

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 15, 2024

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - 70 Ranch USX BB09-99HZ Flowline

Work Order #2410142

Enclosed are the results of analyses for samples received by Summit Scientific on 10/09/24 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Natalie Tessier For Paul Shrewsbury

President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232

Project Manager: Paul Henchan

Reported:
10/15/24 10:15

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01RW - 3.0	2410142-01	Soil	10/09/24 00:00	10/09/24 16:30
FL02 - 3.0	2410142-02	Soil	10/09/24 00:00	10/09/24 16:30
FL03 - 3.0	2410142-03	Soil	10/09/24 00:00	10/09/24 16:30
FL04 - 3.0	2410142-04	Soil	10/09/24 00:00	10/09/24 16:30

Summit Scientific

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Client: Fremont	Project Manager: Paul Henehan	Send Data To:	Send Invoice To:
Address:	E-Mail: <u>Distribution list</u>	Company: <u>NOBLE / Chevron</u>	Project Name/Location: <u>70 RANCH USX 8809-9942</u>
City/State/Zip:	Project Name: <u>70 RANCH USX 8809-9942 Flowline</u>	AFE#:	PO/Billing Codes: <u>UWRWR-A4029-AES</u>
Phone: <u>813-514-7730</u>	Project Number: <u>CO24-232</u>	Contact: <u>Mike Montoya</u>	
Sampler Name: <u>Joshua Belangue</u>			

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Betc. N	TDT 16-36	TMS	915 metals	SAR, EC, BORON PH	
1	FLO1RW-3.0	10/9		2			X			X			X	X	X	X	X	
2	FLO2-3.0	↓		↓			X						X	X	X	X	X	
3	FLO3-3.0	↓		↓			X						X	X	X	X	X	
4	FLO4-3.0	↓		↓			X						X	X	X	X	X	
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Relinquished by: <u>Joshua Belangue</u>	Date/Time: <u>10/9 1400</u>	Received by: <u>Summit Worth</u>	Date/Time: <u>10/9 1400</u>	TAT Business Days	Field DO	Notes:
Relinquished by: <u>52</u>	Date/Time: <u>10/24 1030</u>	Received by: <u>[Signature]</u>	Date/Time: <u>10/24 11030</u>	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Temperature Upon Receipt: <u>8.7</u>	Corrected Temperature: <u>9</u>	IR gun #: <u>1</u>	HNO3 lot #: <u>1</u>	Standard	Field Turb.	

S₂

Sample Receipt Checklist

S2 Work Order# 2410142

Client: Fremont Client Project ID: TO Ranch USX BBO9-99H2 Flow/W

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

Control Form #: SRC-001

SN

Custodian Printed Name

10/9/24

Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 70 Ranch USX BB09-99HZ Flowline
Project Number: UWRWR-A4029-AES CO24-232
Project Manager: Paul Henchan

Reported:
10/15/24 10:15

FL01RW - 3.0
2410142-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHJ0390	10/10/24	10/10/24	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: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0420	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0413	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0408	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0388	10/10/24	10/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.51	76.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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10/15/24 10:15

FL01RW - 3.0
2410142-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0360	10/10/24	10/10/24	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: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0197	59.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0207	62.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ0370	10/10/24	10/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: UWRWR-A4029-AES CO24-232
Project Manager: Paul Henchan

Reported:
10/15/24 10:15

FL01RW - 3.0
2410142-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.69	0.200	mg/kg dry	1	BHJ0374	10/10/24	10/10/24	EPA 6020B	
Barium	54.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.18	0.400	"	"	"	"	"	"	
Lead	6.08	0.200	"	"	"	"	"	"	
Nickel	2.02	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	8.76	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ0364	10/10/24	10/10/24	EPA 7196A	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	14.0	0.0500	mg/L dry	1	BHJ0384	10/10/24	10/14/24	EPA 6020B	
Magnesium	8.30	0.0500	"	"	"	"	"	"	
Sodium	4.76	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.249	0.00100	units	1	BHJ0559	10/15/24	10/15/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Reported:
 10/15/24 10:15

FL01RW - 3.0
2410142-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.4		%	1	BHJ0356	10/10/24	10/10/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.103	0.0100	mmhos/cm	1	BHJ0385	10/10/24	10/11/24	EPA 120.1	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.72		pH Units	1	BHJ0386	10/10/24	10/11/24	EPA 9045D	

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Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
Project Manager: Paul Henchan

Reported:
10/15/24 10:15

FL02 - 3.0
2410142-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHJ0390	10/10/24	10/11/24	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: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0478	119 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0431	108 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0403	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0388	10/10/24	10/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.1	105 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project Number: UWRWR-A4029-AES CO24-232
Project Manager: Paul Henchan

Reported:
10/15/24 10:15

FL02 - 3.0
2410142-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0360	10/10/24	10/10/24	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: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0225	67.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0229	68.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ0370	10/10/24	10/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
Project Manager: Paul Henchan

Reported:
10/15/24 10:15

FL02 - 3.0
2410142-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.75	0.200	mg/kg dry	1	BHJ0374	10/10/24	10/10/24	EPA 6020B	
Barium	33.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	6.81	0.400	"	"	"	"	"	"	
Lead	3.68	0.200	"	"	"	"	"	"	
Nickel	4.68	0.400	"	"	"	"	"	"	
Silver	0.0763	0.0200	"	"	"	"	"	"	
Zinc	16.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ0364	10/10/24	10/10/24	EPA 7196A	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	28.4	0.0500	mg/L dry	1	BHJ0384	10/10/24	10/14/24	EPA 6020B	
Magnesium	9.01	0.0500	"	"	"	"	"	"	
Sodium	10.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.444	0.00100	units	1	BHJ0559	10/15/24	10/15/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
 Project Manager: Paul Henchan

Reported:
 10/15/24 10:15

FL02 - 3.0
2410142-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.5		%	1	BHJ0356	10/10/24	10/10/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.271	0.0100	mmhos/cm	1	BHJ0385	10/10/24	10/11/24	EPA 120.1	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.79		pH Units	1	BHJ0386	10/10/24	10/11/24	EPA 9045D	

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Project: Noble - 70 Ranch USX BB09-99HZ Flowline

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Project Manager: Paul Henchan

Reported:
10/15/24 10:15

FL03 - 3.0
2410142-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHJ0390	10/10/24	10/11/24	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: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0426	107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0411	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0398	99.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0388	10/10/24	10/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.7	102 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
Project Manager: Paul Henchan

Reported:
10/15/24 10:15

FL03 - 3.0
2410142-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0360	10/10/24	10/10/24	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: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0169	50.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0196	58.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ0370	10/10/24	10/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/09/24 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 - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
Project Manager: Paul Henchan

Reported:
10/15/24 10:15

FL03 - 3.0
2410142-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.06	0.200	mg/kg dry	1	BHJ0374	10/10/24	10/10/24	EPA 6020B	
Barium	67.4	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.76	0.400	"	"	"	"	"	"	
Lead	4.54	0.200	"	"	"	"	"	"	
Nickel	3.03	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	12.2	0.400	"	"	"	"	"	"	
Selenium	0.334	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ0364	10/10/24	10/10/24	EPA 7196A	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	17.8	0.0500	mg/L dry	1	BHJ0384	10/10/24	10/15/24	EPA 6020B	
Magnesium	4.00	0.0500	"	"	"	"	"	"	
Sodium	7.54	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.420	0.00100	units	1	BHJ0559	10/15/24	10/15/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
 Project Manager: Paul Henchan

Reported:
 10/15/24 10:15

FL03 - 3.0
2410142-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.0		%	1	BHJ0356	10/10/24	10/10/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.153	0.0100	mmhos/cm	1	BHJ0385	10/10/24	10/11/24	EPA 120.1	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.45		pH Units	1	BHJ0386	10/10/24	10/11/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
Project Manager: Paul Henchan

Reported:
10/15/24 10:15

FL04 - 3.0
2410142-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHJ0390	10/10/24	10/11/24	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: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0430	108 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0417	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0397	99.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0388	10/10/24	10/11/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.4	108 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
Project Manager: Paul Henchan

Reported:
10/15/24 10:15

FL04 - 3.0
2410142-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0360	10/10/24	10/10/24	EPA 8270D SIM	
Anthracene	0.0107	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0229	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0128	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0192	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.00796	0.00500	"	"	"	"	"	"	
Chrysene	0.0217	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0495	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.0102	0.00500	"	"	"	"	"	"	
Pyrene	0.0431	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0160	47.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0167	50.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ0370	10/10/24	10/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/09/24 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 - 70 Ranch USX BB09-99HZ Flowline
Project Number: UWRWR-A4029-AES CO24-232
Project Manager: Paul Henchan

Reported:
10/15/24 10:15

FL04 - 3.0
2410142-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.22	0.200	mg/kg dry	1	BHJ0374	10/10/24	10/10/24	EPA 6020B	
Barium	34.3	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.77	0.400	"	"	"	"	"	"	
Lead	3.64	0.200	"	"	"	"	"	"	
Nickel	2.39	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	10.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ0364	10/10/24	10/10/24	EPA 7196A	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	10.6	0.0500	mg/L dry	1	BHJ0384	10/10/24	10/14/24	EPA 6020B	
Magnesium	19.0	0.0500	"	"	"	"	"	"	
Sodium	1.65	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0702	0.00100	units	1	BHJ0559	10/15/24	10/15/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
 Project Manager: Paul Henchan

Reported:
 10/15/24 10:15

FL04 - 3.0
2410142-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.4		%	1	BHJ0356	10/10/24	10/10/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0744	0.0100	mmhos/cm	1	BHJ0385	10/10/24	10/11/24	EPA 120.1	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.71		pH Units	1	BHJ0386	10/10/24	10/11/24	EPA 9045D	

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Fremont Environmental
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Wellington CO, 80549

Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
Project Manager: Paul Henchan

Reported:
10/15/24 10:15

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 BHJ0390 - EPA 5030 Soil MS

Blank (BHJ0390-BLK1)

Prepared & Analyzed: 10/10/24

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	"								
Surrogate: 1,2-Dichloroethane-d4	0.0337		"	0.0400		84.3	50-150				
Surrogate: Toluene-d8	0.0418		"	0.0400		104	50-150				
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400		96.9	50-150				

LCS (BHJ0390-BS1)

Prepared & Analyzed: 10/10/24

Benzene	0.101	0.0020	mg/kg	0.100		101	70-130				
Toluene	0.103	0.0050	"	0.100		103	70-130				
Ethylbenzene	0.113	0.0050	"	0.100		113	70-130				
m,p-Xylene	0.216	0.010	"	0.200		108	70-130				
o-Xylene	0.105	0.0050	"	0.100		105	70-130				
1,2,4-Trimethylbenzene	0.108	0.0050	"	0.100		108	70-130				
1,3,5-Trimethylbenzene	0.113	0.0050	"	0.100		113	70-130				
Naphthalene	0.0861	0.0038	"	0.100		86.1	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0395		"	0.0400		98.8	50-150				
Surrogate: Toluene-d8	0.0405		"	0.0400		101	50-150				
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		99.9	50-150				

Matrix Spike (BHJ0390-MS1)

Source: 2410142-01

Prepared & Analyzed: 10/10/24

Benzene	0.108	0.0020	mg/kg	0.100	ND	108	70-130				
Toluene	0.110	0.0050	"	0.100	ND	110	70-130				
Ethylbenzene	0.121	0.0050	"	0.100	ND	121	70-130				
m,p-Xylene	0.230	0.010	"	0.200	ND	115	70-130				
o-Xylene	0.111	0.0050	"	0.100	ND	111	70-130				
1,2,4-Trimethylbenzene	0.113	0.0050	"	0.100	ND	113	70-130				
1,3,5-Trimethylbenzene	0.117	0.0050	"	0.100	ND	117	70-130				
Naphthalene	0.0913	0.0038	"	0.100	ND	91.3	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0423		"	0.0400		106	50-150				
Surrogate: Toluene-d8	0.0405		"	0.0400		101	50-150				
Surrogate: 4-Bromofluorobenzene	0.0421		"	0.0400		105	50-150				

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 Wellington CO, 80549

Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
 Project Manager: Paul Henchan

Reported:
 10/15/24 10:15

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 BHJ0390 - EPA 5030 Soil MS

Matrix Spike Dup (BHJ0390-MSD1)	Source: 2410142-01			Prepared & Analyzed: 10/10/24						
Benzene	0.113	0.0020	mg/kg	0.100	ND	113	70-130	4.52	30	
Toluene	0.116	0.0050	"	0.100	ND	116	70-130	5.48	30	
Ethylbenzene	0.122	0.0050	"	0.100	ND	122	70-130	0.591	30	
m,p-Xylene	0.235	0.010	"	0.200	ND	117	70-130	2.08	30	
o-Xylene	0.112	0.0050	"	0.100	ND	112	70-130	1.42	30	
1,2,4-Trimethylbenzene	0.114	0.0050	"	0.100	ND	114	70-130	0.977	30	
1,3,5-Trimethylbenzene	0.118	0.0050	"	0.100	ND	118	70-130	0.739	30	
Naphthalene	0.0889	0.0038	"	0.100	ND	88.9	70-130	2.63	30	
Surrogate: 1,2-Dichloroethane-d4	0.0412		"	0.0400		103	50-150			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0400		102	50-150			

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
 Project Manager: Paul Henchan

Reported:
 10/15/24 10:15

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 BHJ0388 - EPA 3550A

Blank (BHJ0388-BLK1)

Prepared: 10/10/24 Analyzed: 10/11/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	15.3		"	12.5		122		30-150		

LCS (BHJ0388-BS1)

Prepared: 10/10/24 Analyzed: 10/11/24

C10-C28 (DRO)	471	50	mg/kg	500		94.3		70-130		
Surrogate: <i>o</i> -Terphenyl	12.6		"	12.5		101		30-150		

Matrix Spike (BHJ0388-MS1)

Source: 2410142-01

Prepared: 10/10/24 Analyzed: 10/11/24

C10-C28 (DRO)	474	50	mg/kg	500	16.5	91.4		70-130		
Surrogate: <i>o</i> -Terphenyl	11.1		"	12.5		89.1		30-150		

Matrix Spike Dup (BHJ0388-MSD1)

Source: 2410142-01

Prepared: 10/10/24 Analyzed: 10/11/24

C10-C28 (DRO)	447	50	mg/kg	500	16.5	86.1		70-130	5.80	20
Surrogate: <i>o</i> -Terphenyl	10.9		"	12.5		87.3		30-150		

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
Project Manager: Paul Henchan

Reported:
10/15/24 10:15

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHJ0360 - EPA 5030 Soil MS

Blank (BHJ0360-BLK1)

Prepared & Analyzed: 10/10/24

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>	0.0223		"	0.0333		67.0		40-150		
<i>Surrogate: Fluoranthene-d10</i>	0.0242		"	0.0333		72.6		40-150		

LCS (BHJ0360-BS1)

Prepared & Analyzed: 10/10/24

Acenaphthene	0.0234	0.00500	mg/kg	0.0333		70.3		31-137		
Anthracene	0.0249	0.00500	"	0.0333		74.6		30-120		
Benzo (a) anthracene	0.0246	0.00500	"	0.0333		73.7		30-120		
Benzo (a) pyrene	0.0214	0.00500	"	0.0333		64.3		30-120		
Benzo (b) fluoranthene	0.0223	0.00500	"	0.0333		66.9		30-120		
Benzo (k) fluoranthene	0.0232	0.00500	"	0.0333		69.6		30-120		
Chrysene	0.0248	0.00500	"	0.0333		74.3		30-120		
Dibenz (a,h) anthracene	0.0188	0.00500	"	0.0333		56.4		30-120		
Fluoranthene	0.0241	0.00500	"	0.0333		72.2		30-120		
Fluorene	0.0240	0.00500	"	0.0333		72.0		30-120		
Indeno (1,2,3-cd) pyrene	0.0222	0.00500	"	0.0333		66.5		30-120		
Pyrene	0.0257	0.00500	"	0.0333		77.2		35-142		
1-Methylnaphthalene	0.0263	0.00500	"	0.0333		78.8		35-142		
2-Methylnaphthalene	0.0277	0.00500	"	0.0333		83.2		35-142		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0262		"	0.0333		78.7		40-150		
<i>Surrogate: Fluoranthene-d10</i>	0.0242		"	0.0333		72.6		40-150		

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Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
Project Manager: Paul Henchan

Reported:
10/15/24 10:15

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 BHJ0360 - EPA 5030 Soil MS

Matrix Spike (BHJ0360-MS1)	Source: 2410142-01			Prepared & Analyzed: 10/10/24						
Acenaphthene	0.0211	0.00500	mg/kg	0.0333	ND	63.4	31-137			
Anthracene	0.0219	0.00500	"	0.0333	ND	65.6	30-120			
Benzo (a) anthracene	0.0232	0.00500	"	0.0333	ND	69.7	30-120			
Benzo (a) pyrene	0.0203	0.00500	"	0.0333	ND	60.8	30-120			
Benzo (b) fluoranthene	0.0196	0.00500	"	0.0333	ND	58.8	30-120			
Benzo (k) fluoranthene	0.0195	0.00500	"	0.0333	ND	58.6	30-120			
Chrysene	0.0224	0.00500	"	0.0333	ND	67.3	30-120			
Dibenz (a,h) anthracene	0.0180	0.00500	"	0.0333	ND	54.1	30-120			
Fluoranthene	0.0212	0.00500	"	0.0333	ND	63.6	30-120			
Fluorene	0.0219	0.00500	"	0.0333	ND	65.8	30-120			
Indeno (1,2,3-cd) pyrene	0.0208	0.00500	"	0.0333	ND	62.5	30-120			
Pyrene	0.0239	0.00500	"	0.0333	ND	71.7	35-142			
1-Methylnaphthalene	0.0213	0.00500	"	0.0333	ND	63.8	15-130			
2-Methylnaphthalene	0.0220	0.00500	"	0.0333	ND	66.1	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0216</i>		<i>"</i>	<i>0.0333</i>		<i>64.7</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0215</i>		<i>"</i>	<i>0.0333</i>		<i>64.4</i>	<i>40-150</i>			

Matrix Spike Dup (BHJ0360-MSD1)	Source: 2410142-01			Prepared & Analyzed: 10/10/24						
Acenaphthene	0.0182	0.00500	mg/kg	0.0333	ND	54.6	31-137	14.9	30	
Anthracene	0.0195	0.00500	"	0.0333	ND	58.5	30-120	11.6	30	
Benzo (a) anthracene	0.0205	0.00500	"	0.0333	ND	61.4	30-120	12.7	30	
Benzo (a) pyrene	0.0178	0.00500	"	0.0333	ND	53.3	30-120	13.1	30	
Benzo (b) fluoranthene	0.0175	0.00500	"	0.0333	ND	52.6	30-120	11.0	30	
Benzo (k) fluoranthene	0.0172	0.00500	"	0.0333	ND	51.7	30-120	12.4	30	
Chrysene	0.0194	0.00500	"	0.0333	ND	58.1	30-120	14.6	30	
Dibenz (a,h) anthracene	0.0162	0.00500	"	0.0333	ND	48.7	30-120	10.5	30	
Fluoranthene	0.0184	0.00500	"	0.0333	ND	55.1	30-120	14.4	30	
Fluorene	0.0189	0.00500	"	0.0333	ND	56.6	30-120	15.1	30	
Indeno (1,2,3-cd) pyrene	0.0193	0.00500	"	0.0333	ND	57.9	30-120	7.76	30	
Pyrene	0.0194	0.00500	"	0.0333	ND	58.2	35-142	20.7	30	
1-Methylnaphthalene	0.0175	0.00500	"	0.0333	ND	52.5	15-130	19.4	50	
2-Methylnaphthalene	0.0179	0.00500	"	0.0333	ND	53.6	15-130	21.0	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0171</i>		<i>"</i>	<i>0.0333</i>		<i>51.4</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0186</i>		<i>"</i>	<i>0.0333</i>		<i>55.8</i>	<i>40-150</i>			

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
 Project Manager: Paul Henchan

Reported:
 10/15/24 10:15

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 BHJ0370 - EPA 3050B

Blank (BHJ0370-BLK1)

Prepared & Analyzed: 10/10/24

Boron ND 2.00 mg/L

LCS (BHJ0370-BS1)

Prepared & Analyzed: 10/10/24

Boron 5.11 2.00 mg/L 5.00 102 80-120

Duplicate (BHJ0370-DUP1)

Source: 2410133-01

Prepared & Analyzed: 10/10/24

Boron 0.118 2.00 mg/L 0.172 36.6 20 QR-01

Matrix Spike (BHJ0370-MS1)

Source: 2410133-01

Prepared & Analyzed: 10/10/24

Boron 5.07 2.00 mg/L 5.00 0.172 98.0 75-125

Matrix Spike Dup (BHJ0370-MSD1)

Source: 2410133-01

Prepared & Analyzed: 10/10/24

Boron 5.27 2.00 mg/L 5.00 0.172 102 75-125 3.85 25

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
Project Manager: Paul Henchan

Reported:
10/15/24 10:15

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHJ0374 - EPA 3050B

Blank (BHJ0374-BLK1)

Prepared & Analyzed: 10/10/24

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 (BHJ0374-BS1)

Prepared & Analyzed: 10/10/24

Arsenic	36.8	0.200	mg/kg wet	37.6	97.9	80-120
Barium	36.5	0.400	"	37.6	97.2	80-120
Cadmium	1.80	0.200	"	1.88	95.6	80-120
Copper	38.2	0.400	"	37.6	102	80-120
Lead	18.0	0.200	"	18.8	96.0	80-120
Nickel	37.9	0.400	"	37.6	101	80-120
Silver	1.81	0.0200	"	1.88	96.3	80-120
Zinc	37.9	0.400	"	37.6	101	80-120
Selenium	3.78	0.260	"	3.76	101	80-120

Duplicate (BHJ0374-DUP1)

Source: 2410127-01

Prepared & Analyzed: 10/10/24

Arsenic	3.76	0.200	mg/kg dry	3.80	1.08	20
Barium	121	0.400	"	132	8.33	20
Cadmium	0.224	0.200	"	0.197	12.8	20
Copper	4.69	0.400	"	4.80	2.20	20
Lead	8.67	0.200	"	7.24	18.0	20
Nickel	6.30	0.400	"	6.49	2.98	20
Silver	0.0351	0.0200	"	0.0404	14.0	20
Zinc	20.5	0.400	"	20.8	1.19	20
Selenium	ND	0.260	"	ND		20

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 Wellington CO, 80549

Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
 Project Manager: Paul Henchan

Reported:
 10/15/24 10:15

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 BHJ0374 - EPA 3050B

Matrix Spike (BHJ0374-MS1)

Source: 2410127-01

Prepared & Analyzed: 10/10/24

Arsenic	47.1	0.200	mg/kg dry	46.4	3.80	93.3	75-125			
Barium	160	0.400	"	46.4	132	60.4	75-125			QM-05
Cadmium	2.46	0.200	"	2.32	0.197	97.4	75-125			
Copper	23.8	0.400	"	46.4	4.80	41.0	75-125			QM-05
Lead	28.7	0.200	"	23.2	7.24	92.4	75-125			
Nickel	25.6	0.400	"	46.4	6.49	41.2	75-125			QM-05
Silver	2.23	0.0200	"	2.32	0.0404	94.1	75-125			
Zinc	40.3	0.400	"	46.4	20.8	42.2	75-125			QM-05
Selenium	3.58	0.260	"	4.64	ND	77.1	75-125			

Matrix Spike Dup (BHJ0374-MSD1)

Source: 2410127-01

Prepared & Analyzed: 10/10/24

Arsenic	46.5	0.200	mg/kg dry	45.7	3.80	93.4	75-125	1.28	25	
Barium	161	0.400	"	45.7	132	65.3	75-125	1.12	25	QM-05
Cadmium	2.37	0.200	"	2.29	0.197	95.3	75-125	3.45	25	
Copper	23.6	0.400	"	45.7	4.80	41.2	75-125	0.970	25	QM-05
Lead	28.1	0.200	"	22.9	7.24	91.3	75-125	2.00	25	
Nickel	25.5	0.400	"	45.7	6.49	41.5	75-125	0.590	25	QM-05
Silver	2.20	0.0200	"	2.29	0.0404	94.7	75-125	0.956	25	
Zinc	40.3	0.400	"	45.7	20.8	42.8	75-125	0.0726	25	QM-05
Selenium	3.53	0.260	"	4.57	ND	77.1	75-125	1.54	25	

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 Wellington CO, 80549

Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
 Project Manager: Paul Henchan

Reported:
 10/15/24 10:15

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BHJ0364 - 3060A Mod

Blank (BHJ0364-BLK1)

Prepared & Analyzed: 10/10/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHJ0364-BS1)

Prepared & Analyzed: 10/10/24

Chromium, Hexavalent 26.4 0.30 mg/kg wet 25.0 105 80-120

Duplicate (BHJ0364-DUP1)

Source: 2410133-01

Prepared & Analyzed: 10/10/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHJ0364-MS1)

Source: 2410133-01

Prepared & Analyzed: 10/10/24

Chromium, Hexavalent 29.4 0.30 mg/kg dry 27.2 ND 108 75-125

Matrix Spike Dup (BHJ0364-MSD1)

Source: 2410133-01

Prepared & Analyzed: 10/10/24

Chromium, Hexavalent 28.9 0.30 mg/kg dry 27.2 ND 106 75-125 1.68 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
 Project Manager: Paul Henchan

Reported:
 10/15/24 10:15

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 BHJ0384 - General Preparation

Blank (BHJ0384-BLK1)

Prepared: 10/10/24 Analyzed: 10/14/24

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

LCS (BHJ0384-BS1)

Prepared: 10/10/24 Analyzed: 10/14/24

Calcium	5.35	0.0500	mg/L wet	5.00		107	70-130			
Magnesium	5.58	0.0500	"	5.00		112	70-130			
Sodium	5.86	0.0500	"	5.00		117	70-130			

Summit Scientific

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 PO Box 1289
 Wellington CO, 80549

Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
 Project Manager: Paul Henchan

Reported:
 10/15/24 10:15

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 BHJ0356 - General Preparation

Duplicate (BHJ0356-DUP1)

Source: 2410141-01

Prepared & Analyzed: 10/10/24

% Solids	97.5		%		97.5			0.0133		20	
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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
 Project Manager: Paul Henchan

Reported:
 10/15/24 10:15

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 BHJ0385 - General Preparation

Blank (BHJ0385-BLK1)

Prepared: 10/10/24 Analyzed: 10/11/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHJ0385-BS1)

Prepared: 10/10/24 Analyzed: 10/11/24

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

Duplicate (BHJ0385-DUP1)

Source: 2410142-01

Prepared: 10/10/24 Analyzed: 10/11/24

Specific Conductance (EC) 0.103 0.0100 mmhos/cm 0.103 0.389 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
 Project Manager: Paul Henchan

Reported:
 10/15/24 10:15

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 BHJ0386 - General Preparation

LCS (BHJ0386-BS1)

Prepared: 10/10/24 Analyzed: 10/11/24

pH 9.20 pH Units 9.18 100 95-105

Duplicate (BHJ0386-DUP1)

Source: 2410142-01

Prepared: 10/10/24 Analyzed: 10/11/24

pH 8.95 pH Units 8.72 2.60 20

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Project: Noble - 70 Ranch USX BB09-99HZ Flowline

Project Number: UWRWR-A4029-AES CO24-232
Project Manager: Paul Henchan

Reported:
10/15/24 10:15

Notes and Definitions

- QR-01 Analyses are not controlled on RPD values from sample concentrations below the reporting limit. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- 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