

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 26, 2023

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Barton C 15-19 Facility

Work Order #2310297

Enclosed are the results of analyses for samples received by Summit Scientific on 10/16/23 16:30. 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 - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PWV FLOOR 5FT	2310297-01	Soil	10/14/23 00:00	10/16/23 16:30
AST W CEN. SURF.	2310297-02	Soil	10/14/23 00:00	10/16/23 16:30
AST E CEN. SURF.	2310297-03	Soil	10/14/23 00:00	10/16/23 16:30
N Dump 2FT	2310297-04	Soil	10/14/23 00:00	10/16/23 16:30
S Dump 2FT	2310297-05	Soil	10/14/23 00:00	10/16/23 16:30
N SEP RISER 3FT	2310297-06	Soil	10/14/23 00:00	10/16/23 16:30
S SEP RISER 3FT	2310297-07	Soil	10/14/23 00:00	10/16/23 16:30

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

Lab ID	Page 1 of 1
2310297	

Send Data To:		Send Invoice To:	
Client: Fremont Environmental, Inc.	Project Manager: Henehan	Company: Chevron	
Address: 8305 6th St.,	E-Mail: Fremont Distribution List	Project Name/Location:	
City/State/Zip: Wellington, CO, 80549		AFE#:	
Phone: 603-477-6907	Project Name: Noble - Barton C15-19 (Facility)	PO/Billing Codes: UWRWE - A2428 - ABN	
Sampler Name: Ethan Black	Project Number:	Contact: Mike Montoya	

					Preservative				Matrix			Analysis Requested						Special Instructions		
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other _____	Water	Soil	Air-Canister #	Other _____	BTEX, Naphthalene, TMBs	TPH (C6-C36)	PAH	SAR, EC, pH, Boron	TDS, Chloride, Sulfate	Metals (915-1)		
1	PWV Floor SFT	10/14/23		2			X			X			X	X	X	X		X		
2	AST W CEN. SURF.																			
3	AST E CEN. SURF.																			
4	N Dump 2FT																			
5	S Dump 2FT																			
6	N SEP Riser 3FT																			
7	S SEP Riser 3FT																			
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by: <u>Ethan Black</u>	Date/Time: <u>10/16/23</u> 0630	Received by: <u>S2</u>	Date/Time: <u>10/16/23</u> 0630	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <u>SL</u>	Date/Time: <u>10/16/23</u> 1030	Received by: <u>[Signature]</u>	Date/Time: <u>10/16/23</u> 1030	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by: <u>[Signature]</u>	Date/Time: <u>10/16/23</u> 1030	Received by: <u>[Signature]</u>	Date/Time: <u>10/16/23</u> 1030	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: <u>10.9</u>	Corrected Temperature: <u>0</u>	IR gun #: <u>1</u>	HNO3 lot #: <u></u>			

S₂

Sample Receipt Checklist

S2 Work Order# 2310297Client: FremontClient Project ID: Noble-Barton CR-19 (Facility)Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐

Airbill #: _____

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------	--------------------------	--------------------------

Matrix (Check all that apply)

Air

☐

Solid/Solid

☐

Water

☐

Other

☐

Temp (°C)

10.9

Thermometer #

1

	Yes	No	N/A	Comments (If any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	at JOE
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 checked="" type="checkbox"/>	<input type="checkbox"/>	no time stamps
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.				

Custodian Printed Name

Date/Time

AS

10/10/23



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

PWV FLOOR 5FT
2310297-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BGJ0679	10/17/23	10/18/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0405	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0426	107 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0512	128 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BGJ0678	10/17/23	10/19/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	9.89	79.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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2310297-01 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BGJ0661	10/17/23	10/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0152	45.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0172	51.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BGJ0839	10/20/23	10/24/23	EPA 6020B	

Total Metals by EPA 6020B

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PWV FLOOR 5FT
2310297-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.50	0.200	mg/kg dry	1	BGJ0924	10/24/23	10/25/23	EPA 6020B	
Barium	156	0.400	"	"	"	"	"	"	
Cadmium	0.238	0.200	"	"	"	"	"	"	
Copper	4.91	0.400	"	"	"	"	"	"	
Lead	7.51	0.200	"	"	"	"	"	"	
Nickel	1.96	0.400	"	"	"	"	"	"	
Silver	0.0390	0.0200	"	"	"	"	"	"	
Zinc	18.3	0.400	"	"	"	"	"	"	
Selenium	0.511	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGJ0881	10/23/23	10/23/23	EPA 7196A	

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

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	50.9	0.0500	mg/L dry	1	BGJ0842	10/20/23	10/24/23	EPA 6020B	
Magnesium	34.7	0.0500	"	"	"	"	"	"	
Sodium	190	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	5.03	0.00100	units	1	BGJ1015	10/25/23	10/25/23	Calculation	

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PWV FLOOR 5FT
2310297-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	84.1			%	1	BGJ0973	10/25/23	10/25/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	1.34	0.0100		mmhos/cm	1	BGJ0894	10/23/23	10/23/23	EPA 120.1	

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

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.88			pH Units	1	BGJ0895	10/23/23	10/23/23	EPA 9045D	

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Reported:
10/26/23 15:22

AST W CEN. SURF.
2310297-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGJ0679	10/17/23	10/18/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0454	114 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0421	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGJ0678	10/17/23	10/19/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.2	114 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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AST W CEN. SURF.
2310297-02 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BGJ0661	10/17/23	10/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0151	45.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0234	70.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BGJ0839	10/20/23	10/24/23	EPA 6020B	

Total Metals by EPA 6020B

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10/26/23 15:22

AST W CEN. SURF.
2310297-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.622	0.200	mg/kg dry	1	BGJ0924	10/24/23	10/25/23	EPA 6020B	
Barium	6.97	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.22	0.400	"	"	"	"	"	"	
Lead	0.867	0.200	"	"	"	"	"	"	
Nickel	ND	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	5.04	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGJ0881	10/23/23	10/23/23	EPA 7196A	

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

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	62.5	0.0500	mg/L dry	1	BGJ0842	10/20/23	10/24/23	EPA 6020B	
Magnesium	21.0	0.0500	"	"	"	"	"	"	
Sodium	83.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	2.34	0.00100	units	1	BGJ1015	10/25/23	10/25/23	Calculation	

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Project: Noble - Barton C 15-19 Facility
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10/26/23 15:22

AST W CEN. SURF.
2310297-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	97.9			%	1	BGJ0973	10/25/23	10/25/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	1.01	0.0100		mmhos/cm	1	BGJ0894	10/23/23	10/23/23	EPA 120.1	

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

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.65			pH Units	1	BGJ0895	10/23/23	10/23/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

AST E CEN. SURE.
2310297-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGJ0679	10/17/23	10/18/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0486	121 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0411	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0388	96.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGJ0678	10/17/23	10/19/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.90	71.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

AST E CEN. SURF.
2310297-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BGJ0661	10/17/23	10/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0142	42.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0175	52.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BGJ0839	10/20/23	10/24/23	EPA 6020B	

Total Metals by EPA 6020B

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Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

AST E CEN. SURE.
2310297-03 (Soil)

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Total Metals by EPA 6020B

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.891	0.200	mg/kg dry	1	BGJ0924	10/24/23	10/25/23	EPA 6020B	
Barium	65.1	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.49	0.400	"	"	"	"	"	"	
Lead	3.99	0.200	"	"	"	"	"	"	
Nickel	0.403	0.400	"	"	"	"	"	"	
Silver	0.0241	0.0200	"	"	"	"	"	"	
Zinc	10.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGJ0881	10/23/23	10/23/23	EPA 7196A	

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

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	62.9	0.0500	mg/L dry	1	BGJ0842	10/20/23	10/24/23	EPA 6020B	
Magnesium	25.2	0.0500	"	"	"	"	"	"	
Sodium	130	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	3.50	0.00100	units	1	BGJ1015	10/25/23	10/25/23	Calculation	

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Project Manager: Paul Henchan

Reported:
10/26/23 15:22

AST E CEN. SURE.
2310297-03 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	86.4			%	1	BGJ0973	10/25/23	10/25/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	1.11	0.0100		mmhos/cm	1	BGJ0894	10/23/23	10/23/23	EPA 120.1	

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

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.02			pH Units	1	BGJ0895	10/23/23	10/23/23	EPA 9045D	

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Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

N Dump 2FT
2310297-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGJ0679	10/17/23	10/18/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0456	114 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0391	97.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGJ0678	10/17/23	10/19/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/14/23 00:00**

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

PAH by EPA Method 8270D SIM

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Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
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Reported:
10/26/23 15:22

N Dump 2FT
2310297-04 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BGJ0661	10/17/23	10/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0145	43.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0156	46.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BGJ0839	10/20/23	10/24/23	EPA 6020B	

Total Metals by EPA 6020B

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N Dump 2FT
2310297-04 (Soil)

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Total Metals by EPA 6020B

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.25	0.200	mg/kg dry	1	BGJ0924	10/24/23	10/25/23	EPA 6020B	
Barium	82.3	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.11	0.400	"	"	"	"	"	"	
Lead	4.54	0.200	"	"	"	"	"	"	
Nickel	0.592	0.400	"	"	"	"	"	"	
Silver	0.0255	0.0200	"	"	"	"	"	"	
Zinc	11.5	0.400	"	"	"	"	"	"	
Selenium	0.477	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGJ0881	10/23/23	10/23/23	EPA 7196A	

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

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	413	0.0500	mg/L dry	1	BGJ0842	10/20/23	10/24/23	EPA 6020B	
Magnesium	84.8	0.0500	"	"	"	"	"	"	
Sodium	218	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	2.55	0.00100	units	1	BGJ1015	10/25/23	10/25/23	Calculation	

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10/26/23 15:22

N Dump 2FT
2310297-04 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.2		%	1	BGJ0973	10/25/23	10/25/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.95	0.0100	mmhos/cm	1	BGJ0894	10/23/23	10/23/23	EPA 120.1	

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

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.79		pH Units	1	BGJ0895	10/23/23	10/23/23	EPA 9045D	

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Project Number: UWRWE-A2428-ABN
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Reported:
10/26/23 15:22

S Dump 2FT
2310297-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGJ0679	10/17/23	10/18/23	EPA 8260B	
Toluene	0.013	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.015	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: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0393	98.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0413	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0394	98.5 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGJ0678	10/17/23	10/19/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.6	101 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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S Dump 2FT
2310297-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BGJ0661	10/17/23	10/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0137	41.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0162	48.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BGJ0839	10/20/23	10/24/23	EPA 6020B	

Total Metals by EPA 6020B

Summit Scientific

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Project Number: UWRWE-A2428-ABN
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10/26/23 15:22

S Dump 2FT
2310297-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.19	0.200	mg/kg dry	1	BGJ0924	10/24/23	10/25/23	EPA 6020B	
Barium	44.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.44	0.400	"	"	"	"	"	"	
Lead	2.92	0.200	"	"	"	"	"	"	
Nickel	ND	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	9.67	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGJ0881	10/23/23	10/23/23	EPA 7196A	

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

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	150	0.0500	mg/L dry	1	BGJ0842	10/20/23	10/24/23	EPA 6020B	
Magnesium	45.0	0.0500	"	"	"	"	"	"	
Sodium	237	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	4.36	0.00100	units	1	BGJ1015	10/25/23	10/25/23	Calculation	

Summit Scientific

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PO Box 1289
Wellington CO, 80549

Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

S Dump 2FT
2310297-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.6		%	1	BGJ0973	10/25/23	10/25/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.84	0.0100	mmhos/cm	1	BGJ0894	10/23/23	10/23/23	EPA 120.1	

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

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.93		pH Units	1	BGJ0895	10/23/23	10/23/23	EPA 9045D	

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Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

N SEP RISER 3FT
2310297-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGJ0679	10/17/23	10/18/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0473	118 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0411	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0386	96.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGJ0678	10/17/23	10/19/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/14/23 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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Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

N SEP RISER 3FT
2310297-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGJ0661	10/17/23	10/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0184	55.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0198	59.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGJ0839	10/20/23	10/24/23	EPA 6020B	

Total Metals by EPA 6020B

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Wellington CO, 80549

Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

N SEP RISER 3FT
2310297-06 (Soil)

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Total Metals by EPA 6020B

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.989	0.200	mg/kg dry	1	BGJ0924	10/24/23	10/25/23	EPA 6020B	
Barium	33.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.84	0.400	"	"	"	"	"	"	
Lead	2.53	0.200	"	"	"	"	"	"	
Nickel	ND	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	8.38	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGJ0881	10/23/23	10/23/23	EPA 7196A	

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

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	142	0.0500	mg/L dry	1	BGJ0842	10/20/23	10/24/23	EPA 6020B	
Magnesium	33.8	0.0500	"	"	"	"	"	"	
Sodium	118	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	2.31	0.00100	units	1	BGJ1015	10/25/23	10/25/23	Calculation	

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Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

N SEP RISER 3FT
2310297-06 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.3		%	1	BGJ0973	10/25/23	10/25/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.51	0.0100	mmhos/cm	1	BGJ0894	10/23/23	10/23/23	EPA 120.1	

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

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.87		pH Units	1	BGJ0895	10/23/23	10/23/23	EPA 9045D	

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Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

S SEP RISER 3FT
2310297-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGJ0679	10/17/23	10/18/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0360	90.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	98.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0388	97.1 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGJ0678	10/17/23	10/19/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.7	85.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

S SEP RISER 3FT
2310297-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGJ0661	10/17/23	10/19/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0152	45.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0183	54.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGJ0839	10/20/23	10/24/23	EPA 6020B	

Total Metals by EPA 6020B

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Reported:
10/26/23 15:22

S SEP RISER 3FT
2310297-07 (Soil)

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Total Metals by EPA 6020B

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.08	0.200	mg/kg dry	1	BGJ0924	10/24/23	10/25/23	EPA 6020B	
Barium	43.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.37	0.400	"	"	"	"	"	"	
Lead	3.12	0.200	"	"	"	"	"	"	
Nickel	0.401	0.400	"	"	"	"	"	"	
Silver	0.0261	0.0200	"	"	"	"	"	"	
Zinc	10.1	0.400	"	"	"	"	"	"	
Selenium	0.266	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGJ0881	10/23/23	10/23/23	EPA 7196A	

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

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	68.9	0.0500	mg/L dry	1	BGJ0842	10/20/23	10/25/23	EPA 6020B	
Magnesium	10.6	0.0500	"	"	"	"	"	"	
Sodium	17.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	0.521	0.00100	units	1	BGJ1015	10/25/23	10/25/23	Calculation	

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Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

S SEP RISER 3FT
2310297-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	93.5			%	1	BGJ0973	10/25/23	10/25/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.546	0.0100		mmhos/cm	1	BGJ0894	10/23/23	10/23/23	EPA 120.1	

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

Date Sampled: **10/14/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.91			pH Units	1	BGJ0895	10/23/23	10/23/23	EPA 9045D	

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Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

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 BGJ0679 - EPA 5030 Soil MS

Blank (BGJ0679-BLK1)

Prepared: 10/17/23 Analyzed: 10/18/23

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0386		"	0.0400		96.4	50-150			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400		98.2	50-150			

LCS (BGJ0679-BS1)

Prepared: 10/17/23 Analyzed: 10/18/23

Benzene	0.109	0.0020	mg/kg	0.100		109	70-130			
Toluene	0.108	0.0050	"	0.100		108	70-130			
Ethylbenzene	0.103	0.0050	"	0.100		103	70-130			
m,p-Xylene	0.204	0.010	"	0.200		102	70-130			
o-Xylene	0.101	0.0050	"	0.100		101	70-130			
1,2,4-Trimethylbenzene	0.0962	0.0050	"	0.100		96.2	70-130			
1,3,5-Trimethylbenzene	0.0975	0.0050	"	0.100		97.5	70-130			
Naphthalene	0.0862	0.0038	"	0.100		86.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0385		"	0.0400		96.2	50-150			
Surrogate: Toluene-d8	0.0404		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0379		"	0.0400		94.8	50-150			

Matrix Spike (BGJ0679-MS1)

Source: 2310291-01

Prepared: 10/17/23 Analyzed: 10/18/23

Benzene	0.0943	0.0020	mg/kg	0.100	ND	94.3	70-130			
Toluene	0.0846	0.0050	"	0.100	ND	84.6	70-130			
Ethylbenzene	0.0796	0.0050	"	0.100	ND	79.6	70-130			
m,p-Xylene	0.159	0.010	"	0.200	ND	79.3	70-130			
o-Xylene	0.0821	0.0050	"	0.100	ND	82.1	70-130			
1,2,4-Trimethylbenzene	0.0991	0.0050	"	0.100	ND	99.1	70-130			
1,3,5-Trimethylbenzene	0.0729	0.0050	"	0.100	ND	72.9	70-130			
Naphthalene	0.118	0.0038	"	0.100	ND	118	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0463		"	0.0400		116	50-150			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0390		"	0.0400		97.5	50-150			

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Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

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 BGJ0679 - EPA 5030 Soil MS

Matrix Spike Dup (BGJ0679-MSD1)		Source: 2310291-01		Prepared: 10/17/23		Analyzed: 10/18/23				
Benzene	0.0865	0.0020	mg/kg	0.100	ND	86.5	70-130	8.63	30	
Toluene	0.0752	0.0050	"	0.100	ND	75.2	70-130	11.8	30	
Ethylbenzene	0.0721	0.0050	"	0.100	ND	72.1	70-130	9.85	30	
m,p-Xylene	0.147	0.010	"	0.200	ND	73.5	70-130	7.58	30	
o-Xylene	0.0751	0.0050	"	0.100	ND	75.1	70-130	8.97	30	
1,2,4-Trimethylbenzene	0.0915	0.0050	"	0.100	ND	91.5	70-130	7.97	30	
1,3,5-Trimethylbenzene	0.0959	0.0050	"	0.100	ND	95.9	70-130	27.2	30	
Naphthalene	0.108	0.0038	"	0.100	ND	108	70-130	8.35	30	
<hr/>										
Surrogate: 1,2-Dichloroethane-d4	0.0458		"	0.0400		114	50-150			
Surrogate: Toluene-d8	0.0394		"	0.0400		98.6	50-150			
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0400		96.8	50-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

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 BGJ0678 - EPA 3550A

Blank (BGJ0678-BLK1)

Prepared: 10/17/23 Analyzed: 10/18/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	12.4		"	12.5		99.2	30-150			

LCS (BGJ0678-BS1)

Prepared: 10/17/23 Analyzed: 10/18/23

C10-C28 (DRO)	553	50	mg/kg	500		111	70-130			
Surrogate: o-Terphenyl	12.3		"	12.5		98.2	30-150			

Matrix Spike (BGJ0678-MS1)

Source: 2310291-01

Prepared: 10/17/23 Analyzed: 10/18/23

C10-C28 (DRO)	418	50	mg/kg	500	16.1	80.4	70-130			
Surrogate: o-Terphenyl	9.60		"	12.5		76.8	30-150			

Matrix Spike Dup (BGJ0678-MSD1)

Source: 2310291-01

Prepared: 10/17/23 Analyzed: 10/19/23

C10-C28 (DRO)	450	50	mg/kg	500	16.1	86.8	70-130	7.31	20	
Surrogate: o-Terphenyl	11.7		"	12.5		93.5	30-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

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 BGJ0661 - EPA 5030 Soil MS

Blank (BGJ0661-BLK1)

Prepared: 10/17/23 Analyzed: 10/18/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0324		"	0.0333		97.2	40-150			
Surrogate: Fluoranthene-d10	0.0360		"	0.0333		108	40-150			

LCS (BGJ0661-BS1)

Prepared: 10/17/23 Analyzed: 10/18/23

Acenaphthene	0.0337	0.00500	mg/kg	0.0333	101	31-137
Anthracene	0.0351	0.00500	"	0.0333	105	30-120
Benzo (a) anthracene	0.0339	0.00500	"	0.0333	102	30-120
Benzo (a) pyrene	0.0326	0.00500	"	0.0333	97.7	30-120
Benzo (b) fluoranthene	0.0333	0.00500	"	0.0333	99.9	30-120
Benzo (k) fluoranthene	0.0342	0.00500	"	0.0333	103	30-120
Chrysene	0.0356	0.00500	"	0.0333	107	30-120
Dibenz (a,h) anthracene	0.0306	0.00500	"	0.0333	91.9	30-120
Fluoranthene	0.0350	0.00500	"	0.0333	105	30-120
Fluorene	0.0337	0.00500	"	0.0333	101	30-120
Indeno (1,2,3-cd) pyrene	0.0302	0.00500	"	0.0333	90.6	30-120
Pyrene	0.0353	0.00500	"	0.0333	106	35-142
1-Methylnaphthalene	0.0332	0.00500	"	0.0333	99.7	35-142
2-Methylnaphthalene	0.0342	0.00500	"	0.0333	103	35-142
Surrogate: 2-Methylnaphthalene-d10	0.0353		"	0.0333	106	40-150
Surrogate: Fluoranthene-d10	0.0350		"	0.0333	105	40-150

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

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 BGJ0661 - EPA 5030 Soil MS

Matrix Spike (BGJ0661-MS1)

Source: 2310269-05

Prepared: 10/17/23 Analyzed: 10/18/23

Acenaphthene	0.0229	0.00500	mg/kg	0.0333	ND	68.6	31-137		
Anthracene	0.0200	0.00500	"	0.0333	ND	60.0	30-120		
Benzo (a) anthracene	0.0214	0.00500	"	0.0333	ND	64.1	30-120		
Benzo (a) pyrene	0.0194	0.00500	"	0.0333	ND	58.3	30-120		
Benzo (b) fluoranthene	0.0197	0.00500	"	0.0333	ND	59.0	30-120		
Benzo (k) fluoranthene	0.0197	0.00500	"	0.0333	ND	59.1	30-120		
Chrysene	0.0216	0.00500	"	0.0333	ND	64.9	30-120		
Dibenz (a,h) anthracene	0.0160	0.00500	"	0.0333	ND	48.1	30-120		
Fluoranthene	0.0229	0.00500	"	0.0333	ND	68.7	30-120		
Fluorene	0.0199	0.00500	"	0.0333	ND	59.7	30-120		
Indeno (1,2,3-cd) pyrene	0.0178	0.00500	"	0.0333	ND	53.3	30-120		
Pyrene	0.0222	0.00500	"	0.0333	ND	66.7	35-142		
1-Methylnaphthalene	0.0192	0.00500	"	0.0333	ND	57.6	15-130		
2-Methylnaphthalene	0.0202	0.00500	"	0.0333	ND	60.6	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0197		"	0.0333		59.1	40-150		
Surrogate: Fluoranthene-d10	0.0207		"	0.0333		62.1	40-150		

Matrix Spike Dup (BGJ0661-MSD1)

Source: 2310269-05

Prepared: 10/17/23 Analyzed: 10/18/23

Acenaphthene	0.0238	0.00500	mg/kg	0.0333	ND	71.5	31-137	4.19	30
Anthracene	0.0259	0.00500	"	0.0333	ND	77.7	30-120	25.6	30
Benzo (a) anthracene	0.0276	0.00500	"	0.0333	ND	82.8	30-120	25.5	30
Benzo (a) pyrene	0.0244	0.00500	"	0.0333	ND	73.3	30-120	22.8	30
Benzo (b) fluoranthene	0.0247	0.00500	"	0.0333	ND	74.2	30-120	22.8	30
Benzo (k) fluoranthene	0.0249	0.00500	"	0.0333	ND	74.8	30-120	23.3	30
Chrysene	0.0274	0.00500	"	0.0333	ND	82.1	30-120	23.3	30
Dibenz (a,h) anthracene	0.0205	0.00500	"	0.0333	ND	61.5	30-120	24.3	30
Fluoranthene	0.0303	0.00500	"	0.0333	ND	91.0	30-120	27.9	30
Fluorene	0.0230	0.00500	"	0.0333	ND	69.0	30-120	14.4	30
Indeno (1,2,3-cd) pyrene	0.0215	0.00500	"	0.0333	ND	64.4	30-120	19.0	30
Pyrene	0.0288	0.00500	"	0.0333	ND	86.5	35-142	25.9	30
1-Methylnaphthalene	0.0238	0.00500	"	0.0333	ND	71.4	15-130	21.5	50
2-Methylnaphthalene	0.0247	0.00500	"	0.0333	ND	74.0	15-130	19.9	50
Surrogate: 2-Methylnaphthalene-d10	0.0247		"	0.0333		74.2	40-150		
Surrogate: Fluoranthene-d10	0.0273		"	0.0333		81.9	40-150		

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

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 BGJ0839 - EPA 3050B

Blank (BGJ0839-BLK1)

Prepared: 10/20/23 Analyzed: 10/24/23

Boron ND 2.00 mg/L

LCS (BGJ0839-BS1)

Prepared: 10/20/23 Analyzed: 10/24/23

Boron 4.81 2.00 mg/L 5.00 96.1 80-120

Duplicate (BGJ0839-DUP1)

Source: 2310295-01

Prepared: 10/20/23 Analyzed: 10/24/23

Boron 0.477 2.00 mg/L 0.489 2.45 20

Matrix Spike (BGJ0839-MS1)

Source: 2310295-01

Prepared: 10/20/23 Analyzed: 10/24/23

Boron 4.26 2.00 mg/L 5.00 0.489 75.4 75-125

Matrix Spike Dup (BGJ0839-MSD1)

Source: 2310295-01

Prepared: 10/20/23 Analyzed: 10/24/23

Boron 4.24 2.00 mg/L 5.00 0.489 75.0 75-125 0.460 25

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGJ0924 - EPA 3050B

Blank (BGJ0924-BLK1)

Prepared: 10/24/23 Analyzed: 10/25/23

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

LCS (BGJ0924-BS1)

Prepared: 10/24/23 Analyzed: 10/25/23

Arsenic	36.4	0.200	mg/kg wet	40.0	91.0	80-120
Barium	35.0	0.400	"	40.0	87.6	80-120
Cadmium	1.91	0.200	"	2.00	95.7	80-120
Copper	37.4	0.400	"	40.0	93.5	80-120
Lead	23.6	0.200	"	20.0	118	80-120
Nickel	37.7	0.400	"	40.0	94.1	80-120
Silver	1.93	0.0200	"	2.00	96.3	80-120
Zinc	37.7	0.400	"	40.0	94.3	80-120
Selenium	4.42	0.260	"	4.00	110	80-120


Duplicate (BGJ0924-DUP1)

Source: 2310190-01

Prepared: 10/24/23 Analyzed: 10/25/23

Arsenic	1.33	0.200	mg/kg dry	1.66	22.2	20	QR-01
Barium	36.7	0.400	"	39.8	8.18	20	
Cadmium	0.0586	0.200	"	0.0662	12.2	20	
Copper	1.54	0.400	"	1.74	11.8	20	
Lead	120	0.200	"	4.53	185	20	QR-01
Nickel	1.28	0.400	"	1.53	17.7	20	
Silver	0.0215	0.0200	"	0.00886	83.3	20	QR-01
Zinc	6.51	0.400	"	7.67	16.4	20	
Selenium	ND	0.260	"	ND		20	

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Wellington CO, 80549

Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

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 BGJ0924 - EPA 3050B

Matrix Spike (BGJ0924-MS1)

Source: 2310190-01

Prepared: 10/24/23 Analyzed: 10/25/23

Arsenic	38.3	0.200	mg/kg dry	42.2	1.66	86.8	75-125			
Barium	67.9	0.400	"	42.2	39.8	66.5	75-125			QM-07
Cadmium	1.61	0.200	"	2.11	0.0662	73.4	75-125			QM-07
Copper	27.2	0.400	"	42.2	1.74	60.3	75-125			QM-07
Lead	19.3	0.200	"	21.1	4.53	69.8	75-125			QM-07
Nickel	27.8	0.400	"	42.2	1.53	62.2	75-125			QM-07
Silver	1.55	0.0200	"	2.11	0.00886	73.1	75-125			QM-07
Zinc	31.9	0.400	"	42.2	7.67	57.3	75-125			QM-07
Selenium	4.88	0.260	"	4.22	ND	116	75-125			

Matrix Spike Dup (BGJ0924-MSD1)

Source: 2310190-01

Prepared: 10/24/23 Analyzed: 10/25/23

Arsenic	40.6	0.200	mg/kg dry	42.2	1.66	92.3	75-125	5.88	25	
Barium	68.5	0.400	"	42.2	39.8	68.0	75-125	0.933	25	QM-07
Cadmium	1.63	0.200	"	2.11	0.0662	74.0	75-125	0.781	25	QM-07
Copper	28.0	0.400	"	42.2	1.74	62.2	75-125	2.94	25	QM-07
Lead	19.6	0.200	"	21.1	4.53	71.6	75-125	1.92	25	QM-07
Nickel	28.5	0.400	"	42.2	1.53	64.0	75-125	2.72	25	QM-07
Silver	1.58	0.0200	"	2.11	0.00886	74.4	75-125	1.81	25	QM-07
Zinc	32.5	0.400	"	42.2	7.67	58.9	75-125	2.07	25	QM-07
Selenium	5.01	0.260	"	4.22	ND	119	75-125	2.50	25	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

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 BGJ0881 - 3060A Mod

Blank (BGJ0881-BLK1)

Prepared & Analyzed: 10/23/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGJ0881-BS1)

Prepared & Analyzed: 10/23/23

Chromium, Hexavalent 26.2 0.30 mg/kg wet 25.0 105 80-120

Duplicate (BGJ0881-DUP1)

Source: 2310297-01

Prepared & Analyzed: 10/23/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGJ0881-MS1)

Source: 2310297-01

Prepared & Analyzed: 10/23/23

Chromium, Hexavalent 29.6 0.30 mg/kg dry 29.7 ND 99.6 75-125

Matrix Spike Dup (BGJ0881-MSD1)

Source: 2310297-01

Prepared & Analyzed: 10/23/23

Chromium, Hexavalent 28.8 0.30 mg/kg dry 29.7 ND 97.0 75-125 2.64 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

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 BGJ0842 - General Preparation

Blank (BGJ0842-BLK1)

Prepared: 10/20/23 Analyzed: 10/24/23

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

LCS (BGJ0842-BS1)

Prepared: 10/20/23 Analyzed: 10/24/23

Calcium	5.12	0.0500	mg/L wet	5.00	102	70-130
Magnesium	5.26	0.0500	"	5.00	105	70-130
Sodium	5.52	0.0500	"	5.00	110	70-130

Summit Scientific

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Wellington CO, 80549

Project: Noble - Barton C 15-19 Facility

Project Number: UWRWE-A2428-ABN

Project Manager: Paul Henchan

Reported:
10/26/23 15:22

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

Summit Scientific

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

Batch BGJ0973 - General Preparation

Duplicate (BGJ0973-DUP1)

Source: 2310292-04

Prepared & Analyzed: 10/25/23

% Solids	94.1	%	94.0	0.0636	20
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PO Box 1289
Wellington CO, 80549

Project: Noble - Barton C 15-19 Facility

Project Number: UWRWE-A2428-ABN

Project Manager: Paul Henchan

Reported:
10/26/23 15:22

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 BGJ0894 - General Preparation

Blank (BGJ0894-BLK1)

Prepared & Analyzed: 10/23/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGJ0894-BS1)

Prepared & Analyzed: 10/23/23

Specific Conductance (EC) 0.151 0.0100 mmhos/cm 0.150 101 95-105

Duplicate (BGJ0894-DUP1)

Source: 2310052-03

Prepared & Analyzed: 10/23/23

Specific Conductance (EC) 1.99 0.0100 mmhos/cm 1.99 0.251 20

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Barton C 15-19 Facility

Project Number: UWRWE-A2428-ABN

Project Manager: Paul Henchan

Reported:
10/26/23 15:22

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

Summit Scientific

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

Batch BGJ0895 - General Preparation

LCS (BGJ0895-BS1)

Prepared & Analyzed: 10/23/23

pH	9.15	pH Units	9.18	99.7	95-105
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Duplicate (BGJ0895-DUP1)

Source: 2310292-04

Prepared & Analyzed: 10/23/23

pH	5.99	pH Units	6.02	0.500	20
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Barton C 15-19 Facility
Project Number: UWRWE-A2428-ABN
Project Manager: Paul Henchan

Reported:
10/26/23 15:22

Notes and Definitions

QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
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