

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 06, 2022

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Wells Ranch AE20

Work Order #2204345

Enclosed are the results of analyses for samples received by Summit Scientific on 04/22/22 15:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury

President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W PIT-W WALL 6FT	2204345-01	Soil	04/21/22 00:00	04/22/22 15:00
METER-W WALL 2FT	2204345-02	Soil	04/21/22 00:00	04/22/22 15:00
METER-FLOOR 3FT	2204345-03	Soil	04/21/22 00:00	04/22/22 15:00
E PIT-N WALL 6FT	2204345-04	Soil	04/21/22 00:00	04/22/22 15:00

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

2204345

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S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310 ♦ 303-374-5933 (f)

Page 1 of 1

Client: Fremont Environmental

Project Manager: Paul Henehan

Address: P.O Box 1289

E-Mail: paulh@fremontenv.com, ethanb@fremontenv.com

City/State/Zip: Wellington, CO 80549

Bill to: Jacob

Phone: 303-956-8714

Project Name: Noble - Wells Ranch AE20

Sampler Name: Black

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested										Notes:
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	GBTEXN-915 TIMES 915 Metals BTEX-910	GRO	DRO/ORO	SAR	EC	pH	Boron	PAH-915			
1	W PIT - W WALL 6FT	4/21/22		3			X			X				X	X		X	X	X	X	X		
2	METER - W WALL 2FT	↓		↓										↓	↓		↓	↓	↓	↓	↓		
3	METER - FLOOR 3FT	↓		↓										↓	↓		↓	↓	↓	↓	↓		
4	E PIT - N WALL 6FT	↓		↓										↓	↓		↓	↓	↓	↓	↓		
5																							
6																							
7																							
8																							
9																							
10																							

Relinquished by: Ethan Black	Date/Time: 4/22/22	Received by: 	Date/Time: 4/22/22 1506	Turn Around Time (Check) Same Day _____ 72 hours 24 hours _____ Standard _____ 48 hours _____ Sample Integrity: Temperature Upon Receipt: 40 Samples Intact: Yes No
Relinquished by:	Date/Time:	Received by:	Date/Time:	
Relinquished by:	Date/Time:	Received by:	Date/Time:	

S₂

S2 Work Order# 2204345

Sample Receipt Checklist

Client: Fremont Client Project ID: Noble-Wells Ranch AE 20

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

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Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 4.0 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.	-			on ICE
Were all samples received intact ⁽¹⁾ ?	-			
Was adequate sample volume provided ⁽¹⁾ ?	-			
If custody seals are present, are they intact ⁽¹⁾ ?	✓			
Are samples due within 48 hours present?	-			24 hrs
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			-	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	-			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	-			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	-			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	-			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			-	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.			-	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.			-	
If dissolved metals are requested, were samples field filtered?			-	
Additional Comments (if any):				

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



Custodian Printed Name

4-22-22

Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

W PIT-W WALL 6FT
2204345-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFD0507	04/22/22	04/23/22	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: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0424	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0403	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0421	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFD0508	04/22/22	04/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	14.8	118 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

W PIT-W WALL 6FT
2204345-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFD0518	04/25/22	04/28/22	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: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0250	74.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0232	69.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.235	0.0100	mg/L	1	BFD0513	04/25/22	04/30/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/21/22 00:00**

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

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

W PIT-W WALL 6FT
2204345-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	5.01	0.238	mg/kg dry	1	BFD0538	04/25/22	04/30/22	EPA 6020B
Barium	101	0.475	"	"	"	"	"	"
Cadmium	ND	0.238	"	"	"	"	"	"
Copper	7.12	0.475	"	"	"	"	"	"
Lead	7.75	0.238	"	"	"	"	"	"
Nickel	9.46	0.475	"	"	"	"	"	"
Selenium	0.735	0.309	"	"	"	"	"	"
Silver	0.0378	0.0238	"	"	"	"	"	"
Zinc	37.8	0.475	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFE0094	05/05/22	05/05/22	EPA 7196A	

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

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	14.5	0.0594	mg/L dry	1	BFD0563	04/26/22	05/03/22	EPA 6020B	
Magnesium	2.94	0.0594	"	"	"	"	"	"	
Sodium	1.00	0.0594	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0626	0.00100	units	1	BFE0069	05/04/22	05/04/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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PO Box 1289
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Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

W PIT-W WALL 6FT
2204345-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	84.2	%	1	BFD0539	04/25/22	04/25/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.354	0.0100	mmhos/cm	1	BFD0575	04/26/22	04/27/22	EPA 120.1	

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

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.61		pH Units	1	BFD0576	04/26/22	04/27/22	EPA 9045D	

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Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

METER-W WALL 2FT
2204345-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFD0507	04/22/22	04/23/22	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: **04/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0422	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0398	99.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	100 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFD0508	04/22/22	04/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.7	118 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

METER-W WALL 2FT
2204345-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFD0518	04/25/22	04/28/22	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: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0254	76.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0221	66.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.171	0.0100	mg/L	1	BFD0513	04/25/22	04/30/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/21/22 00:00**

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

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

METER-W WALL 2FT
2204345-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.48	0.229	mg/kg dry	1	BFD0538	04/25/22	04/30/22	EPA 6020B
Barium	176	0.457	"	"	"	"	"	"
Cadmium	ND	0.229	"	"	"	"	"	"
Copper	4.82	0.457	"	"	"	"	"	"
Lead	5.71	0.229	"	"	"	"	"	"
Nickel	6.64	0.457	"	"	"	"	"	"
Selenium	0.599	0.297	"	"	"	"	"	"
Silver	0.0350	0.0229	"	"	"	"	"	"
Zinc	24.7	0.457	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFE0094	05/05/22	05/05/22	EPA 7196A	

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

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	10.9	0.0572	mg/L dry	1	BFD0563	04/26/22	05/03/22	EPA 6020B	
Magnesium	1.97	0.0572	"	"	"	"	"	"	
Sodium	0.275	0.0572	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0201	0.00100	units	1	BFE0069	05/04/22	05/04/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/21/22 00:00**

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

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

METER-W WALL 2FT
2204345-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	87.4	%	1	BFD0539	04/25/22	04/25/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.177	0.0100	mmhos/cm	1	BFD0575	04/26/22	04/27/22	EPA 120.1	

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

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.53		pH Units	1	BFD0576	04/26/22	04/27/22	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

METER-FLOOR 3FT
2204345-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFD0507	04/22/22	04/23/22	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: **04/21/22 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	0.0385	96.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0413	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFD0508	04/22/22	04/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.7	118 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

METER-FLOOR 3FT
2204345-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFD0518	04/25/22	04/28/22	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: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0241	72.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0223	67.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.200	0.0100	mg/L	1	BFD0513	04/25/22	04/30/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/21/22 00:00**

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

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

METER-FLOOR 3FT
2204345-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.91	0.229	mg/kg dry	1	BFD0538	04/25/22	05/01/22	EPA 6020B
Barium	73.1	0.457	"	"	"	"	"	"
Cadmium	ND	0.229	"	"	"	"	"	"
Copper	6.25	0.457	"	"	"	"	"	"
Lead	7.00	0.229	"	"	"	"	"	"
Nickel	7.07	0.457	"	"	"	"	"	"
Selenium	0.698	0.297	"	"	"	"	"	"
Silver	0.0307	0.0229	"	"	"	"	"	"
Zinc	36.5	0.457	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFE0094	05/05/22	05/05/22	EPA 7196A	

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

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	17.4	0.0572	mg/L dry	1	BFD0563	04/26/22	05/03/22	EPA 6020B	
Magnesium	2.96	0.0572	"	"	"	"	"	"	
Sodium	0.500	0.0572	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0292	0.00100	units	1	BFE0069	05/04/22	05/04/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/21/22 00:00**

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

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

METER-FLOOR 3FT
2204345-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	87.4	%	1	BFD0539	04/25/22	04/25/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.175	0.0100	mmhos/cm	1	BFD0575	04/26/22	04/27/22	EPA 120.1	

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

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.67		pH Units	1	BFD0576	04/26/22	04/27/22	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

E PIT-N WALL 6FT
2204345-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFD0507	04/22/22	04/23/22	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: **04/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0403	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0396	99.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0417	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFD0508	04/22/22	04/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.4	115 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

E PIT-N WALL 6FT
2204345-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFD0518	04/25/22	04/28/22	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: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0183	55.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0165	49.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.215	0.0100	mg/L	1	BFD0513	04/25/22	04/30/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/21/22 00:00**

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

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

E PIT-N WALL 6FT
2204345-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.81	0.231	mg/kg dry	1	BFD0538	04/25/22	05/01/22	EPA 6020B
Barium	70.4	0.462	"	"	"	"	"	"
Cadmium	0.389	0.231	"	"	"	"	"	"
Copper	9.73	0.462	"	"	"	"	"	"
Lead	9.14	0.231	"	"	"	"	"	"
Nickel	11.0	0.462	"	"	"	"	"	"
Selenium	1.09	0.300	"	"	"	"	"	"
Silver	0.0396	0.0231	"	"	"	"	"	"
Zinc	55.8	0.462	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFE0094	05/05/22	05/05/22	EPA 7196A	

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

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	9.49	0.0578	mg/L dry	1	BFD0563	04/26/22	05/03/22	EPA 6020B	
Magnesium	2.34	0.0578	"	"	"	"	"	"	
Sodium	0.943	0.0578	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0711	0.00100	units	1	BFE0069	05/04/22	05/04/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/21/22 00:00**

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

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

E PIT-N WALL 6FT
2204345-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	86.5	%	1	BFD0539	04/25/22	04/25/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.211	0.0100	mmhos/cm	1	BFD0575	04/26/22	04/27/22	EPA 120.1	

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

Date Sampled: **04/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.77		pH Units	1	BFD0576	04/26/22	04/27/22	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

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 BFD0507 - EPA 5030 Soil MS

Blank (BFD0507-BLK1)

Prepared & Analyzed: 04/22/22

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	0.0394		"	0.0400		98.6	50-150			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.6	50-150			
Surrogate: 4-Bromofluorobenzene	0.0411		"	0.0400		103	50-150			

LCS (BFD0507-BS1)

Prepared & Analyzed: 04/22/22

Benzene	0.107	0.0020	mg/kg	0.100		107	70-130			
Toluene	0.101	0.0050	"	0.100		101	70-130			
Ethylbenzene	0.115	0.0050	"	0.100		115	70-130			
m,p-Xylene	0.223	0.010	"	0.200		111	70-130			
o-Xylene	0.106	0.0050	"	0.100		106	70-130			
1,2,4-Trimethylbenzene	0.106	0.0050	"	0.100		106	70-130			
1,3,5-Trimethylbenzene	0.104	0.0050	"	0.100		104	70-130			
Naphthalene	0.0952	0.0038	"	0.100		95.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0433		"	0.0400		108	50-150			
Surrogate: Toluene-d8	0.0406		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0400		95.8	50-150			

Matrix Spike (BFD0507-MS1)

Source: 2204344-01

Prepared & Analyzed: 04/22/22

Benzene	0.0945	0.0020	mg/kg	0.100	ND	94.5	70-130			
Toluene	0.0878	0.0050	"	0.100	ND	87.8	70-130			
Ethylbenzene	0.0973	0.0050	"	0.100	ND	97.3	70-130			
m,p-Xylene	0.239	0.010	"	0.200	ND	119	70-130			
o-Xylene	0.113	0.0050	"	0.100	ND	113	70-130			
1,2,4-Trimethylbenzene	0.116	0.0050	"	0.100	ND	116	70-130			
1,3,5-Trimethylbenzene	0.0982	0.0050	"	0.100	ND	98.2	70-130			
Naphthalene	0.100	0.0038	"	0.100	ND	100	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0442		"	0.0400		110	50-150			
Surrogate: Toluene-d8	0.0407		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0429		"	0.0400		107	50-150			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

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 BFD0507 - EPA 5030 Soil MS

Matrix Spike Dup (BFD0507-MSD1)	Source: 2204344-01			Prepared & Analyzed: 04/22/22						
Benzene	0.0922	0.0020	mg/kg	0.100	ND	92.2	70-130	2.51	30	
Toluene	0.0797	0.0050	"	0.100	ND	79.7	70-130	9.74	30	
Ethylbenzene	0.0908	0.0050	"	0.100	ND	90.8	70-130	6.86	30	
m,p-Xylene	0.221	0.010	"	0.200	ND	110	70-130	7.95	30	
o-Xylene	0.0988	0.0050	"	0.100	ND	98.8	70-130	13.0	30	
1,2,4-Trimethylbenzene	0.0929	0.0050	"	0.100	ND	92.9	70-130	21.9	30	
1,3,5-Trimethylbenzene	0.116	0.0050	"	0.100	ND	116	70-130	16.9	30	
Naphthalene	0.0811	0.0038	"	0.100	ND	81.1	70-130	21.0	30	
Surrogate: 1,2-Dichloroethane-d4	0.0440		"	0.0400		110	50-150			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.5	50-150			
Surrogate: 4-Bromofluorobenzene	0.0319		"	0.0400		79.8	50-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

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 BFD0508 - EPA 3550A

Blank (BFD0508-BLK1)

Prepared & Analyzed: 04/22/22

C10-C28 (DRO)	ND	50	mg/kg
C28-C36 (ORO)	ND	50	"

LCS (BFD0508-BS1)

Prepared & Analyzed: 04/22/22

C10-C28 (DRO)	488	50	mg/kg	500	97.5	70-130
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Matrix Spike (BFD0508-MS1)

Source: 2204344-01

Prepared & Analyzed: 04/22/22

C10-C28 (DRO)	468	50	mg/kg	500	43.3	84.9	70-130
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Matrix Spike Dup (BFD0508-MSD1)

Source: 2204344-01

Prepared & Analyzed: 04/22/22

C10-C28 (DRO)	442	50	mg/kg	500	43.3	79.7	70-130	5.68	20
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20
Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFD0518 - EPA 5030 Soil MS

Blank (BFD0518-BLK1)

Prepared: 04/25/22 Analyzed: 04/27/22

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	0.0263		"	0.0333		78.8	40-150			
Surrogate: Fluoranthene-d10	0.0244		"	0.0333		73.1	40-150			

LCS (BFD0518-BS1)

Prepared: 04/25/22 Analyzed: 04/27/22

Acenaphthene	0.0218	0.00500	mg/kg	0.0333		65.5	31-137			
Anthracene	0.0304	0.00500	"	0.0333		91.2	30-120			
Benzo (a) anthracene	0.0313	0.00500	"	0.0333		93.9	30-120			
Benzo (a) pyrene	0.0303	0.00500	"	0.0333		90.8	30-120			
Benzo (b) fluoranthene	0.0317	0.00500	"	0.0333		95.2	30-120			
Benzo (k) fluoranthene	0.0313	0.00500	"	0.0333		94.0	30-120			
Chrysene	0.0316	0.00500	"	0.0333		94.7	30-120			
Dibenz (a,h) anthracene	0.0284	0.00500	"	0.0333		85.3	30-120			
Fluoranthene	0.0314	0.00500	"	0.0333		94.1	30-120			
Fluorene	0.0260	0.00500	"	0.0333		77.9	30-120			
Indeno (1,2,3-cd) pyrene	0.0287	0.00500	"	0.0333		86.1	30-120			
Pyrene	0.0314	0.00500	"	0.0333		94.2	35-142			
1-Methylnaphthalene	0.0265	0.00500	"	0.0333		79.4	35-142			
2-Methylnaphthalene	0.0296	0.00500	"	0.0333		88.9	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0292		"	0.0333		87.7	40-150			
Surrogate: Fluoranthene-d10	0.0329		"	0.0333		98.6	40-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFD0518 - EPA 5030 Soil MS

Matrix Spike (BFD0518-MS1)			Source: 2204308-01		Prepared: 04/25/22 Analyzed: 04/27/22					
Acenaphthene	0.0121	0.00500	mg/kg	0.0333	ND	36.3	31-137			
Anthracene	0.0280	0.00500	"	0.0333	ND	83.9	30-120			
Benzo (a) anthracene	0.0224	0.00500	"	0.0333	ND	67.1	30-120			
Benzo (a) pyrene	0.0212	0.00500	"	0.0333	ND	63.7	30-120			
Benzo (b) fluoranthene	0.0240	0.00500	"	0.0333	ND	72.1	30-120			
Benzo (k) fluoranthene	0.0262	0.00500	"	0.0333	ND	78.5	30-120			
Chrysene	0.0321	0.00500	"	0.0333	0.00371	85.1	30-120			
Dibenz (a,h) anthracene	0.0214	0.00500	"	0.0333	ND	64.3	30-120			
Fluoranthene	0.0328	0.00500	"	0.0333	ND	98.5	30-120			
Fluorene	0.0212	0.00500	"	0.0333	ND	63.5	30-120			
Indeno (1,2,3-cd) pyrene	0.0179	0.00500	"	0.0333	ND	53.7	30-120			
Pyrene	0.0338	0.00500	"	0.0333	ND	101	35-142			
1-Methylnaphthalene	0.0532	0.00500	"	0.0333	0.0599	NR	15-130			QM-07
2-Methylnaphthalene	0.0490	0.00500	"	0.0333	0.0539	NR	15-130			QM-07
Surrogate: 2-Methylnaphthalene-d10	0.0223		"	0.0333		66.8	40-150			
Surrogate: Fluoranthene-d10	0.0280		"	0.0333		84.0	40-150			

Matrix Spike Dup (BFD0518-MSD1)			Source: 2204308-01		Prepared: 04/25/22 Analyzed: 04/27/22					
Acenaphthene	0.0206	0.00500	mg/kg	0.0333	ND	61.7	31-137	51.9	30	QM-07
Anthracene	0.0256	0.00500	"	0.0333	ND	76.8	30-120	8.76	30	
Benzo (a) anthracene	0.0229	0.00500	"	0.0333	ND	68.7	30-120	2.49	30	
Benzo (a) pyrene	0.0218	0.00500	"	0.0333	ND	65.5	30-120	2.92	30	
Benzo (b) fluoranthene	0.0219	0.00500	"	0.0333	ND	65.6	30-120	9.38	30	
Benzo (k) fluoranthene	0.0237	0.00500	"	0.0333	ND	71.1	30-120	9.98	30	
Chrysene	0.0281	0.00500	"	0.0333	0.00371	73.3	30-120	13.1	30	
Dibenz (a,h) anthracene	0.0191	0.00500	"	0.0333	ND	57.4	30-120	11.4	30	
Fluoranthene	0.0261	0.00500	"	0.0333	ND	78.2	30-120	23.0	30	
Fluorene	0.0221	0.00500	"	0.0333	ND	66.3	30-120	4.33	30	
Indeno (1,2,3-cd) pyrene	0.0196	0.00500	"	0.0333	ND	58.9	30-120	9.32	30	
Pyrene	0.0267	0.00500	"	0.0333	ND	80.1	35-142	23.4	30	
1-Methylnaphthalene	0.0704	0.00500	"	0.0333	0.0599	31.3	15-130	27.8	50	
2-Methylnaphthalene	0.0329	0.00500	"	0.0333	0.0539	NR	15-130	39.3	50	QM-07
Surrogate: 2-Methylnaphthalene-d10	0.0200		"	0.0333		60.1	40-150			
Surrogate: Fluoranthene-d10	0.0233		"	0.0333		69.8	40-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

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 BFD0513 - EPA 3050B

Blank (BFD0513-BLK1)

Prepared: 04/25/22 Analyzed: 04/30/22

Boron ND 0.0100 mg/L

LCS (BFD0513-BS1)

Prepared: 04/25/22 Analyzed: 04/30/22

Boron 4.50 0.0100 mg/L 5.00 90.1 80-120

Duplicate (BFD0513-DUP1)

Source: 2204266-01

Prepared: 04/25/22 Analyzed: 04/30/22

Boron 0.253 0.0100 mg/L 0.261 3.05 20

Matrix Spike (BFD0513-MS1)

Source: 2204266-01

Prepared: 04/25/22 Analyzed: 04/30/22

Boron 4.50 0.0100 mg/L 5.00 0.261 84.8 75-125

Matrix Spike Dup (BFD0513-MSD1)

Source: 2204266-01

Prepared: 04/25/22 Analyzed: 04/30/22

Boron 4.41 0.0100 mg/L 5.00 0.261 83.0 75-125 2.05 25

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

Total Metals by EPA 6020B - Quality Control

Summit Scientific

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

Batch BFD0538 - EPA 3050B

Blank (BFD0538-BLK1)

Prepared: 04/25/22 Analyzed: 04/30/22

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	"
Selenium	ND	0.260	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"

LCS (BFD0538-BS1)

Prepared: 04/25/22 Analyzed: 04/30/22

Arsenic	45.2	0.200	mg/kg wet	40.0	113	80-120
Barium	39.4	0.400	"	40.0	98.5	80-120
Cadmium	2.28	0.200	"	2.00	114	80-120
Copper	41.0	0.400	"	40.0	103	80-120
Lead	20.9	0.200	"	20.0	105	80-120
Nickel	40.3	0.400	"	40.0	101	80-120
Selenium	4.00	0.260	"	4.00	100	80-120
Silver	2.06	0.0200	"	2.00	103	80-120
Zinc	44.6	0.400	"	40.0	112	80-120

Duplicate (BFD0538-DUP1)

Source: 2204029-08

Prepared: 04/25/22 Analyzed: 04/30/22

Arsenic	3.08	0.224	mg/kg dry	3.03	1.84	20
Barium	155	0.448	"	159	2.02	20
Cadmium	0.160	0.224	"	0.168	4.88	20
Copper	4.36	0.448	"	4.49	2.90	20
Lead	7.68	0.224	"	7.89	2.69	20
Nickel	3.58	0.448	"	3.70	3.33	20
Selenium	0.763	0.291	"	0.761	0.200	20
Silver	0.0448	0.0224	"	0.0508	12.5	20
Zinc	16.6	0.448	"	16.7	0.551	20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

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 BFD0538 - EPA 3050B

Matrix Spike (BFD0538-MS1)	Source: 2204029-08			Prepared: 04/25/22 Analyzed: 04/30/22						
Arsenic	57.1	0.224	mg/kg dry	44.8	3.03	121	75-125			
Barium	238	0.448	"	44.8	159	176	75-125			QM-05
Cadmium	2.78	0.224	"	2.24	0.168	117	75-125			
Copper	47.0	0.448	"	44.8	4.49	94.9	75-125			
Lead	32.5	0.224	"	22.4	7.89	110	75-125			
Nickel	50.2	0.448	"	44.8	3.70	104	75-125			
Selenium	5.31	0.291	"	4.48	0.761	102	75-125			
Silver	2.38	0.0224	"	2.24	0.0508	104	75-125			
Zinc	70.9	0.448	"	44.8	16.7	121	75-125			

Matrix Spike Dup (BFD0538-MSD1)	Source: 2204029-08			Prepared: 04/25/22 Analyzed: 04/30/22						
Arsenic	61.4	0.224	mg/kg dry	44.8	3.03	130	75-125	7.35	25	QM-05
Barium	228	0.448	"	44.8	159	156	75-125	3.98	25	QM-05
Cadmium	2.72	0.224	"	2.24	0.168	114	75-125	2.24	25	
Copper	49.0	0.448	"	44.8	4.49	99.3	75-125	4.09	25	
Lead	31.5	0.224	"	22.4	7.89	105	75-125	3.34	25	
Nickel	51.5	0.448	"	44.8	3.70	107	75-125	2.65	25	
Selenium	5.32	0.291	"	4.48	0.761	102	75-125	0.112	25	
Silver	2.28	0.0224	"	2.24	0.0508	99.2	75-125	4.35	25	
Zinc	75.8	0.448	"	44.8	16.7	132	75-125	6.72	25	QM-05

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henehan

Reported:
05/06/22 11:39

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 BFE0094 - 3060A Mod

Blank (BFE0094-BLK1)

Prepared & Analyzed: 05/05/22

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BFE0094-BS1)

Prepared & Analyzed: 05/05/22

Chromium, Hexavalent 25.4 0.30 mg/kg wet 25.0 102 80-120

Duplicate (BFE0094-DUP1)

Source: 2204337-01

Prepared & Analyzed: 05/05/22

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BFE0094-MS1)

Source: 2204337-01

Prepared & Analyzed: 05/05/22

Chromium, Hexavalent 29.8 0.30 mg/kg dry 28.1 ND 106 75-125

Matrix Spike Dup (BFE0094-MSD1)

Source: 2204337-01

Prepared & Analyzed: 05/05/22

Chromium, Hexavalent 29.3 0.30 mg/kg dry 28.1 ND 104 75-125 1.71 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

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 BFD0563 - General Preparation

Blank (BFD0563-BLK1)

Prepared: 04/26/22 Analyzed: 05/03/22

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

LCS (BFD0563-BS1)

Prepared: 04/26/22 Analyzed: 05/03/22

Calcium	4.77	0.0500	mg/L wet	5.00	95.4	70-130
Magnesium	5.78	0.0500	"	5.00	116	70-130
Sodium	5.78	0.0500	"	5.00	116	70-130

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

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 BFD0539 - General Preparation

Duplicate (BFD0539-DUP1)

Source: 2204274-02

Prepared & Analyzed: 04/25/22

% Solids	88.9	%		89.5		0.682	20
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

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 BFD0575 - General Preparation

Blank (BFD0575-BLK1)

Prepared: 04/26/22 Analyzed: 04/27/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFD0575-BS1)

Prepared: 04/26/22 Analyzed: 04/27/22

Specific Conductance (EC) 0.153 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BFD0575-DUP1)

Source: 2204266-01

Prepared: 04/26/22 Analyzed: 04/27/22

Specific Conductance (EC) 2.82 0.0100 mmhos/cm 2.91 3.24 20

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

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 BFD0576 - General Preparation

LCS (BFD0576-BS1)

Prepared: 04/26/22 Analyzed: 04/27/22

pH	9.12	pH Units	9.18	99.3	95-105
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Duplicate (BFD0576-DUP1)

Source: 2204080-09

Prepared: 04/26/22 Analyzed: 04/27/22

pH	8.00	pH Units	8.00	0.00	20
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Wells Ranch AE20

Project Number: [none]
Project Manager: Paul Henchan

Reported:
05/06/22 11:39

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference