

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

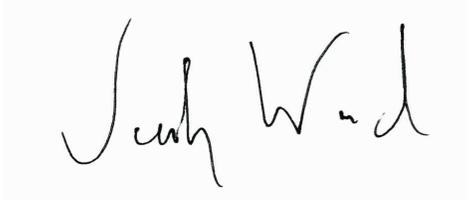
September 20, 2023

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549

RE: Noble - Hansen O 1-23 Flowline
Work Order #2308546

Enclosed are the results of analyses for samples received by Summit Scientific on 08/23/23 16:30. 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 large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
Project Manager: Paul Henchan

Reported:
09/20/23 16:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP01-FL@2'	2308546-01	Soil	08/22/23 11:20	08/23/23 16:30
FL01-01@4'	2308546-02	Soil	08/22/23 10:30	08/23/23 16:30
FL01-02@4'	2308546-03	Soil	08/22/23 10:45	08/23/23 16:30
FL01-03@4'	2308546-04	Soil	08/22/23 11:00	08/23/23 16:30
FLR01@4'	2308546-05	Soil	08/22/23 11:15	08/23/23 16:30

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

Lab ID	Page 1 of 1
2308546	

Send Data To:		Send Invoice To:
Client: Fremont Environmental	Project Manager: Paul Henehan	Company: Noble/Chevron
Address: 8305 6th Street	E-Mail: Fremont Distribution List	Project Name/Location:
City/State/Zip: Wellington, CO, 80549		AFE#: UWRWE - A2137 - ABN
Phone: 603-477-6907	Project Name: Hansen O 1-23 Flouline	PO/Billing Codes:
Sampler Name: Aaron Otilar	Project Number: C023-232	Contact: Mike Montoya

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested						Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 915	TPH (C6-C36)	PAH	SAR, EC, pH, Boron		TDS, Cl, SO4
1	SEPOL-FL02'	8/22/23	1120	2			2			X			X	X	X	X		
2	FL01-0104'	8/23/23	1030	2														
3	FL01-0204'	I	1045	I														
4	FL01-0304'	I	1100	I														
5	FLR0104'	I	1115	I														
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Relinquished by: <i>Aaron Otilar</i>	Date/Time: 8/23/23 1400	Received by: Summit North	Date/Time: 8/23/23 1400	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: S2	Date/Time: 8/23/23 1030	Received by: <i>DRH</i>	Date/Time: 8/23/23 1030	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb. <input checked="" type="checkbox"/>	
Temperature Upon Receipt: 11.1	Corrected Temperature: <i>Q</i>	IR gun #:		HNO3 lot #:		

S₂

Sample Receipt Checklist

S2 Work Order# 2308546

Client: Fremont Client Project ID: Hansen 0 1-23 Flowline

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

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

Temp (°C)

Thermometer #

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

8/23/23
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
Project Manager: Paul Henchan

Reported:
09/20/23 16:43

SEP01-FL@2'
2308546-01 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/22/23 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGH1064	08/25/23	08/26/23	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: **08/22/23 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0288	72.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0402	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0378	94.6 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/22/23 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGH1067	08/25/23	08/26/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **08/22/23 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	12.7	101 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project Number: CO23-232
Project Manager: Paul Henchan

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SEP01-FL@2'
2308546-01 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **08/22/23 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH1040	08/25/23	08/25/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.00804	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.00821	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.00867	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0185	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0154	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0247	74.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0176	52.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/22/23 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGH0971	08/24/23	08/25/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/22/23 11:20**

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

Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
Project Manager: Paul Henchan

Reported:
09/20/23 16:43

SEP01-FL@2'
2308546-01 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	5.51	0.200	mg/kg dry	1	BGH0987	08/24/23	08/28/23	EPA 6020B
Barium	72.9	0.400	"	"	"	"	"	"
Cadmium	0.480	0.200	"	"	"	"	"	"
Copper	5.79	0.400	"	"	"	"	"	"
Lead	7.62	0.200	"	"	"	"	"	"
Nickel	5.42	0.400	"	"	"	"	"	"
Silver	0.0249	0.0200	"	"	"	"	"	"
Zinc	23.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/22/23 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH1102	08/28/23	08/28/23	EPA 7196A	

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

Date Sampled: **08/22/23 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	128	0.0556	mg/L dry	1	BGH1166	08/29/23	08/30/23	EPA 6020B	
Magnesium	14.4	0.0556	"	"	"	"	"	"	
Sodium	1.32	0.0556	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/22/23 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0295	0.00100	units	1	BGH1268	08/31/23	08/31/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/22/23 11:20**

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 - Hansen O 1-23 Flowline

Project Number: CO23-232
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Reported:
 09/20/23 16:43

SEP01-FL@2'
2308546-01 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	89.9	%	1	BGH1058	08/25/23	08/25/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/22/23 11:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	0.158	0.0100	mmhos/cm	1	BGH1188	08/29/23	08/30/23	EPA 120.1	

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 Project Manager: Paul Henchan

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SEP01-FL@2'
2308546-01 (Soil)

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

Date Sampled: **08/22/23 11:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.32		pH Units	1	BGI0309	08/29/23	09/12/23	EPA 9045D	

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Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
Project Manager: Paul Henchan

Reported:
09/20/23 16:43

FL01-01@4'
2308546-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/22/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGH1064	08/25/23	08/26/23	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	0.0063	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/22/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0306	76.5 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0402	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0370	92.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/22/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGH1067	08/25/23	08/26/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.5	100 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
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09/20/23 16:43

FL01-01@4'
2308546-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/22/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.0159	0.00500	mg/kg	1	BGH1040	08/25/23	08/25/23	EPA 8270D SIM	
Anthracene	0.0362	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0669	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0343	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0582	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.0232	0.00500	"	"	"	"	"	"	
Chrysene	0.0675	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	0.00629	0.00500	"	"	"	"	"	"	
Fluoranthene	0.153	0.00500	"	"	"	"	"	"	
Fluorene	0.0192	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.0286	0.00500	"	"	"	"	"	"	
Pyrene	0.113	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/22/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0259	77.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0191	57.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/22/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0490	0.0100	mg/L	1	BGH0971	08/24/23	08/25/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/22/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	6.70	0.200	mg/kg dry	1	BGH0987	08/24/23	08/28/23	EPA 6020B	

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Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
Project Manager: Paul Henchan

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09/20/23 16:43

FL01-01@4'
2308546-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Barium	36.5	0.400	mg/kg dry	1	BGH0987	08/24/23	08/28/23	EPA 6020B	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.53	0.400	"	"	"	"	"	"	
Lead	7.12	0.200	"	"	"	"	"	"	
Nickel	4.64	0.400	"	"	"	"	"	"	
Silver	0.0349	0.0200	"	"	"	"	"	"	
Zinc	22.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/22/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH1102	08/28/23	08/28/23	EPA 7196A	

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

Date Sampled: **08/22/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	16.5	0.0538	mg/L dry	1	BGH1166	08/29/23	08/30/23	EPA 6020B	
Magnesium	18.2	0.0538	"	"	"	"	"	"	
Sodium	22.0	0.0538	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/22/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.888	0.00100	units	1	BGH1268	08/31/23	08/31/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/22/23 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: CO23-232
 Project Manager: Paul Henchan

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FL01-01@4'
2308546-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	92.9	%	1	BGH1058	08/25/23	08/25/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/22/23 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	0.424	0.0100	mmhos/cm	1	BGH1188	08/29/23	08/30/23	EPA 120.1	

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 Wellington CO, 80549

Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
 Project Manager: Paul Henchan

Reported:
 09/20/23 16:43

FL01-01@4'
2308546-02 (Soil)

Summit Scientific

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

Date Sampled: **08/22/23 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.51		pH Units	1	BGI0309	08/29/23	09/12/23	EPA 9045D	

Summit Scientific



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
Project Manager: Paul Henchan

Reported:
09/20/23 16:43

FL01-02@4'
2308546-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/22/23 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGH1064	08/25/23	08/26/23	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: **08/22/23 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0321	80.3 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0403	101 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0389	97.2 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/22/23 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGH1067	08/25/23	08/26/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **08/22/23 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	13.4	107 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
 Project Manager: Paul Henchan

Reported:
 09/20/23 16:43

FL01-02@4'
2308546-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/22/23 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH1040	08/25/23	08/25/23	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: **08/22/23 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0186	55.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0150	44.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/22/23 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0634	0.0100	mg/L	1	BGH0971	08/24/23	08/26/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/22/23 10:45**

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 - Hansen O 1-23 Flowline

Project Number: CO23-232
Project Manager: Paul Henchan

Reported:
09/20/23 16:43

FL01-02@4'
2308546-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	7.17	0.200	mg/kg dry	1	BGH0987	08/24/23	08/28/23	EPA 6020B
Barium	64.4	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	5.33	0.400	"	"	"	"	"	"
Lead	8.04	0.200	"	"	"	"	"	"
Nickel	6.05	0.400	"	"	"	"	"	"
Silver	0.0458	0.0200	"	"	"	"	"	"
Zinc	26.9	0.400	"	"	"	"	"	"
Selenium	0.358	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/22/23 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH1102	08/28/23	08/28/23	EPA 7196A	

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

Date Sampled: **08/22/23 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	464	0.0578	mg/L dry	1	BGH1166	08/29/23	08/30/23	EPA 6020B	
Magnesium	334	0.0578	"	"	"	"	"	"	
Sodium	284	0.0578	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/22/23 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.46	0.00100	units	1	BGH1268	08/31/23	08/31/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/22/23 10:45**

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

Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
 Project Manager: Paul Henchan

Reported:
 09/20/23 16:43

FL01-02@4'
2308546-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	86.5	%	1	BGH1058	08/25/23	08/25/23	Calculation
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Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **08/22/23 10:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	7.94		pH Units	1	BGH1189	08/29/23	08/30/23	EPA 9045D	

Summit Scientific



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Project Number: CO23-232
 Project Manager: Paul Henchan

Reported:
 09/20/23 16:43

FL01-02@4'
2308546-03 (Soil)

Summit Scientific

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/22/23 10:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	2.77	0.0100	mmhos/cm	1	BGI0424	09/14/23	09/14/23	EPA 120.1	

Summit Scientific



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Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
Project Manager: Paul Henchan

Reported:
09/20/23 16:43

FL01-03@4'
2308546-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/22/23 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGH1064	08/25/23	08/26/23	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	0.012	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **08/22/23 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0281	70.2 %		50-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>	0.0386	96.4 %		50-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0402	100 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/22/23 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	66	50		mg/kg	1	BGH1067	08/25/23	08/26/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **08/22/23 11:00**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
Project Manager: Paul Henchan

Reported:
09/20/23 16:43

FL01-03@4'
2308546-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.204	0.00500	mg/kg	1	BGH1040	08/25/23	08/25/23	EPA 8270D SIM	E
Anthracene	0.410	0.00500	"	"	"	"	"	"	E
Benzo (a) anthracene	0.609	0.00500	"	"	"	"	"	"	E
Benzo (a) pyrene	0.508	0.00500	"	"	"	"	"	"	E
Benzo (b) fluoranthene	0.715	0.00500	"	"	"	"	"	"	E
Benzo (k) fluoranthene	0.285	0.00500	"	"	"	"	"	"	E
Chrysene	0.641	0.00500	"	"	"	"	"	"	E
Dibenz (a,h) anthracene	0.105	0.00500	"	"	"	"	"	"	E
Fluoranthene	1.46	0.00500	"	"	"	"	"	"	E
Fluorene	0.266	0.00500	"	"	"	"	"	"	E
Indeno (1,2,3-cd) pyrene	0.341	0.00500	"	"	"	"	"	"	E
Pyrene	1.02	0.00500	"	"	"	"	"	"	E
1-Methylnaphthalene	0.0243	0.00500	"	"	"	"	"	"	E
2-Methylnaphthalene	0.0417	0.00500	"	"	"	"	"	"	E

Date Sampled: **08/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0151	45.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0181	54.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.846	0.0100	mg/L	1	BGH0971	08/24/23	08/26/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.81	0.200	mg/kg dry	1	BGH0987	08/24/23	08/28/23	EPA 6020B	

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Fremont Environmental
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Wellington CO, 80549

Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
Project Manager: Paul Henchan

Reported:
09/20/23 16:43

FL01-03@4'
2308546-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Barium	143	0.400	mg/kg dry	1	BGH0987	08/24/23	08/28/23	EPA 6020B	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	8.22	0.400	"	"	"	"	"	"	
Lead	7.18	0.200	"	"	"	"	"	"	
Nickel	6.82	0.400	"	"	"	"	"	"	
Silver	0.0393	0.0200	"	"	"	"	"	"	
Zinc	31.2	0.400	"	"	"	"	"	"	
Selenium	0.777	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH1102	08/28/23	08/28/23	EPA 7196A	

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

Date Sampled: **08/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	158	0.0565	mg/L dry	1	BGH1166	08/29/23	08/30/23	EPA 6020B	
Magnesium	156	0.0565	"	"	"	"	"	"	
Sodium	207	0.0565	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.80	0.00100	units	1	BGH1268	08/31/23	08/31/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.4		%	1	BGH1058	08/25/23	08/25/23	Calculation	

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 PO Box 1289
 Wellington CO, 80549

Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
 Project Manager: Paul Henchan

Reported:
 09/20/23 16:43

FL01-03@4'
2308546-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.60	0.0100	mmhos/cm	1	BGH1188	08/29/23	08/30/23	EPA 120.1	

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

Date Sampled: **08/22/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.88		pH Units	1	BGH1189	08/29/23	08/30/23	EPA 9045D	

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PO Box 1289
Wellington CO, 80549

Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
Project Manager: Paul Henchan

Reported:
09/20/23 16:43

FLR01@4'
2308546-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BGH1064	08/25/23	08/26/23	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: **08/22/23 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0303	75.8 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0371	92.7 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BGH1067	08/25/23	08/26/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	12.5	99.7 %	30-150	"	"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
Project Manager: Paul Henchan

Reported:
09/20/23 16:43

FLR01@4'
2308546-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH1040	08/25/23	08/25/23	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: **08/22/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0302	90.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0217	65.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGH0971	08/24/23	08/26/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
Project Manager: Paul Henchan

Reported:
09/20/23 16:43

FLR01@4'
2308546-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	4.14	0.200	mg/kg dry	1	BGH0987	08/24/23	08/28/23	EPA 6020B
Barium	137	0.400	"	"	"	"	"	"
Cadmium	0.297	0.200	"	"	"	"	"	"
Copper	9.35	0.400	"	"	"	"	"	"
Lead	19.2	0.200	"	"	"	"	"	"
Nickel	9.22	0.400	"	"	"	"	"	"
Silver	0.0518	0.0200	"	"	"	"	"	"
Zinc	36.6	0.400	"	"	"	"	"	"
Selenium	0.390	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH1102	08/28/23	08/28/23	EPA 7196A	

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

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	102	0.0600	mg/L dry	1	BGH1166	08/29/23	08/30/23	EPA 6020B	
Magnesium	49.1	0.0600	"	"	"	"	"	"	
Sodium	17.5	0.0600	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.356	0.00100	units	1	BGH1268	08/31/23	08/31/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/22/23 11:15**

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 - Hansen O 1-23 Flowline

Project Number: CO23-232
 Project Manager: Paul Henchan

Reported:
 09/20/23 16:43

FLR01@4'
2308546-05 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.4	%	1	BGH1058	08/25/23	08/25/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.06	0.0100	mmhos/cm	1	BGH1188	08/29/23	08/30/23	EPA 120.1	

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

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.61		pH Units	1	BGH1189	08/29/23	08/30/23	EPA 9045D	

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Wellington CO, 80549

Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
Project Manager: Paul Henchan

Reported:
09/20/23 16:43

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BGH1064 - EPA 5030 Soil MS

Blank (BGH1064-BLK1)

Prepared: 08/25/23 Analyzed: 08/26/23

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>	0.0307		"	0.0400		76.7	50-150			
<i>Surrogate: Toluene-d8</i>	0.0398		"	0.0400		99.6	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0364		"	0.0400		90.9	50-150			

LCS (BGH1064-BS1)

Prepared: 08/25/23 Analyzed: 08/26/23

Benzene	0.106	0.0020	mg/kg	0.100		106	70-130			
Toluene	0.105	0.0050	"	0.100		105	70-130			
Ethylbenzene	0.117	0.0050	"	0.100		117	70-130			
m,p-Xylene	0.227	0.010	"	0.200		114	70-130			
o-Xylene	0.108	0.0050	"	0.100		108	70-130			
1,2,4-Trimethylbenzene	0.114	0.0050	"	0.100		114	70-130			
1,3,5-Trimethylbenzene	0.114	0.0050	"	0.100		114	70-130			
Naphthalene	0.0999	0.0038	"	0.100		99.9	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0230		"	0.0400		57.6	50-150			
<i>Surrogate: Toluene-d8</i>	0.0388		"	0.0400		96.9	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0371		"	0.0400		92.8	50-150			

Matrix Spike (BGH1064-MS1)

Source: 2308363-02

Prepared: 08/25/23 Analyzed: 08/26/23

Benzene	0.0854	0.0020	mg/kg	0.100	ND	85.4	70-130			
Toluene	0.0826	0.0050	"	0.100	ND	82.6	70-130			
Ethylbenzene	0.0867	0.0050	"	0.100	ND	86.7	70-130			
m,p-Xylene	0.165	0.010	"	0.200	ND	82.5	70-130			
o-Xylene	0.0796	0.0050	"	0.100	ND	79.6	70-130			
1,2,4-Trimethylbenzene	0.0830	0.0050	"	0.100	ND	83.0	70-130			
1,3,5-Trimethylbenzene	0.0823	0.0050	"	0.100	ND	82.3	70-130			
Naphthalene	0.0544	0.0038	"	0.100	ND	54.4	70-130			QM-07
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0343		"	0.0400		85.7	50-150			
<i>Surrogate: Toluene-d8</i>	0.0403		"	0.0400		101	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0371		"	0.0400		92.8	50-150			

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Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
 Project Manager: Paul Henchan

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Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BGH1064 - EPA 5030 Soil MS

Matrix Spike Dup (BGH1064-MSD1)	Source: 2308363-02			Prepared: 08/25/23 Analyzed: 08/26/23						
Benzene	0.0838	0.0020	mg/kg	0.100	ND	83.8	70-130	1.88	30	
Toluene	0.0845	0.0050	"	0.100	ND	84.5	70-130	2.23	30	
Ethylbenzene	0.0927	0.0050	"	0.100	ND	92.7	70-130	6.69	30	
m,p-Xylene	0.180	0.010	"	0.200	ND	90.2	70-130	8.93	30	
o-Xylene	0.0838	0.0050	"	0.100	ND	83.8	70-130	5.11	30	
1,2,4-Trimethylbenzene	0.0885	0.0050	"	0.100	ND	88.5	70-130	6.47	30	
1,3,5-Trimethylbenzene	0.0881	0.0050	"	0.100	ND	88.1	70-130	6.83	30	
Naphthalene	0.0555	0.0038	"	0.100	ND	55.5	70-130	1.97	30	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0303		"	0.0400		75.8	50-150			
Surrogate: Toluene-d8	0.0385		"	0.0400		96.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0384		"	0.0400		95.9	50-150			

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Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
 Project Manager: Paul Henchan

Reported:
 09/20/23 16:43

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGH1067 - EPA 3550A

Blank (BGH1067-BLK1)

Prepared & Analyzed: 08/25/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	12.0		"	12.5		96.0		30-150		

LCS (BGH1067-BS1)

Prepared: 08/25/23 Analyzed: 08/26/23

C10-C28 (DRO)	512	50	mg/kg	500	102			70-130		
Surrogate: <i>o</i> -Terphenyl	11.9		"	12.5		95.2		30-150		

Matrix Spike (BGH1067-MS1)

Source: 2308363-02

Prepared: 08/25/23 Analyzed: 08/26/23

C10-C28 (DRO)	488	50	mg/kg	500	12.2	95.3		70-130		
Surrogate: <i>o</i> -Terphenyl	12.3		"	12.5		98.6		30-150		

Matrix Spike Dup (BGH1067-MSD1)

Source: 2308363-02

Prepared: 08/25/23 Analyzed: 08/26/23

C10-C28 (DRO)	527	50	mg/kg	500	12.2	103		70-130	7.53	20
Surrogate: <i>o</i> -Terphenyl	13.0		"	12.5		104		30-150		

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Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
 Project Manager: Paul Henchan

Reported:
 09/20/23 16:43

PAH by EPA Method 8270D SIM - Quality Control

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

Batch BGH1040 - EPA 5030 Soil MS

Blank (BGH1040-BLK1)

Prepared & Analyzed: 08/25/23

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>0.0415</i>		"	<i>0.0333</i>		<i>125</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0313</i>		"	<i>0.0333</i>		<i>93.9</i>		<i>40-150</i>		

LCS (BGH1040-BS1)

Prepared & Analyzed: 08/25/23

Acenaphthene	0.0358	0.00500	mg/kg	0.0333	107	31-137
Anthracene	0.0346	0.00500	"	0.0333	104	30-120
Benzo (a) anthracene	0.0272	0.00500	"	0.0333	81.6	30-120
Benzo (a) pyrene	0.0354	0.00500	"	0.0333	106	30-120
Benzo (b) fluoranthene	0.0367	0.00500	"	0.0333	110	30-120
Benzo (k) fluoranthene	0.0355	0.00500	"	0.0333	107	30-120
Chrysene	0.0356	0.00500	"	0.0333	107	30-120
Dibenz (a,h) anthracene	0.0325	0.00500	"	0.0333	97.6	30-120
Fluoranthene	0.0333	0.00500	"	0.0333	99.9	30-120
Fluorene	0.0363	0.00500	"	0.0333	109	30-120
Indeno (1,2,3-cd) pyrene	0.0237	0.00500	"	0.0333	71.2	30-120
Pyrene	0.0392	0.00500	"	0.0333	117	35-142
1-Methylnaphthalene	0.0250	0.00500	"	0.0333	75.1	35-142
2-Methylnaphthalene	0.0406	0.00500	"	0.0333	122	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0408</i>		"	<i>0.0333</i>	<i>123</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0303</i>		"	<i>0.0333</i>	<i>90.8</i>	<i>40-150</i>

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
Project Manager: Paul Henchan

Reported:
09/20/23 16:43

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 BGH1040 - EPA 5030 Soil MS

Matrix Spike (BGH1040-MS1)	Source: 2308521-01			Prepared & Analyzed: 08/25/23							
Acenaphthene	0.0153	0.00500	mg/kg	0.0333	ND	45.9	31-137				
Anthracene	0.0146	0.00500	"	0.0333	ND	43.7	30-120				
Benzo (a) anthracene	0.0163	0.00500	"	0.0333	ND	48.8	30-120				
Benzo (a) pyrene	0.0141	0.00500	"	0.0333	ND	42.2	30-120				
Benzo (b) fluoranthene	0.0153	0.00500	"	0.0333	ND	46.0	30-120				
Benzo (k) fluoranthene	0.0154	0.00500	"	0.0333	ND	46.1	30-120				
Chrysene	0.0163	0.00500	"	0.0333	ND	48.8	30-120				
Dibenz (a,h) anthracene	0.0136	0.00500	"	0.0333	ND	40.7	30-120				
Fluoranthene	0.0157	0.00500	"	0.0333	ND	47.1	30-120				
Fluorene	0.0159	0.00500	"	0.0333	0.0903	NR	30-120				QM-01
Indeno (1,2,3-cd) pyrene	0.0141	0.00500	"	0.0333	ND	42.2	30-120				
Pyrene	0.0167	0.00500	"	0.0333	0.00603	31.9	35-142				QM-01
1-Methylnaphthalene	0.0146	0.00500	"	0.0333	0.482	NR	15-130				QM-01
2-Methylnaphthalene	0.0171	0.00500	"	0.0333	0.772	NR	15-130				QM-01
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0157</i>		<i>"</i>	<i>0.0333</i>		<i>47.1</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0136</i>		<i>"</i>	<i>0.0333</i>		<i>40.7</i>	<i>40-150</i>				

Matrix Spike Dup (BGH1040-MSD1)	Source: 2308521-01			Prepared & Analyzed: 08/25/23							
Acenaphthene	0.0139	0.00500	mg/kg	0.0333	ND	41.6	31-137	9.81	30		
Anthracene	0.0148	0.00500	"	0.0333	ND	44.3	30-120	1.20	30		
Benzo (a) anthracene	0.0149	0.00500	"	0.0333	ND	44.8	30-120	8.55	30		
Benzo (a) pyrene	0.0158	0.00500	"	0.0333	ND	47.5	30-120	11.9	30		
Benzo (b) fluoranthene	0.0155	0.00500	"	0.0333	ND	46.4	30-120	0.745	30		
Benzo (k) fluoranthene	0.0146	0.00500	"	0.0333	ND	43.9	30-120	4.86	30		
Chrysene	0.0155	0.00500	"	0.0333	ND	46.6	30-120	4.76	30		
Dibenz (a,h) anthracene	0.0138	0.00500	"	0.0333	ND	41.4	30-120	1.78	30		
Fluoranthene	0.0134	0.00500	"	0.0333	ND	40.3	30-120	15.5	30		
Fluorene	0.0148	0.00500	"	0.0333	0.0903	NR	30-120	7.00	30		QM-01
Indeno (1,2,3-cd) pyrene	0.0147	0.00500	"	0.0333	ND	44.1	30-120	4.50	30		
Pyrene	0.0146	0.00500	"	0.0333	0.00603	25.8	35-142	13.0	30		QM-01
1-Methylnaphthalene	0.0160	0.00500	"	0.0333	0.482	NR	15-130	9.29	50		QM-01
2-Methylnaphthalene	0.0158	0.00500	"	0.0333	0.772	NR	15-130	7.41	50		QM-01
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0156</i>		<i>"</i>	<i>0.0333</i>		<i>46.8</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0148</i>		<i>"</i>	<i>0.0333</i>		<i>44.5</i>	<i>40-150</i>				

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Fremont Environmental
 PO Box 1289
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Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
 Project Manager: Paul Henchan

Reported:
 09/20/23 16:43

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 BGH0971 - EPA 3050B

Blank (BGH0971-BLK1)

Prepared: 08/24/23 Analyzed: 08/25/23

Boron ND 0.0100 mg/L

LCS (BGH0971-BS1)

Prepared: 08/24/23 Analyzed: 08/25/23

Boron 4.48 0.0100 mg/L 5.00 89.5 80-120

Duplicate (BGH0971-DUP1)

Source: 2308537-01

Prepared: 08/24/23 Analyzed: 08/25/23

Boron ND 0.0100 mg/L ND 20

Matrix Spike (BGH0971-MS1)

Source: 2308537-01

Prepared: 08/24/23 Analyzed: 08/25/23

Boron 4.40 0.0100 mg/L 5.00 ND 87.9 75-125

Matrix Spike Dup (BGH0971-MSD1)

Source: 2308537-01

Prepared: 08/24/23 Analyzed: 08/25/23

Boron 4.62 0.0100 mg/L 5.00 ND 92.3 75-125 4.92 25

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
 Project Manager: Paul Henchan

Reported:
 09/20/23 16:43

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGH0987 - EPA 3050B

Blank (BGH0987-BLK1)

Prepared: 08/24/23 Analyzed: 08/28/23

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 (BGH0987-BS1)

Prepared: 08/24/23 Analyzed: 08/28/23

Arsenic	40.6	0.200	mg/kg wet	40.0	102	80-120
Barium	46.7	0.400	"	40.0	117	80-120
Cadmium	2.28	0.200	"	2.00	114	80-120
Copper	46.8	0.400	"	40.0	117	80-120
Lead	23.0	0.200	"	20.0	115	80-120
Nickel	44.7	0.400	"	40.0	112	80-120
Silver	2.25	0.0200	"	2.00	112	80-120
Zinc	45.2	0.400	"	40.0	113	80-120

Duplicate (BGH0987-DUP1)

Source: 2308501-01

Prepared: 08/24/23 Analyzed: 08/28/23

Arsenic	4.83	0.200	mg/kg dry	5.20	7.25	20
Barium	62.1	0.400	"	62.2	0.275	20
Cadmium	0.159	0.200	"	0.171	7.49	20
Copper	4.06	0.400	"	4.04	0.349	20
Lead	6.17	0.200	"	6.26	1.45	20
Nickel	4.78	0.400	"	4.92	2.82	20
Silver	0.0190	0.0200	"	0.0194	2.30	20
Zinc	22.4	0.400	"	22.7	1.61	20
Selenium	ND	0.260	"	ND		200

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 PO Box 1289
 Wellington CO, 80549

Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
 Project Manager: Paul Henchan

Reported:
 09/20/23 16:43

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGH0987 - EPA 3050B

Matrix Spike (BGH0987-MS1)	Source: 2308501-01			Prepared: 08/24/23		Analyzed: 08/28/23				
Arsenic	59.1	0.200	mg/kg dry	44.1	5.20	122	75-125			
Barium	119	0.400	"	44.1	62.2	129	75-125			QM-07
Cadmium	2.78	0.200	"	2.21	0.171	118	75-125			
Copper	39.2	0.400	"	44.1	4.04	79.7	75-125			
Lead	32.1	0.200	"	22.1	6.26	117	75-125			
Nickel	39.7	0.400	"	44.1	4.92	78.8	75-125			
Silver	2.52	0.0200	"	2.21	0.0194	113	75-125			
Zinc	57.5	0.400	"	44.1	22.7	78.7	75-125			

Matrix Spike Dup (BGH0987-MSD1)	Source: 2308501-01			Prepared: 08/24/23		Analyzed: 08/28/23				
Arsenic	58.9	0.200	mg/kg dry	44.1	5.20	122	75-125	0.382	25	
Barium	119	0.400	"	44.1	62.2	130	75-125	0.285	25	QM-07
Cadmium	2.76	0.200	"	2.21	0.171	117	75-125	0.653	25	
Copper	39.3	0.400	"	44.1	4.04	80.0	75-125	0.360	25	
Lead	32.5	0.200	"	22.1	6.26	119	75-125	1.17	25	
Nickel	39.8	0.400	"	44.1	4.92	79.1	75-125	0.334	25	
Silver	2.56	0.0200	"	2.21	0.0194	115	75-125	1.44	25	
Zinc	58.0	0.400	"	44.1	22.7	79.8	75-125	0.866	25	

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
 Project Manager: Paul Henchan

Reported:
 09/20/23 16:43

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 BGH1102 - 3060A Mod

Blank (BGH1102-BLK1)

Prepared & Analyzed: 08/28/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGH1102-BS1)

Prepared & Analyzed: 08/28/23

Chromium, Hexavalent 26.0 0.30 mg/kg wet 25.0 104 80-120

Duplicate (BGH1102-DUP1)

Source: 2308546-01

Prepared & Analyzed: 08/28/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGH1102-MS1)

Source: 2308546-01

Prepared & Analyzed: 08/28/23

Chromium, Hexavalent 27.9 0.30 mg/kg dry 27.8 ND 100 75-125

Matrix Spike Dup (BGH1102-MSD1)

Source: 2308546-01

Prepared & Analyzed: 08/28/23

Chromium, Hexavalent 27.8 0.30 mg/kg dry 27.8 ND 99.8 75-125 0.599 20

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 PO Box 1289
 Wellington CO, 80549

Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
 Project Manager: Paul Henchan

Reported:
 09/20/23 16:43

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

Summit Scientific

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

Batch BGH1166 - General Preparation

Blank (BGH1166-BLK1)

Prepared: 08/29/23 Analyzed: 08/30/23

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

LCS (BGH1166-BS1)

Prepared: 08/29/23 Analyzed: 08/30/23

Calcium	5.19	0.0500	mg/L wet	5.00		104	70-130			
Magnesium	5.36	0.0500	"	5.00		107	70-130			
Sodium	5.50	0.0500	"	5.00		110	70-130			

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Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
 Project Manager: Paul Henchan

Reported:
 09/20/23 16:43

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

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

Batch BGH1058 - General Preparation

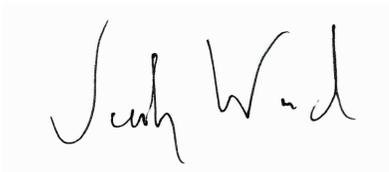
Duplicate (BGH1058-DUP1)

Source: 2308541-01

Prepared & Analyzed: 08/25/23

% Solids	84.9		%		84.7			0.252	20	
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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
 Project Manager: Paul Henchan

Reported:
 09/20/23 16:43

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 BGH1188 - General Preparation

Blank (BGH1188-BLK1)

Prepared: 08/29/23 Analyzed: 08/30/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGH1188-BS1)

Prepared: 08/29/23 Analyzed: 08/30/23

Specific Conductance (EC) 0.155 0.0100 mmhos/cm 0.150 104 95-105

Duplicate (BGH1188-DUP1)

Source: 2308546-01

Prepared: 08/29/23 Analyzed: 08/30/23

Specific Conductance (EC) 0.158 0.0100 mmhos/cm 0.158 0.00 20

Batch BGI0424 - General Preparation

Blank (BGI0424-BLK1)

Prepared & Analyzed: 09/14/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGI0424-BS1)

Prepared & Analyzed: 09/14/23

Specific Conductance (EC) 0.149 0.0100 mmhos/cm 0.150 99.6 95-105

Duplicate (BGI0424-DUP1)

Source: 2308546-03

Prepared & Analyzed: 09/14/23

Specific Conductance (EC) 2.80 0.0100 mmhos/cm 2.77 0.898 20

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
 Project Manager: Paul Henchan

Reported:
 09/20/23 16:43

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 BGH1189 - General Preparation

LCS (BGH1189-BS1)		Prepared: 08/29/23 Analyzed: 08/30/23								
pH	9.08		pH Units	9.18		98.9		95-105		
Duplicate (BGH1189-DUP1)		Source: 2308546-01		Prepared: 08/29/23 Analyzed: 08/30/23						
pH	8.57		pH Units		8.57			0.00		20

Batch BGI0309 - General Preparation

LCS (BGI0309-BS1)		Prepared & Analyzed: 09/12/23								
pH	9.25		pH Units	9.18		101		95-105		
Duplicate (BGI0309-DUP1)		Source: 2308174-05		Prepared & Analyzed: 09/12/23						
pH	8.84		pH Units		8.84			0.00		20

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Fremont Environmental
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Wellington CO, 80549

Project: Noble - Hansen O 1-23 Flowline

Project Number: CO23-232
Project Manager: Paul Henchan

Reported:
09/20/23 16:43

Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- QM-01 The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
- 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