 Project Number: UWRWE-A3502-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 03/07/24 10:33

**FL02@3.5'**  
**2401384-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/23/24 00:00**


Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Calcium</b>	<b>5.59</b>	0.0500	mg/L dry	1	BHB0658	01/25/24	02/29/24	EPA 6020B	
<b>Magnesium</b>	<b>2.57</b>	0.0500	"	"	"	"	"	"	
<b>Sodium</b>	<b>6.72</b>	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Sodium Adsorption Ratio</b>	<b>0.590</b>	0.00100	units	1	BHB0807	01/29/24	02/29/24	Calculation	

Summit Scientific



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Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
Project Manager: Paul Henchan

**Reported:**  
03/07/24 10:33

**FL07@4.0'**  
**2401384-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0861	01/24/24	01/25/24	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: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0417	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	98.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0399	99.8 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0863	01/24/24	01/25/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.20	57.6 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 03/07/24 10:33

**FL07@4.0'**  
**2401384-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0889	01/25/24	01/25/24	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: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0208	62.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0274	82.2 %	40-150		"	"	"	"	

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

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHA0844	01/24/24	01/25/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/23/24 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 - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
Project Manager: Paul Henchan

**Reported:**  
03/07/24 10:33

**FL07@4.0'**  
**2401384-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	5.39	0.200	mg/kg dry	1	BHA1008	01/29/24	01/31/24	EPA 6020B
Barium	119	0.400	"	"	"	"	"	"
Cadmium	0.239	0.200	"	"	"	"	"	"
Copper	6.87	0.400	"	"	"	"	"	"
Lead	10.1	0.200	"	"	"	"	"	"
Nickel	8.15	0.400	"	"	"	"	"	"
Silver	0.0462	0.0200	"	"	"	"	"	"
Zinc	24.4	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0846	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	367	0.0500	mg/L dry	1	BHA0901	01/25/24	01/26/24	EPA 6020B	
Magnesium	28.8	0.0500	"	"	"	"	"	"	
Sodium	3.06	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0414	0.00100	units	1	BHA0999	01/29/24	01/30/24	Calculation	

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

Date Sampled: **01/23/24 00:00**

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

Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 03/07/24 10:33

**FL07@4.0'**  
**2401384-03 (Soil)**

**Summit Scientific**

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

% Solids	86.5	%	1	BHA0824	01/24/24	01/24/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/23/24 00:00**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.248	0.0100	mmhos/cm	1	BHA0921	01/26/24	01/26/24	EPA 120.1	

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

Date Sampled: **01/23/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.12		pH Units	1	BHA0920	01/26/24	01/26/24	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
Project Manager: Paul Henchan

**Reported:**  
03/07/24 10:33

### 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 BHA0861 - EPA 5030 Soil MS

##### Blank (BHA0861-BLK1)

Prepared: 01/24/24 Analyzed: 01/25/24

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>	0.0398		"	0.0400		99.4	50-150			
<i>Surrogate: Toluene-d8</i>	0.0390		"	0.0400		97.4	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0396		"	0.0400		98.9	50-150			

##### LCS (BHA0861-BS1)

Prepared: 01/24/24 Analyzed: 01/25/24

Benzene	0.0863	0.0020	mg/kg	0.100		86.3	70-130			
Toluene	0.105	0.0050	"	0.100		105	70-130			
Ethylbenzene	0.104	0.0050	"	0.100		104	70-130			
m,p-Xylene	0.210	0.010	"	0.200		105	70-130			
o-Xylene	0.103	0.0050	"	0.100		103	70-130			
1,2,4-Trimethylbenzene	0.0996	0.0050	"	0.100		99.6	70-130			
1,3,5-Trimethylbenzene	0.102	0.0050	"	0.100		102	70-130			
Naphthalene	0.0848	0.0038	"	0.100		84.8	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0381		"	0.0400		95.2	50-150			
<i>Surrogate: Toluene-d8</i>	0.0406		"	0.0400		101	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0388		"	0.0400		97.1	50-150			

##### Matrix Spike (BHA0861-MS1)

Source: 2401368-01

Prepared: 01/24/24 Analyzed: 01/25/24

Benzene	0.0779	0.0020	mg/kg	0.100	ND	77.9	70-130			
Toluene	0.0971	0.0050	"	0.100	ND	97.1	70-130			
Ethylbenzene	0.0931	0.0050	"	0.100	ND	93.1	70-130			
m,p-Xylene	0.187	0.010	"	0.200	ND	93.3	70-130			
o-Xylene	0.0928	0.0050	"	0.100	ND	92.8	70-130			
1,2,4-Trimethylbenzene	0.0901	0.0050	"	0.100	ND	90.1	70-130			
1,3,5-Trimethylbenzene	0.0908	0.0050	"	0.100	ND	90.8	70-130			
Naphthalene	0.0866	0.0038	"	0.100	ND	86.6	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0399		"	0.0400		99.7	50-150			
<i>Surrogate: Toluene-d8</i>	0.0412		"	0.0400		103	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0392		"	0.0400		98.0	50-150			

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 03/07/24 10:33

**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 BHA0861 - EPA 5030 Soil MS**

Matrix Spike Dup (BHA0861-MSD1)	Source: 2401368-01			Prepared: 01/24/24 Analyzed: 01/25/24						
Benzene	0.0809	0.0020	mg/kg	0.100	ND	80.9	70-130	3.85	30	
Toluene	0.100	0.0050	"	0.100	ND	100	70-130	2.98	30	
Ethylbenzene	0.0947	0.0050	"	0.100	ND	94.7	70-130	1.79	30	
m,p-Xylene	0.190	0.010	"	0.200	ND	95.0	70-130	1.83	30	
o-Xylene	0.0942	0.0050	"	0.100	ND	94.2	70-130	1.48	30	
1,2,4-Trimethylbenzene	0.0901	0.0050	"	0.100	ND	90.1	70-130	0.0666	30	
1,3,5-Trimethylbenzene	0.0928	0.0050	"	0.100	ND	92.8	70-130	2.12	30	
Naphthalene	0.0875	0.0038	"	0.100	ND	87.5	70-130	1.03	30	
Surrogate: 1,2-Dichloroethane-d4	0.0413		"	0.0400		103	50-150			
Surrogate: Toluene-d8	0.0407		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400		95.1	50-150			

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Huntsman G 13-9  
 Project Number: UWRWE-A3502-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 03/07/24 10:33

**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 BHA0863 - EPA 3550A**

**Blank (BHA0863-BLK1)**

Prepared & Analyzed: 01/24/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	11.2		"	12.5		89.9	30-150				

**LCS (BHA0863-BS1)**

Prepared & Analyzed: 01/24/24

C10-C28 (DRO)	468	50	mg/kg	500		93.6	70-130				
Surrogate: <i>o</i> -Terphenyl	9.53		"	12.5		76.2	30-150				

**Matrix Spike (BHA0863-MS1)**

Source: 2401368-01

Prepared & Analyzed: 01/24/24

C10-C28 (DRO)	447	50	mg/kg	500	9.53	87.4	70-130				
Surrogate: <i>o</i> -Terphenyl	6.44		"	12.5		51.5	30-150				

**Matrix Spike Dup (BHA0863-MSD1)**

Source: 2401368-01

Prepared & Analyzed: 01/24/24

C10-C28 (DRO)	457	50	mg/kg	500	9.53	89.4	70-130	2.18	20		
Surrogate: <i>o</i> -Terphenyl	6.18		"	12.5		49.4	30-150				

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Huntsman G 13-9  
Project Number: UWRWE-A3502-ABN  
Project Manager: Paul Henchan

**Reported:**  
03/07/24 10:33

**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 BHA0889 - EPA 5030 Soil MS**

**Blank (BHA0889-BLK1)**

Prepared & Analyzed: 01/25/24

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>0.0296</i>		"	<i>0.0333</i>		<i>88.8</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0377</i>		"	<i>0.0333</i>		<i>113</i>	<i>40-150</i>			

**LCS (BHA0889-BS1)**

Prepared & Analyzed: 01/25/24

Acenaphthene	0.0335	0.00500	mg/kg	0.0333	100	31-137
Anthracene	0.0349	0.00500	"	0.0333	105	30-120
Benzo (a) anthracene	0.0280	0.00500	"	0.0333	84.0	30-120
Benzo (a) pyrene	0.0338	0.00500	"	0.0333	101	30-120
Benzo (b) fluoranthene	0.0364	0.00500	"	0.0333	109	30-120
Benzo (k) fluoranthene	0.0374	0.00500	"	0.0333	112	30-120
Chrysene	0.0358	0.00500	"	0.0333	107	30-120
Dibenz (a,h) anthracene	0.0323	0.00500	"	0.0333	96.9	30-120
Fluoranthene	0.0384	0.00500	"	0.0333	115	30-120
Fluorene	0.0360	0.00500	"	0.0333	108	30-120
Indeno (1,2,3-cd) pyrene	0.0227	0.00500	"	0.0333	68.1	30-120
Pyrene	0.0366	0.00500	"	0.0333	110	35-142
1-Methylnaphthalene	0.0362	0.00500	"	0.0333	109	35-142
2-Methylnaphthalene	0.0377	0.00500	"	0.0333	113	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0312</i>		"	<i>0.0333</i>	<i>93.6</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0386</i>		"	<i>0.0333</i>	<i>116</i>	<i>40-150</i>

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
Project Manager: Paul Henchan

**Reported:**  
03/07/24 10:33

**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 BHA0889 - EPA 5030 Soil MS**

**Matrix Spike (BHA0889-MS1)**

Source: 2401384-01

Prepared & Analyzed: 01/25/24

Acenaphthene	0.0298	0.00500	mg/kg	0.0333	ND	89.4	31-137			
Anthracene	0.0354	0.00500	"	0.0333	ND	106	30-120			
Benzo (a) anthracene	0.0390	0.00500	"	0.0333	ND	117	30-120			
Benzo (a) pyrene	0.0398	0.00500	"	0.0333	ND	119	30-120			
Benzo (b) fluoranthene	0.0380	0.00500	"	0.0333	ND	114	30-120			
Benzo (k) fluoranthene	0.0388	0.00500	"	0.0333	ND	116	30-120			
Chrysene	0.0381	0.00500	"	0.0333	ND	114	30-120			
Dibenz (a,h) anthracene	0.0382	0.00500	"	0.0333	ND	115	30-120			
Fluoranthene	0.0366	0.00500	"	0.0333	ND	110	30-120			
Fluorene	0.0318	0.00500	"	0.0333	ND	95.4	30-120			
Indeno (1,2,3-cd) pyrene	0.0330	0.00500	"	0.0333	ND	99.1	30-120			
Pyrene	0.0400	0.00500	"	0.0333	ND	120	35-142			
1-Methylnaphthalene	0.0433	0.00500	"	0.0333	ND	130	15-130			
2-Methylnaphthalene	0.0164	0.00500	"	0.0333	ND	49.3	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0363		"	0.0333		109	40-150			
Surrogate: Fluoranthene-d10	0.0378		"	0.0333		113	40-150			

**Matrix Spike Dup (BHA0889-MSD1)**

Source: 2401384-01

Prepared & Analyzed: 01/25/24

Acenaphthene	0.0358	0.00500	mg/kg	0.0333	ND	108	31-137	18.4	30
Anthracene	0.0361	0.00500	"	0.0333	ND	108	30-120	2.05	30
Benzo (a) anthracene	0.0361	0.00500	"	0.0333	ND	108	30-120	7.68	30
Benzo (a) pyrene	0.0354	0.00500	"	0.0333	ND	106	30-120	11.7	30
Benzo (b) fluoranthene	0.0372	0.00500	"	0.0333	ND	111	30-120	2.28	30
Benzo (k) fluoranthene	0.0328	0.00500	"	0.0333	ND	98.3	30-120	16.9	30
Chrysene	0.0349	0.00500	"	0.0333	ND	105	30-120	8.89	30
Dibenz (a,h) anthracene	0.0371	0.00500	"	0.0333	ND	111	30-120	2.79	30
Fluoranthene	0.0335	0.00500	"	0.0333	ND	101	30-120	8.82	30
Fluorene	0.0374	0.00500	"	0.0333	ND	112	30-120	16.3	30
Indeno (1,2,3-cd) pyrene	0.0292	0.00500	"	0.0333	ND	87.6	30-120	12.4	30
Pyrene	0.0344	0.00500	"	0.0333	ND	103	35-142	15.1	30
1-Methylnaphthalene	0.0374	0.00500	"	0.0333	ND	112	15-130	14.5	50
2-Methylnaphthalene	0.0260	0.00500	"	0.0333	ND	77.9	15-130	45.0	50
Surrogate: 2-Methylnaphthalene-d10	0.0323		"	0.0333		96.9	40-150		
Surrogate: Fluoranthene-d10	0.0337		"	0.0333		101	40-150		

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 03/07/24 10:33

**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 BHA0844 - EPA 3050B**

**Blank (BHA0844-BLK1)**

Prepared: 01/24/24 Analyzed: 01/25/24

Boron ND 2.00 mg/L

**LCS (BHA0844-BS1)**

Prepared: 01/24/24 Analyzed: 01/25/24

Boron 4.60 2.00 mg/L 5.00 92.1 80-120

**Duplicate (BHA0844-DUP1)**

**Source: 2401365-01**

Prepared: 01/24/24 Analyzed: 01/25/24

Boron ND 2.00 mg/L ND 20

**Matrix Spike (BHA0844-MS1)**

**Source: 2401365-01**

Prepared: 01/24/24 Analyzed: 01/25/24

Boron 5.18 2.00 mg/L 5.00 ND 104 75-125

**Matrix Spike Dup (BHA0844-MSD1)**

**Source: 2401365-01**

Prepared: 01/24/24 Analyzed: 01/25/24

Boron 4.91 2.00 mg/L 5.00 ND 98.1 75-125 5.54 25

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Huntsman G 13-9  
Project Number: UWRWE-A3502-ABN  
Project Manager: Paul Henchan

**Reported:**  
03/07/24 10:33

**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 BHA1008 - EPA 3050B**

**Blank (BHA1008-BLK1)**

Prepared: 01/29/24 Analyzed: 01/31/24

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 (BHA1008-BS1)**

Prepared: 01/29/24 Analyzed: 01/31/24

Arsenic	37.7	0.200	mg/kg wet	40.0	94.2	80-120
Barium	39.3	0.400	"	40.0	98.1	80-120
Cadmium	1.92	0.200	"	2.00	96.2	80-120
Copper	42.6	0.400	"	40.0	106	80-120
Lead	19.3	0.200	"	20.0	96.6	80-120
Nickel	41.7	0.400	"	40.0	104	80-120
Silver	1.94	0.0200	"	2.00	97.0	80-120
Zinc	41.9	0.400	"	40.0	105	80-120
Selenium	3.93	0.260	"	4.00	98.1	80-120

**Duplicate (BHA1008-DUP1)**

Source: 2401382-01

Prepared: 01/29/24 Analyzed: 01/31/24

Arsenic	1.83	0.200	mg/kg dry	2.08	13.1	20
Barium	250	0.400	"	214	15.4	20
Cadmium	0.438	0.200	"	0.435	0.801	20
Copper	5.81	0.400	"	6.40	9.67	20
Lead	9.05	0.200	"	10.0	10.2	20
Nickel	3.99	0.400	"	4.24	6.08	20
Silver	0.0280	0.0200	"	0.0315	11.8	20
Zinc	53.4	0.400	"	47.5	11.6	20
Selenium	0.291	0.260	"	0.297	2.21	20

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 03/07/24 10:33

**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 BHA1008 - EPA 3050B**

**Matrix Spike (BHA1008-MS1)**

Source: 2401382-01

Prepared: 01/29/24 Analyzed: 01/31/24

Arsenic	39.0	0.200	mg/kg dry	50.0	2.08	73.8	75-125				QM-05
Barium	252	0.400	"	50.0	214	75.0	75-125				
Cadmium	2.29	0.200	"	2.50	0.435	74.4	75-125				QM-05
Copper	35.1	0.400	"	50.0	6.40	57.3	75-125				QM-05
Lead	27.0	0.200	"	25.0	10.0	67.8	75-125				QM-05
Nickel	34.7	0.400	"	50.0	4.24	60.9	75-125				QM-05
Silver	1.94	0.0200	"	2.50	0.0315	76.5	75-125				
Zinc	80.5	0.400	"	50.0	47.5	66.0	75-125				QM-05
Selenium	4.34	0.260	"	5.00	0.297	80.9	75-125				

**Matrix Spike Dup (BHA1008-MSD1)**

Source: 2401382-01

Prepared: 01/29/24 Analyzed: 01/31/24

Arsenic	39.4	0.200	mg/kg dry	50.0	2.08	74.7	75-125	1.12	25		QM-05
Barium	256	0.400	"	50.0	214	82.8	75-125	1.55	25		
Cadmium	2.36	0.200	"	2.50	0.435	77.1	75-125	2.92	25		
Copper	36.5	0.400	"	50.0	6.40	60.2	75-125	4.01	25		QM-05
Lead	27.6	0.200	"	25.0	10.0	70.2	75-125	2.21	25		QM-05
Nickel	35.8	0.400	"	50.0	4.24	63.2	75-125	3.37	25		QM-05
Silver	1.99	0.0200	"	2.50	0.0315	78.4	75-125	2.41	25		
Zinc	83.5	0.400	"	50.0	47.5	72.1	75-125	3.71	25		QM-05
Selenium	4.29	0.260	"	5.00	0.297	79.9	75-125	1.13	25		

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 03/07/24 10:33

**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 BHA0846 - 3060A Mod**

**Blank (BHA0846-BLK1)**

Prepared & Analyzed: 01/24/24

Chromium, Hexavalent      ND      0.30    mg/kg wet

**LCS (BHA0846-BS1)**

Prepared & Analyzed: 01/24/24

Chromium, Hexavalent      22.6      0.30    mg/kg wet      25.0      90.6      80-120

**Duplicate (BHA0846-DUP1)**

**Source: 2311401-01**

Prepared & Analyzed: 01/24/24

Chromium, Hexavalent      ND      0.30    mg/kg dry      ND      20

**Matrix Spike (BHA0846-MS1)**

**Source: 2311401-01**

Prepared & Analyzed: 01/24/24

Chromium, Hexavalent      25.2      0.30    mg/kg dry      27.4      ND      92.2      75-125

**Matrix Spike Dup (BHA0846-MSD1)**

**Source: 2311401-01**

Prepared & Analyzed: 01/24/24

Chromium, Hexavalent      25.3      0.30    mg/kg dry      27.4      ND      92.4      75-125      0.217      20

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 03/07/24 10:33

**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			Limit	RPD	Limit	RPD	

**Batch BHA0901 - General Preparation**

**Blank (BHA0901-BLK1)**

Prepared: 01/25/24 Analyzed: 01/26/24

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

**LCS (BHA0901-BS1)**

Prepared: 01/25/24 Analyzed: 01/26/24

Calcium	5.51	0.0500	mg/L wet	5.00	110	70-130
Magnesium	5.63	0.0500	"	5.00	113	70-130
Sodium	5.48	0.0500	"	5.00	110	70-130

**Batch BHB0658 - General Preparation**

**Blank (BHB0658-BLK1)**

Prepared: 02/20/24 Analyzed: 02/29/24

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

**LCS (BHB0658-BS1)**

Prepared: 02/20/24 Analyzed: 02/29/24

Calcium	5.08	0.0500	mg/L wet	5.00	102	70-130
Magnesium	5.16	0.0500	"	5.00	103	70-130
Sodium	5.11	0.0500	"	5.00	102	70-130

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 03/07/24 10:33

**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 BHA0824 - General Preparation**


**Duplicate (BHA0824-DUP1)**

**Source: 2312187-24**

**Prepared & Analyzed: 01/24/24**

% Solids	89.9		%		90.4			0.539	20	
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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 03/07/24 10:33

**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 BHA0921 - General Preparation**

**Blank (BHA0921-BLK1)**

Prepared & Analyzed: 01/26/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BHA0921-BS1)**

Prepared & Analyzed: 01/26/24

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

**Duplicate (BHA0921-DUP1)**

**Source: 2401384-01**

Prepared & Analyzed: 01/26/24

Specific Conductance (EC) 0.258 0.0100 mmhos/cm 0.258 0.00 20

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 03/07/24 10:33

**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 BHA0920 - General Preparation**

**LCS (BHA0920-BS1)**

Prepared & Analyzed: 01/26/24

pH	9.14		pH Units	9.18	99.6	95-105
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**Duplicate (BHA0920-DUP1)**

Source: 2401384-01

Prepared & Analyzed: 01/26/24

pH	8.43		pH Units	8.43	0.00	20
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Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Huntsman G 13-9

Project Number: UWRWE-A3502-ABN

Project Manager: Paul Henchan

**Reported:**  
03/07/24 10:33

### Notes and Definitions

- 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