

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

December 04, 2024

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Booth CC 31-17D Tank

Work Order #2410133

Enclosed are the results of analyses for samples received by Summit Scientific on 10/09/24 17:03. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Paul Shrewsbury

President



Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - Booth CC 31-17D Tank Project Number: UWRWE-A2250-ABN Project Manager: Paul Henchan	Reported: 12/04/24 12:23
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ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B02@7.0'	2410133-01	Soil	10/09/24 00:00	10/09/24 17:03
N02@6.0'	2410133-02	Soil	10/09/24 00:00	10/09/24 17:03
S01@6.0'	2410133-03	Soil	10/09/24 00:00	10/09/24 17:03
W02@6.0'	2410133-04	Soil	10/09/24 00:00	10/09/24 17:03

Case Narrative

This project has been renamed per client request on 12/4/2024.

This is a revision of the report originally sent on 10/11/2024 at 14:49 MT.

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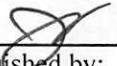
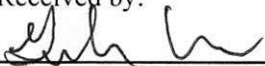
SUMMIT SCIENTIFIC

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

Lab ID	Page 1 of 1
2410133	

Client: Fremont Env		Send Data To:		Send Invoice To:	
Address:		Project Manager: Paul Henchan		Company: Noble	
City/State/Zip:		E-Mail: Paul.henchan@fremontenv.com		Project Name/Location:	
Phone:		jeff@fremontenv.com Ethel@fremontenv.com		AFE#:	
Sampler Name: JG		Project Name: Booth CC 31-71D Tank		PO/Billing Codes: UWRUE-12250-ABN	
		Project Number:		Contact:	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Air-Canister #	Other	Analysis Requested						Special Instructions
					HCl	HNO3	None	Other	Water	Soil			BTEX+N	TMBs (915)	DRO,ORO,GRO	PAHs (915)	EC1P4, SAR1, BOD5	Metals (915)	
1	Bo2@7.0'	10/9/24		2			X			X			X	X	X	X	X	X	
2	Soil No2@6.0'	↓		↓			↓			↓			↓	↓	↓	↓	↓	↓	
3	Soil@6.0'																		
4	Wo2@6.0'	↓		↓			↓			↓			↓	↓	↓	↓	↓	↓	
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by: 	Date/Time: 10/9/24	Received by: 	Date/Time: 10/9/24 17:03	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 10.30C	Corrected Temperature	IR gun #: 02	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2410133Client: Fremont Env. Client Project ID: Booth CC 31-71D TankShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐
☐ ☐ ☐ ☐ ☐
Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 6.39 Thermometer # 02

	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"/>	in ice
If custody seals are present, are they intact? ⁽¹⁾	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Same day
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


 Custodian Printed Name

10/9/21 17:03
 Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17D Tank

Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

B02@7.0'
2410133-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BHJ0348	10/09/24	10/09/24	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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0375	93.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0384	96.1 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0350	10/09/24	10/09/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

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

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	10.8	86.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project Manager: Paul Henchan

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B02@7.0'
2410133-01 (Soil)

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PAH by EPA Method 8270D SIM

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0358	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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0190	57.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0211	63.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

B02@7.0'
2410133-01 (Soil)

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Total Metals by EPA 6020B

Arsenic	2.52	0.200	mg/kg dry	1	BHJ0369	10/10/24	10/10/24	EPA 6020B
Barium	68.9	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	5.19	0.400	"	"	"	"	"	"
Lead	4.57	0.200	"	"	"	"	"	"
Nickel	6.03	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	26.2	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	48.6	0.0500	mg/L dry	1	BHJ0343	10/09/24	10/10/24	EPA 6020B	
Magnesium	11.5	0.0500	"	"	"	"	"	"	
Sodium	5.36	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	0.180	0.00100	units	1	BHJ0441	10/11/24	10/11/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

B02@7.0'
2410133-01 (Soil)

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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	91.8		%	1	BHJ0355	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)	0.197	0.0100	mmhos/cm	1	BHJ0352	10/09/24	10/10/24	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	8.54		pH Units	1	BHJ0351	10/09/24	10/10/24	EPA 9045D	

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Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

N02@6.0'
2410133-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHJ0348	10/09/24	10/09/24	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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0368	92.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0397	99.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0388	97.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0350	10/09/24	10/09/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.92	79.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

N02@6.0'
2410133-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0358	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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0217	65.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0240	72.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Wellington CO, 80549

Project: Noble - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

N02@6.0'
2410133-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.63	0.181	mg/kg dry	1	BHJ0369	10/10/24	10/10/24	EPA 6020B
Barium	46.3	0.362	"	"	"	"	"	"
Cadmium	ND	0.181	"	"	"	"	"	"
Copper	3.38	0.362	"	"	"	"	"	"
Lead	3.49	0.181	"	"	"	"	"	"
Nickel	3.70	0.362	"	"	"	"	"	"
Silver	ND	0.0181	"	"	"	"	"	"
Zinc	15.7	0.362	"	"	"	"	"	"
Selenium	ND	0.236	"	"	"	"	"	"

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	57.0	0.0500	mg/L dry	1	BHJ0343	10/09/24	10/10/24	EPA 6020B	
Magnesium	7.98	0.0500	"	"	"	"	"	"	
Sodium	4.34	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	0.143	0.00100	units	1	BHJ0441	10/11/24	10/11/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

N02@6.0'
2410133-02 (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	94.0		%	1	BHJ0355	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)	0.160	0.0100	mmhos/cm	1	BHJ0352	10/09/24	10/10/24	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	8.56		pH Units	1	BHJ0351	10/09/24	10/10/24	EPA 9045D	

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Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

S01@6.0'
2410133-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHJ0348	10/09/24	10/09/24	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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0380	94.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0406	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0386	96.5 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0350	10/09/24	10/09/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.5	91.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

S01@6.0'
2410133-03 (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	BHJ0358	10/10/24	10/11/24	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	0.0165	49.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0187	56.2 %	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: Noble - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

S01@6.0'
2410133-03 (Soil)

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Total Metals by EPA 6020B

Arsenic	1.41	0.181	mg/kg dry	1	BHJ0369	10/10/24	10/10/24	EPA 6020B
Barium	46.1	0.362	"	"	"	"	"	"
Cadmium	ND	0.181	"	"	"	"	"	"
Copper	3.01	0.362	"	"	"	"	"	"
Lead	2.92	0.181	"	"	"	"	"	"
Nickel	2.96	0.362	"	"	"	"	"	"
Silver	ND	0.0181	"	"	"	"	"	"
Zinc	13.6	0.362	"	"	"	"	"	"
Selenium	ND	0.236	"	"	"	"	"	"

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	2090	0.0500	mg/L dry	1	BHJ0343	10/09/24	10/10/24	EPA 6020B	
Magnesium	130	0.0500	"	"	"	"	"	"	
Sodium	3.88	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	0.0223	0.00100	units	1	BHJ0441	10/11/24	10/11/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: Noble - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

S01@6.0'
2410133-03 (Soil)

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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	94.6		%	1	BHJ0355	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)	0.178	0.0100	mmhos/cm	1	BHJ0352	10/09/24	10/10/24	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	8.56		pH Units	1	BHJ0351	10/09/24	10/10/24	EPA 9045D	

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Project: Noble - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

W02@6.0'
2410133-04 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHJ0348	10/09/24	10/09/24	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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0399	99.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0384	96.1 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0350	10/09/24	10/09/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.3	90.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Noble - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

W02@6.0'
2410133-04 (Soil)

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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	BHJ0358	10/10/24	10/11/24	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	0.0171	51.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0192	57.7 %	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 - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

W02@6.0'
2410133-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.66	0.200	mg/kg dry	1	BHJ0369	10/10/24	10/10/24	EPA 6020B
Barium	52.7	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.95	0.400	"	"	"	"	"	"
Lead	3.42	0.200	"	"	"	"	"	"
Nickel	3.28	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	13.9	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	1990	0.0500	mg/L dry	1	BHJ0343	10/09/24	10/10/24	EPA 6020B	
Magnesium	90.1	0.0500	"	"	"	"	"	"	
Sodium	9.48	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	0.0564	0.00100	units	1	BHJ0441	10/11/24	10/11/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: Noble - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

W02@6.0'
2410133-04 (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	94.6		%	1	BHJ0355	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)	0.156	0.0100	mmhos/cm	1	BHJ0352	10/09/24	10/10/24	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	8.69		pH Units	1	BHJ0351	10/09/24	10/10/24	EPA 9045D	

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Project: Noble - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BHJ0348 - EPA 5030 Soil MS

Blank (BHJ0348-BLK1)

Prepared: 10/09/24 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	0.0350		"	0.0400		87.4	50-150			
Surrogate: Toluene-d8	0.0403		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0400		96.8	50-150			

LCS (BHJ0348-BS1)

Prepared: 10/09/24 Analyzed: 10/10/24

Benzene	0.0886	0.0020	mg/kg	0.100		88.6	70-130			
Toluene	0.0871	0.0050	"	0.100		87.1	70-130			
Ethylbenzene	0.0887	0.0050	"	0.100		88.7	70-130			
m,p-Xylene	0.174	0.010	"	0.200		87.0	70-130			
o-Xylene	0.0893	0.0050	"	0.100		89.3	70-130			
1,2,4-Trimethylbenzene	0.0850	0.0050	"	0.100		85.0	70-130			
1,3,5-Trimethylbenzene	0.0855	0.0050	"	0.100		85.5	70-130			
Naphthalene	0.0810	0.0038	"	0.100		81.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0354		"	0.0400		88.4	50-150			
Surrogate: Toluene-d8	0.0400		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		98.9	50-150			

Matrix Spike (BHJ0348-MS1)

Source: 2410133-01

Prepared: 10/09/24 Analyzed: 10/10/24

Benzene	0.0821	0.0020	mg/kg	0.100	ND	82.1	70-130			
Toluene	0.0819	0.0050	"	0.100	ND	81.9	70-130			
Ethylbenzene	0.0807	0.0050	"	0.100	ND	80.7	70-130			
m,p-Xylene	0.157	0.010	"	0.200	ND	78.6	70-130			
o-Xylene	0.0790	0.0050	"	0.100	ND	79.0	70-130			
1,2,4-Trimethylbenzene	0.0754	0.0050	"	0.100	ND	75.4	70-130			
1,3,5-Trimethylbenzene	0.0775	0.0050	"	0.100	ND	77.5	70-130			
Naphthalene	0.0752	0.0038	"	0.100	ND	75.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0388		"	0.0400		97.0	50-150			
Surrogate: Toluene-d8	0.0408		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0400		99.8	50-150			

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Project: Noble - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BHJ0348 - EPA 5030 Soil MS

Matrix Spike Dup (BHJ0348-MSD1)

Source: 2410133-01

Prepared: 10/09/24 Analyzed: 10/10/24

Benzene	0.0803	0.0020	mg/kg	0.100	ND	80.3	70-130	2.18	30	
Toluene	0.0793	0.0050	"	0.100	ND	79.3	70-130	3.24	30	
Ethylbenzene	0.0807	0.0050	"	0.100	ND	80.7	70-130	0.0372	30	
m,p-Xylene	0.159	0.010	"	0.200	ND	79.5	70-130	1.18	30	
o-Xylene	0.0805	0.0050	"	0.100	ND	80.5	70-130	1.81	30	
1,2,4-Trimethylbenzene	0.0771	0.0050	"	0.100	ND	77.1	70-130	2.12	30	
1,3,5-Trimethylbenzene	0.0786	0.0050	"	0.100	ND	78.6	70-130	1.46	30	
Naphthalene	0.0740	0.0038	"	0.100	ND	74.0	70-130	1.65	30	
Surrogate: 1,2-Dichloroethane-d4	0.0376		"	0.0400		94.0	50-150			
Surrogate: Toluene-d8	0.0404		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.5	50-150			

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Project: Noble - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BHJ0350 - EPA 3550A

Blank (BHJ0350-BLK1)

Prepared: 10/09/24 Analyzed: 10/10/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	13.0		"	12.5		104	30-150			

LCS (BHJ0350-BS1)

Prepared: 10/09/24 Analyzed: 10/10/24

C10-C28 (DRO)	490	50	mg/kg	500		98.1	70-130			
Surrogate: o-Terphenyl	14.0		"	12.5		112	30-150			

Matrix Spike (BHJ0350-MS1)

Source: 2410133-01

Prepared: 10/09/24 Analyzed: 10/10/24

C10-C28 (DRO)	401	50	mg/kg	500	ND	80.1	70-130			
Surrogate: o-Terphenyl	14.3		"	12.5		115	30-150			

Matrix Spike Dup (BHJ0350-MSD1)

Source: 2410133-01

Prepared: 10/09/24 Analyzed: 10/10/24

C10-C28 (DRO)	414	50	mg/kg	500	ND	82.8	70-130	3.28	20	
Surrogate: o-Terphenyl	13.3		"	12.5		107	30-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHJ0358 - EPA 5030 Soil MS

Blank (BHJ0358-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	"							
Surrogate: 2-Methylnaphthalene-d10	0.0250		"	0.0333		74.9	40-150			
Surrogate: Fluoranthene-d10	0.0277		"	0.0333		83.1	40-150			

LCS (BHJ0358-BS1)

Prepared & Analyzed: 10/10/24

Acenaphthene	0.0218	0.00500	mg/kg	0.0333		65.3	31-137			
Anthracene	0.0223	0.00500	"	0.0333		67.0	30-120			
Benzo (a) anthracene	0.0230	0.00500	"	0.0333		68.9	30-120			
Benzo (a) pyrene	0.0215	0.00500	"	0.0333		64.5	30-120			
Benzo (b) fluoranthene	0.0217	0.00500	"	0.0333		65.1	30-120			
Benzo (k) fluoranthene	0.0218	0.00500	"	0.0333		65.4	30-120			
Chrysene	0.0229	0.00500	"	0.0333		68.8	30-120			
Dibenz (a,h) anthracene	0.0202	0.00500	"	0.0333		60.5	30-120			
Fluoranthene	0.0233	0.00500	"	0.0333		69.8	30-120			
Fluorene	0.0207	0.00500	"	0.0333		62.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0170	0.00500	"	0.0333		50.9	30-120			
Pyrene	0.0238	0.00500	"	0.0333		71.3	35-142			
1-Methylnaphthalene	0.0207	0.00500	"	0.0333		62.1	35-142			
2-Methylnaphthalene	0.0205	0.00500	"	0.0333		61.6	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0211		"	0.0333		63.3	40-150			
Surrogate: Fluoranthene-d10	0.0233		"	0.0333		69.8	40-150			

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Wellington CO, 80549

Project: Noble - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHJ0358 - EPA 5030 Soil MS

Matrix Spike (BHJ0358-MS1)

Source: 2410130-01

Prepared & Analyzed: 10/10/24

Acenaphthene	0.0170	0.00500	mg/kg	0.0333	ND	50.9	31-137		
Anthracene	0.0179	0.00500	"	0.0333	ND	53.8	30-120		
Benzo (a) anthracene	0.0182	0.00500	"	0.0333	ND	54.6	30-120		
Benzo (a) pyrene	0.0194	0.00500	"	0.0333	ND	58.1	30-120		
Benzo (b) fluoranthene	0.0186	0.00500	"	0.0333	ND	55.9	30-120		
Benzo (k) fluoranthene	0.0192	0.00500	"	0.0333	ND	57.6	30-120		
Chrysene	0.0178	0.00500	"	0.0333	ND	53.5	30-120		
Dibenz (a,h) anthracene	0.0182	0.00500	"	0.0333	ND	54.6	30-120		
Fluoranthene	0.0183	0.00500	"	0.0333	ND	54.9	30-120		
Fluorene	0.0167	0.00500	"	0.0333	ND	50.0	30-120		
Indeno (1,2,3-cd) pyrene	0.0143	0.00500	"	0.0333	ND	42.8	30-120		
Pyrene	0.0189	0.00500	"	0.0333	ND	56.8	35-142		
1-Methylnaphthalene	0.0149	0.00500	"	0.0333	ND	44.7	15-130		
2-Methylnaphthalene	0.0149	0.00500	"	0.0333	0.00577	27.4	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0153		"	0.0333		45.8	40-150		
Surrogate: Fluoranthene-d10	0.0187		"	0.0333		56.2	40-150		

Matrix Spike Dup (BHJ0358-MSD1)

Source: 2410130-01

Prepared & Analyzed: 10/10/24

Acenaphthene	0.0159	0.00500	mg/kg	0.0333	ND	47.8	31-137	6.31	30
Anthracene	0.0169	0.00500	"	0.0333	ND	50.8	30-120	5.78	30
Benzo (a) anthracene	0.0172	0.00500	"	0.0333	ND	51.7	30-120	5.33	30
Benzo (a) pyrene	0.0197	0.00500	"	0.0333	ND	59.1	30-120	1.87	30
Benzo (b) fluoranthene	0.0188	0.00500	"	0.0333	ND	56.4	30-120	1.00	30
Benzo (k) fluoranthene	0.0193	0.00500	"	0.0333	ND	57.8	30-120	0.267	30
Chrysene	0.0164	0.00500	"	0.0333	ND	49.3	30-120	8.12	30
Dibenz (a,h) anthracene	0.0184	0.00500	"	0.0333	ND	55.1	30-120	0.876	30
Fluoranthene	0.0168	0.00500	"	0.0333	ND	50.5	30-120	8.41	30
Fluorene	0.0155	0.00500	"	0.0333	ND	46.6	30-120	7.07	30
Indeno (1,2,3-cd) pyrene	0.0139	0.00500	"	0.0333	ND	41.7	30-120	2.70	30
Pyrene	0.0177	0.00500	"	0.0333	ND	53.1	35-142	6.80	30
1-Methylnaphthalene	0.0148	0.00500	"	0.0333	ND	44.4	15-130	0.633	50
2-Methylnaphthalene	0.0142	0.00500	"	0.0333	0.00577	25.4	15-130	4.70	50
Surrogate: 2-Methylnaphthalene-d10	0.0146		"	0.0333		43.9	40-150		
Surrogate: Fluoranthene-d10	0.0169		"	0.0333		50.8	40-150		

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

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

Batch 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 - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHJ0369 - EPA 3050B

Blank (BHJ0369-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 (BHJ0369-BS1)

Prepared & Analyzed: 10/10/24

Arsenic	36.1	0.200	mg/kg wet	39.4	91.7	80-120
Barium	34.7	0.400	"	39.4	88.1	80-120
Cadmium	1.77	0.200	"	1.97	90.1	80-120
Copper	35.9	0.400	"	39.4	91.3	80-120
Lead	17.8	0.200	"	19.7	90.4	80-120
Nickel	36.1	0.400	"	39.4	91.7	80-120
Silver	1.79	0.0200	"	1.97	90.8	80-120
Zinc	36.2	0.400	"	39.4	91.9	80-120
Selenium	3.98	0.260	"	3.94	101	80-120

Duplicate (BHJ0369-DUP1)

Source: 2410133-01

Prepared & Analyzed: 10/10/24

Arsenic	2.54	0.200	mg/kg dry	2.52	0.512	20
Barium	76.5	0.400	"	68.9	10.5	20
Cadmium	0.0557	0.200	"	0.0558	0.0727	20
Copper	5.29	0.400	"	5.19	1.92	20
Lead	4.81	0.200	"	4.57	5.05	20
Nickel	6.26	0.400	"	6.03	3.63	20
Silver	0.0169	0.0200	"	0.0170	0.618	20
Zinc	27.9	0.400	"	26.2	6.27	20
Selenium	ND	0.260	"	ND		20

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHJ0369 - EPA 3050B

Matrix Spike (BHJ0369-MS1)

Source: 2410133-01

Prepared & Analyzed: 10/10/24

Arsenic	38.8	0.200	mg/kg dry	39.8	2.52	91.3	75-125
Barium	111	0.400	"	39.8	68.9	107	75-125
Cadmium	1.84	0.200	"	1.99	0.0558	89.7	75-125
Copper	41.3	0.400	"	39.8	5.19	90.9	75-125
Lead	20.9	0.200	"	19.9	4.57	82.2	75-125
Nickel	42.8	0.400	"	39.8	6.03	92.5	75-125
Silver	1.83	0.0200	"	1.99	0.0170	91.0	75-125
Zinc	63.6	0.400	"	39.8	26.2	94.2	75-125
Selenium	3.79	0.260	"	3.98	ND	95.3	75-125

Matrix Spike Dup (BHJ0369-MSD1)

Source: 2410133-01

Prepared & Analyzed: 10/10/24

Arsenic	38.1	0.200	mg/kg dry	41.3	2.52	86.2	75-125	1.92	25
Barium	104	0.400	"	41.3	68.9	86.2	75-125	6.32	25
Cadmium	1.93	0.200	"	2.06	0.0558	90.9	75-125	4.83	25
Copper	40.1	0.400	"	41.3	5.19	84.5	75-125	3.11	25
Lead	20.7	0.200	"	20.6	4.57	77.9	75-125	1.21	25
Nickel	42.2	0.400	"	41.3	6.03	87.7	75-125	1.36	25
Silver	1.81	0.0200	"	2.06	0.0170	87.1	75-125	0.643	25
Zinc	62.0	0.400	"	41.3	26.2	86.8	75-125	2.63	25
Selenium	3.79	0.260	"	4.13	ND	91.9	75-125	0.0326	25

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

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 - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

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

Summit Scientific

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

Batch BHJ0343 - General Preparation

Blank (BHJ0343-BLK1)

Prepared: 10/09/24 Analyzed: 10/10/24

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

LCS (BHJ0343-BS1)

Prepared: 10/09/24 Analyzed: 10/10/24

Calcium	5.18	0.0500	mg/L wet	5.00	104	70-130
Magnesium	5.04	0.0500	"	5.00	101	70-130
Sodium	5.24	0.0500	"	5.00	105	70-130

Summit Scientific

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Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - Booth CC 31-17D Tank Project Number: UWRWE-A2250-ABN Project Manager: Paul Henchan	Reported: 12/04/24 12:23
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Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

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

Batch BHJ0355 - General Preparation

Duplicate (BHJ0355-DUP1)	Source: 2410133-01			Prepared & Analyzed: 10/10/24						
% Solids	91.7		%		91.8			0.0657	20	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17D Tank
Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

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

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

Batch BHJ0352 - General Preparation

Blank (BHJ0352-BLK1)

Prepared: 10/09/24 Analyzed: 10/10/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHJ0352-BS1)

Prepared: 10/09/24 Analyzed: 10/10/24

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

Duplicate (BHJ0352-DUP1)

Source: 2410125-01

Prepared: 10/09/24 Analyzed: 10/10/24

Specific Conductance (EC) 2.86 0.0100 mmhos/cm 2.90 1.25 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17D Tank

Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

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

Summit Scientific

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

Batch BHJ0351 - General Preparation

LCS (BHJ0351-BS1)

Prepared: 10/09/24 Analyzed: 10/10/24

pH	9.19	pH Units	9.18	100	95-105
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Duplicate (BHJ0351-DUP1)

Source: 2410125-01

Prepared: 10/09/24 Analyzed: 10/10/24

pH	8.09	pH Units	8.05	0.496	20
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17D Tank

Project Number: UWRWE-A2250-ABN
Project Manager: Paul Henchan

Reported:
12/04/24 12:23

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.
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