

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 11, 2024

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Shoemaker PC A12-69HN Facility

Work Order #2405471

Enclosed are the results of analyses for samples received by Summit Scientific on 05/30/24 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Jacob Wood". The signature is written in a cursive style with a small "w" at the end of the last name.

Jacob Wood For Paul Shrewsbury

President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN

Project Manager: Paul Henchan

Reported:
07/11/24 11:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01 0.5ft	2405471-01	Soil	05/30/24 00:00	05/30/24 16:30
AST02 0.5ft	2405471-02	Soil	05/30/24 00:00	05/30/24 16:30
AST03 0.5ft	2405471-03	Soil	05/30/24 00:00	05/30/24 16:30
AST04 0.5ft	2405471-04	Soil	05/30/24 00:00	05/30/24 16:30
PWV01-B 5ft	2405471-05	Soil	05/30/24 00:00	05/30/24 16:30
PWV01-N 4ft	2405471-06	Soil	05/30/24 00:00	05/30/24 16:30
PWV01-S 4ft	2405471-07	Soil	05/30/24 00:00	05/30/24 16:30
PWV01-E 4ft	2405471-08	Soil	05/30/24 00:00	05/30/24 16:30
PWV01-W 4ft	2405471-09	Soil	05/30/24 00:00	05/30/24 16:30
SEP01-FL 4ft	2405471-10	Soil	05/30/24 00:00	05/30/24 16:30
SEP01-DL 4ft	2405471-11	Soil	05/30/24 00:00	05/30/24 16:30
SEP02-FL 4ft	2405471-12	Soil	05/30/24 00:00	05/30/24 16:30
SEP02-DL 4ft	2405471-13	Soil	05/30/24 00:00	05/30/24 16:30
BKG01 0.5ft	2405471-14	Soil	05/30/24 00:00	05/30/24 16:30
BKG01 4ft	2405471-15	Soil	05/30/24 00:00	05/30/24 16:30
BKG01 5ft	2405471-16	Soil	05/30/24 00:00	05/30/24 16:30
BKG02 0.5ft	2405471-17	Soil	05/30/24 00:00	05/30/24 16:30
BKG02 4ft	2405471-18	Soil	05/30/24 00:00	05/30/24 16:30
BKG02 5ft	2405471-19	Soil	05/30/24 00:00	05/30/24 16:30
BKG03 0.5ft	2405471-20	Soil	05/30/24 00:00	05/30/24 16:30
BKG03 4ft	2405471-21	Soil	05/30/24 00:00	05/30/24 16:30
BKG03 5ft	2405471-22	Soil	05/30/24 00:00	05/30/24 16:30
BKG04 0.5ft	2405471-23	Soil	05/30/24 00:00	05/30/24 16:30
BKG04 4ft	2405471-24	Soil	05/30/24 00:00	05/30/24 16:30
BKG04 5ft	2405471-25	Soil	05/30/24 00:00	05/30/24 16:30
BKG05 0.5ft	2405471-26	Soil	05/30/24 00:00	05/30/24 16:30
BKG05 4ft	2405471-27	Soil	05/30/24 00:00	05/30/24 16:30

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BKG05 5ft	2405471-28	Soil	05/30/24 00:00	05/30/24 16:30

Case Narrative

Rerun analyses were performed by client request on 7/3/2024.
The rerun results included in this report are denoted with "RE#."

This is a revision of the report originally sent on 6/17/2024 at 12:08 PM MT.

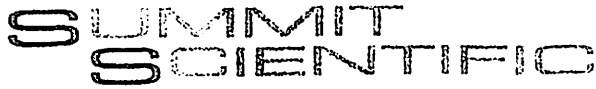
Summit Scientific

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.

		Send Data To:	Send Invoice To:
Client: Fremont	Project Manager: Paul Henehan		Company: Noble / Chevron
Address:	E-Mail:		Project Name/Location:
City/State/Zip:	Project Name: Shoemaker PC A12-69HN Facility		AFE#: UWRWE-A4004-ABN
Phone:	Project Number: CO24-120		PO/Billing Codes:
Sampler Name: Aaron Olliver			Contact: MIKE MONTOYA

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested			Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	915 Organics		915 Inorganics
1	AST01 0.5Ft	5/30/24		2			X			X			X		
2	AST02 0.5FT														
3	AST03 0.5FT														
4	AST04 0.5FT														
5	PW01-B 5FT														
6	PW01-N 4Ft														
7	PW01-S 4Ft														
8	PW01-E 4Ft														
9	PW01-W 4Ft														
10	SEP01-FL 4Ft														
11	SEP01-OL 4Ft														
12	SEP02-FL 4Ft														
13	SEP02-OL 4Ft														
14	BK01 0.5Ft			1									X	X	
15	BK01 4Ft			1									X	X	

Relinquished by: <i>[Signature]</i>	Date/Time: 5/30/24 1525	Received by: Summit North Office	Date/Time: 5/30/24 1525	TAT Business Days	Field DO	Notes:
Relinquished by: 52	Date/Time: 5/30/24 1050	Received by: <i>[Signature]</i>	Date/Time: 5/30/24 1050	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	Field Turb. X	
Temperature Upon Receipt: 10.10	Corrected Temperature: <i>[Symbol]</i>	IR gun #: 1	HNO3 lot #:			



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

Lab ID
2405471.2
Page 2 of 2

		Send Data To:	Send Invoice To:
Client: Fremont	Project Manager: Paul Henehan		Company: Noble/Chemco
Address:	E-Mail:		Project Name/Location:
City/State/Zip:	Project Name: Shoemaker PC A12-69HN Facility		AFE#: UWRWE-A4004-ABN
Phone:	Project Number: C024-120		PO/Billing Codes:
Sampler Name: Aaron O'llier			Contact: MIKE MONTOYA

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested				Special Instructions			
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	915 Inorganics	915 Metals					
1	BK001 5Ft	5/30/24		1															
2	BK002 0.5 Ft																		
3	BK002 4 Ft																		
4	BK002 5 Ft																		
5	BK003 0.5 Ft																		
6	BK003 4 Ft																		
7	BK003 5 Ft																		
8	BK004 0.5 Ft																		
9	BK004 4 Ft																		
10	BK004 5 Ft																		
11	BK005 0.5 Ft																		
12	BK005 4 Ft																		
13	BK005 5 Ft																		
14																			
15																			

Relinquished by: <i>[Signature]</i>	Date/Time: 5/30/24 1525	Received by: Summit North Office	Date/Time: 5/30/24 1525	TAT Business Days	Field DO	Notes:
Relinquished by: 52	Date/Time: 5/30/24 1630	Received by: <i>[Signature]</i>	Date/Time: 5/30/24 1630	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Temperature Upon Receipt: 10.00	Corrected Temperature: 0	IR gun #:		Standard	X	Field Turb.
						HNO3 lot #:

S₂

2/2

Sample Receipt Checklist

S2 Work Order# 2405471

Client: Fremont Client Project ID: Shoemaker PC A12-69HN Facility

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

[] [] [] [] []

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

Temp (°C) 10.6 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
If custody seals are present, are they intact? (1)	-			
Are samples due within 48 hours present?		-		
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)	✗	✓		NO Sample times
Is the COC properly relinquished by the client w/ date and time recorded? (1)	-			
Were all samples received intact? (1)	✓			
Was adequate sample volume provided? (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)		✓		incomplete sample names
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.

AS

Custodian Printed Name

5/30/24
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

AST01 0.5ft
2405471-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHE0970	05/31/24	06/01/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0409	102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0431	108 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0409	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	100	50	mg/kg	1	BHE0973	05/31/24	06/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.3	82.5 %	30-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

AST01 0.5ft
2405471-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHF0022	06/03/24	06/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.47	0.200	mg/kg dry	1	BHF0029	06/03/24	06/07/24	EPA 6020B	
Barium	36.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.45	0.400	"	"	"	"	"	"	
Lead	2.45	0.200	"	"	"	"	"	"	
Nickel	3.06	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	11.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	29.1	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	11.9	0.0500	"	"	"	"	"	"	
Sodium	14.2	0.0500	"	"	"	"	"	"	

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 - Shoemaker PC A12-69HN Facility
 Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

AST01 0.5ft
2405471-01 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.560	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.4		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.373	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

AST01 0.5ft
2405471-01RE1 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

I-04, O-04, O-05

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0147	07/08/24	07/08/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0269	80.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0269	80.7 %	40-150		"	"	"	"	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	10.0		pH Units	1	BHG0145	05/31/24	07/09/24	EPA 9045D	I-04

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

AST02 0.5ft
2405471-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHE0970	05/31/24	06/01/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0406	102 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0422	106 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0401	100 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHE0973	05/31/24	06/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.74	69.9 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

AST02 0.5ft
2405471-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0967	05/31/24	06/01/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0255	76.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0283	84.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0022	06/03/24	06/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

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

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

AST02 0.5ft
2405471-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.74	0.200	mg/kg dry	1	BHF0029	06/03/24	06/07/24	EPA 6020B	
Barium	43.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.51	0.400	"	"	"	"	"	"	
Lead	3.07	0.200	"	"	"	"	"	"	
Nickel	2.95	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	11.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	22.5	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	3.82	0.0500	"	"	"	"	"	"	
Sodium	0.644	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0330	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

AST02 0.5ft
2405471-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.6		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0738	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.86		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

AST03 0.5ft
2405471-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHE0970	05/31/24	06/01/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0446	111 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0428	107 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0422	106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHE0973	05/31/24	06/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.2	89.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

AST03 0.5ft
2405471-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0967	05/31/24	06/01/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0238	71.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0259	77.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0022	06/03/24	06/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

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

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

AST03 0.5ft
2405471-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.62	0.200	mg/kg dry	1	BHF0029	06/03/24	06/07/24	EPA 6020B	
Barium	47.2	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.15	0.400	"	"	"	"	"	"	
Lead	2.88	0.200	"	"	"	"	"	"	
Nickel	3.53	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	12.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	15.6	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	4.81	0.0500	"	"	"	"	"	"	
Sodium	10.0	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.568	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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 - Shoemaker PC A12-69HN Facility
 Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

**AST03 0.5ft
 2405471-03 (Soil)**

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.0		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

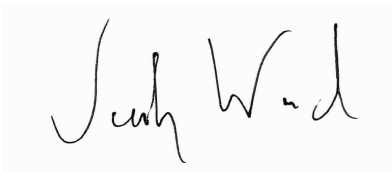
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.212	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.89		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

AST04 0.5ft
2405471-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHE0970	05/31/24	06/01/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0374	93.5 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0410	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0394	98.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHE0973	05/31/24	06/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.6	85.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

AST04 0.5ft
2405471-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0967	05/31/24	06/01/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0205	61.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0206	61.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0022	06/03/24	06/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

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

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

AST04 0.5ft
2405471-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.77	0.200	mg/kg dry	1	BHF0029	06/03/24	06/07/24	EPA 6020B	
Barium	39.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.15	0.400	"	"	"	"	"	"	
Lead	2.67	0.200	"	"	"	"	"	"	
Nickel	3.15	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	11.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	52.6	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	17.6	0.0500	"	"	"	"	"	"	
Sodium	16.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.497	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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 - Shoemaker PC A12-69HN Facility
 Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

AST04 0.5ft
2405471-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.2		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

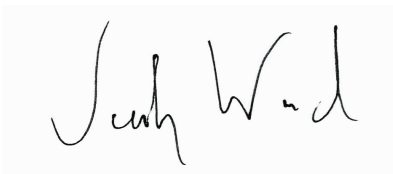
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.565	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.38		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

PWV01-B 5ft
2405471-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.0064	0.0020	mg/kg	1	BHE0970	05/31/24	06/01/24	EPA 8260B	
Toluene	0.035	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.0081	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.066	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.024	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.010	0.0050	"	"	"	"	"	"	
Naphthalene	0.0087	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.66	0.50	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0410	102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0431	108 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0396	99.1 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHE0973	05/31/24	06/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.89	71.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

PWV01-B 5ft
2405471-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0967	05/31/24	06/01/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0183	54.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0184	55.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0022	06/03/24	06/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

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

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

PWV01-B 5ft
2405471-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.99	0.200	mg/kg dry	1	BHF0029	06/03/24	06/07/24	EPA 6020B
Barium	56.3	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.58	0.400	"	"	"	"	"	"
Lead	4.71	0.200	"	"	"	"	"	"
Nickel	4.84	0.400	"	"	"	"	"	"
Silver	0.0227	0.0200	"	"	"	"	"	"
Zinc	27.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	50.0	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	4.72	0.0500	"	"	"	"	"	"	
Sodium	1.09	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0395	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

**PWV01-B 5ft
 2405471-05 (Soil)**

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	88.3			%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**


Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.156	0.0100		mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.70			pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

PWV01-N 4ft
2405471-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHE0970	05/31/24	06/01/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0433	108 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0433	108 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0405	101 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHE0973	05/31/24	06/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.44	75.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

**PWV01-N 4ft
2405471-06 (Soil)**

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0967	05/31/24	06/01/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0169	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0324	0.00500	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0191	57.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0187	56.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0022	06/03/24	06/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

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

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

**PWV01-N 4ft
2405471-06 (Soil)**

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.52	0.200	mg/kg dry	1	BHF0029	06/03/24	06/07/24	EPA 6020B
Barium	45.2	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.37	0.400	"	"	"	"	"	"
Lead	3.07	0.200	"	"	"	"	"	"
Nickel	2.82	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	11.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	64.9	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	4.17	0.0500	"	"	"	"	"	"	
Sodium	ND	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	ND	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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 - Shoemaker PC A12-69HN Facility
 Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

**PWV01-N 4ft
 2405471-06 (Soil)**

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.4		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

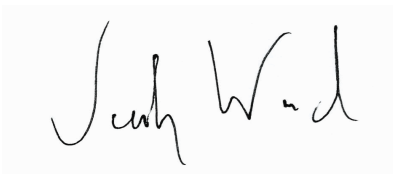
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0891	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.83		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

PWV01-S 4ft
2405471-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHE0970	05/31/24	06/01/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0412	103 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0426	106 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	100 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHE0973	05/31/24	06/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.4	83.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

**PWV01-S 4ft
2405471-07 (Soil)**

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0967	05/31/24	06/01/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/30/24 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	0.0187	56.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0022	06/03/24	06/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

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

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

PWV01-S 4ft
2405471-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.66	0.200	mg/kg dry	1	BHF0029	06/03/24	06/07/24	EPA 6020B
Barium	46.3	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.54	0.400	"	"	"	"	"	"
Lead	4.43	0.200	"	"	"	"	"	"
Nickel	3.57	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	15.8	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	47.5	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	4.41	0.0500	"	"	"	"	"	"	
Sodium	ND	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	ND	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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 - Shoemaker PC A12-69HN Facility
 Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

**PWV01-S 4ft
 2405471-07 (Soil)**

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.6		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

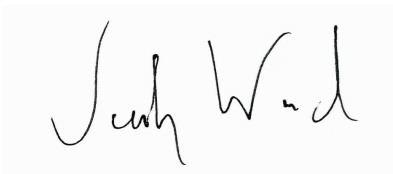
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0933	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.00		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

**PWV01-E 4ft
2405471-08 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHE0970	05/31/24	06/01/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0406	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0413	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0405	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHE0973	05/31/24	06/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.43	67.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

**PWV01-E 4ft
2405471-08 (Soil)**

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0967	05/31/24	06/01/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0197	59.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0199	59.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0022	06/03/24	06/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

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

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

**PWV01-E 4ft
2405471-08 (Soil)**

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.77	0.200	mg/kg dry	1	BHF0029	06/03/24	06/07/24	EPA 6020B	
Barium	51.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.67	0.400	"	"	"	"	"	"	
Lead	3.84	0.200	"	"	"	"	"	"	
Nickel	3.76	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	14.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	38.4	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	4.67	0.0500	"	"	"	"	"	"	
Sodium	0.566	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0230	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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 - Shoemaker PC A12-69HN Facility
 Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

**PWV01-E 4ft
 2405471-08 (Soil)**

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.2		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.116	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.73		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

PWV01-W 4ft
2405471-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHE0970	05/31/24	06/01/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0469	117 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0444	111 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0415	104 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHE0973	05/31/24	06/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.01	56.1 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

**PWV01-W 4ft
2405471-09 (Soil)**

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0967	05/31/24	06/01/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0191	57.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0207	62.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

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

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

**PWV01-W 4ft
2405471-09 (Soil)**

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.88	0.200	mg/kg dry	1	BHF0029	06/03/24	06/07/24	EPA 6020B	
Barium	53.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.21	0.400	"	"	"	"	"	"	
Lead	4.30	0.200	"	"	"	"	"	"	
Nickel	3.54	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	14.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	66.2	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	4.57	0.0500	"	"	"	"	"	"	
Sodium	0.0648	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.00208	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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 - Shoemaker PC A12-69HN Facility
 Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

**PWV01-W 4ft
 2405471-09 (Soil)**

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	86.8			%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

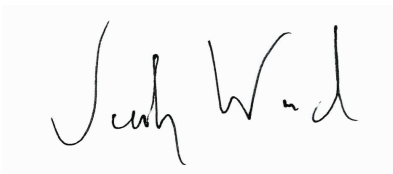
Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.142	0.0100		mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.75			pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

SEP01-FL 4ft
2405471-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHE0970	05/31/24	06/01/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0428	107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0429	107 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0408	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHE0973	05/31/24	06/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.35	66.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

SEP01-FL 4ft
2405471-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0967	05/31/24	06/01/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0236	70.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0222	66.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

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

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

**SEP01-FL 4ft
2405471-10 (Soil)**

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.18	0.200	mg/kg dry	1	BHF0029	06/03/24	06/07/24	EPA 6020B
Barium	50.6	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.35	0.400	"	"	"	"	"	"
Lead	4.74	0.200	"	"	"	"	"	"
Nickel	3.05	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	12.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	11.5	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	2.26	0.0500	"	"	"	"	"	"	
Sodium	ND	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	ND	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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 - Shoemaker PC A12-69HN Facility
 Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

**SEP01-FL 4ft
 2405471-10 (Soil)**

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.0		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

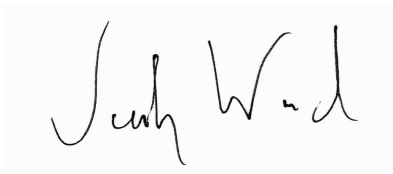
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0631	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	5.50		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

**SEP01-DL 4ft
2405471-11 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHE0970	05/31/24	06/01/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0420	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0423	106 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0408	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHE0973	05/31/24	06/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.51	60.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

**SEP01-DL 4ft
2405471-11 (Soil)**

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0967	05/31/24	06/02/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0239	71.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0226	67.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

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

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

**SEP01-DL 4ft
2405471-11 (Soil)**

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.44	0.200	mg/kg dry	1	BHF0029	06/03/24	06/07/24	EPA 6020B	
Barium	37.3	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.29	0.400	"	"	"	"	"	"	
Lead	4.59	0.200	"	"	"	"	"	"	
Nickel	2.89	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	14.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	25.6	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	4.17	0.0500	"	"	"	"	"	"	
Sodium	2.67	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.129	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

**SEP01-DL 4ft
2405471-11 (Soil)**

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.4		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0967	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.75		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

**SEP02-FL 4ft
2405471-12 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHE0970	05/31/24	06/01/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0526	132 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0429	107 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0421	105 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHE0973	05/31/24	06/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.87	62.9 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

SEP02-FL 4ft
2405471-12 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0967	05/31/24	06/02/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0236	70.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0228	68.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

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

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

**SEP02-FL 4ft
2405471-12 (Soil)**

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.49	0.200	mg/kg dry	1	BHF0029	06/03/24	06/07/24	EPA 6020B
Barium	40.9	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.32	0.400	"	"	"	"	"	"
Lead	3.98	0.200	"	"	"	"	"	"
Nickel	3.40	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	14.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	34.2	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	3.76	0.0500	"	"	"	"	"	"	
Sodium	ND	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	ND	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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 - Shoemaker PC A12-69HN Facility
 Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

**SEP02-FL 4ft
 2405471-12 (Soil)**

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.2		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

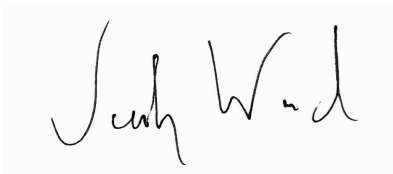
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0982	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.75		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

**SEP02-DL 4ft
2405471-13 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHE0970	05/31/24	06/01/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0216	53.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0420	105 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0416	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHE0973	05/31/24	06/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.83	70.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

**SEP02-DL 4ft
2405471-13 (Soil)**

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0967	05/31/24	06/02/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0258	77.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0237	71.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

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

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

**SEP02-DL 4ft
2405471-13 (Soil)**

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.39	0.200	mg/kg dry	1	BHF0029	06/03/24	06/07/24	EPA 6020B	
Barium	40.2	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.07	0.400	"	"	"	"	"	"	
Lead	3.74	0.200	"	"	"	"	"	"	
Nickel	2.89	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	13.6	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	21.3	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	3.23	0.0500	"	"	"	"	"	"	
Sodium	0.153	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.00816	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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 - Shoemaker PC A12-69HN Facility
 Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

**SEP02-DL 4ft
 2405471-13 (Soil)**

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.4		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0624	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.66		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG01 0.5ft
2405471-14 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.10	0.200	mg/kg dry	1	BHF0029	06/03/24	06/07/24	EPA 6020B	
Barium	48.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.89	0.400	"	"	"	"	"	"	
Lead	4.67	0.200	"	"	"	"	"	"	
Nickel	4.28	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	17.1	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	25.7	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	3.47	0.0500	"	"	"	"	"	"	
Sodium	ND	0.0500	"	"	"	"	"	"	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG01 0.5ft
2405471-14 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	ND	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.0		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0530	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.04		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG01 4ft
2405471-15 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.46	0.200	mg/kg dry	1	BHF0029	06/03/24	06/07/24	EPA 6020B	
Barium	44.4	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.08	0.400	"	"	"	"	"	"	
Lead	3.84	0.200	"	"	"	"	"	"	
Nickel	3.60	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	13.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	23.2	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	3.07	0.0500	"	"	"	"	"	"	
Sodium	ND	0.0500	"	"	"	"	"	"	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG01 4ft
2405471-15 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.00180	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.2		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0353	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.59		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG01 5ft
2405471-16 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.42	0.200	mg/kg dry	1	BHF0029	06/03/24	06/07/24	EPA 6020B	
Barium	61.4	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.23	0.400	"	"	"	"	"	"	
Lead	4.79	0.200	"	"	"	"	"	"	
Nickel	4.39	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	17.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	43.7	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	3.42	0.0500	"	"	"	"	"	"	
Sodium	0.118	0.0500	"	"	"	"	"	"	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG01 5ft
2405471-16 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.00463	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.7		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0645	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.98		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG02 0.5ft
2405471-17 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.20	0.200	mg/kg dry	1	BHF0029	06/03/24	06/07/24	EPA 6020B	
Barium	72.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.92	0.400	"	"	"	"	"	"	
Lead	14.2	0.200	"	"	"	"	"	"	
Nickel	5.58	0.400	"	"	"	"	"	"	
Silver	0.0226	0.0200	"	"	"	"	"	"	
Zinc	20.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	23.1	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	4.34	0.0500	"	"	"	"	"	"	
Sodium	8.12	0.0500	"	"	"	"	"	"	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG02 0.5ft
2405471-17 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.407	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.7		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.372	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.47		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG02 4ft
2405471-18 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.10	0.200	mg/kg dry	1	BHF0029	06/03/24	06/07/24	EPA 6020B	
Barium	55.2	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.78	0.400	"	"	"	"	"	"	
Lead	4.31	0.200	"	"	"	"	"	"	
Nickel	4.04	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	14.9	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	21.4	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	3.45	0.0500	"	"	"	"	"	"	
Sodium	3.85	0.0500	"	"	"	"	"	"	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG02 4ft
2405471-18 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.204	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.5		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.138	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.49		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG02 5ft
2405471-19 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.39	0.200	mg/kg dry	1	BHF0029	06/03/24	06/07/24	EPA 6020B	
Barium	42.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.81	0.400	"	"	"	"	"	"	
Lead	3.29	0.200	"	"	"	"	"	"	
Nickel	3.01	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	11.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	39.2	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	2.87	0.0500	"	"	"	"	"	"	
Sodium	2.88	0.0500	"	"	"	"	"	"	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG02 5ft
2405471-19 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.120	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.2		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.117	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.93		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG03 0.5ft
2405471-20 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.05	0.200	mg/kg dry	1	BHF0031	06/03/24	06/07/24	EPA 6020B	
Barium	34.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.25	0.400	"	"	"	"	"	"	
Lead	5.06	0.200	"	"	"	"	"	"	
Nickel	2.59	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	13.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0018	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	22.5	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	3.46	0.0500	"	"	"	"	"	"	
Sodium	5.58	0.0500	"	"	"	"	"	"	

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 - Shoemaker PC A12-69HN Facility
 Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

BKG03 0.5ft
2405471-20 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.289	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.3		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.291	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.89		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG03 4ft
2405471-21 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.19	0.200	mg/kg dry	1	BHF0031	06/03/24	06/07/24	EPA 6020B	
Barium	58.4	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.70	0.400	"	"	"	"	"	"	
Lead	4.30	0.200	"	"	"	"	"	"	
Nickel	2.93	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	16.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0033	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	25.3	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	6.10	0.0500	"	"	"	"	"	"	
Sodium	8.29	0.0500	"	"	"	"	"	"	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG03 4ft
2405471-21 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.384	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.2		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.653	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.80		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG03 5ft
2405471-22 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.98	0.200	mg/kg dry	1	BHF0031	06/03/24	06/07/24	EPA 6020B	
Barium	51.2	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.19	0.400	"	"	"	"	"	"	
Lead	4.75	0.200	"	"	"	"	"	"	
Nickel	3.16	0.400	"	"	"	"	"	"	
Silver	0.0223	0.0200	"	"	"	"	"	"	
Zinc	15.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0033	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	31.1	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	7.48	0.0500	"	"	"	"	"	"	
Sodium	13.2	0.0500	"	"	"	"	"	"	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG03 5ft
2405471-22 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.552	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.3		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.504	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.57		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG04 0.5ft
2405471-23 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.13	0.200	mg/kg dry	1	BHF0031	06/03/24	06/07/24	EPA 6020B	
Barium	43.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.37	0.400	"	"	"	"	"	"	
Lead	4.51	0.200	"	"	"	"	"	"	
Nickel	2.78	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	11.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0033	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	49.3	0.0500	mg/L dry	1	BHE0979	05/31/24	06/13/24	EPA 6020B	
Magnesium	10.3	0.0500	"	"	"	"	"	"	
Sodium	21.1	0.0500	"	"	"	"	"	"	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG04 0.5ft
2405471-23 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.714	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.1		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.642	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.48		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG04 4ft
2405471-24 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.24	0.181	mg/kg dry	1	BHF0031	06/03/24	06/07/24	EPA 6020B	
Barium	56.5	0.362	"	"	"	"	"	"	
Cadmium	ND	0.181	"	"	"	"	"	"	
Copper	2.31	0.362	"	"	"	"	"	"	
Lead	4.20	0.181	"	"	"	"	"	"	
Nickel	2.81	0.362	"	"	"	"	"	"	
Silver	ND	0.0181	"	"	"	"	"	"	
Zinc	10.9	0.362	"	"	"	"	"	"	
Selenium	ND	0.236	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0033	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	135	0.0500	mg/L dry	1	BHE0979	05/31/24	06/14/24	EPA 6020B	
Magnesium	28.7	0.0500	"	"	"	"	"	"	
Sodium	40.7	0.0500	"	"	"	"	"	"	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG04 4ft
2405471-24 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.830	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.8		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.35	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.25		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG04 5ft
2405471-25 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.23	0.200	mg/kg dry	1	BHF0031	06/03/24	06/07/24	EPA 6020B	
Barium	49.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.10	0.400	"	"	"	"	"	"	
Lead	5.24	0.200	"	"	"	"	"	"	
Nickel	2.78	0.400	"	"	"	"	"	"	
Silver	0.0200	0.0200	"	"	"	"	"	"	
Zinc	14.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0033	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	267	0.0500	mg/L dry	1	BHE0979	05/31/24	06/14/24	EPA 6020B	
Magnesium	57.8	0.0500	"	"	"	"	"	"	
Sodium	35.2	0.0500	"	"	"	"	"	"	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG04 5ft
2405471-25 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.509	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.1		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.48	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.69		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG05 0.5ft
2405471-26 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.56	0.200	mg/kg dry	1	BHF0031	06/03/24	06/07/24	EPA 6020B	
Barium	45.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.00	0.400	"	"	"	"	"	"	
Lead	4.70	0.200	"	"	"	"	"	"	
Nickel	3.23	0.400	"	"	"	"	"	"	
Silver	0.0220	0.0200	"	"	"	"	"	"	
Zinc	17.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0033	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	25.3	0.0500	mg/L dry	1	BHE0979	05/31/24	06/14/24	EPA 6020B	
Magnesium	3.52	0.0500	"	"	"	"	"	"	
Sodium	ND	0.0500	"	"	"	"	"	"	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG05 0.5ft
2405471-26 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	ND	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.2		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0636	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.29		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG05 4ft
2405471-27 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.05	0.200	mg/kg dry	1	BHF0031	06/03/24	06/07/24	EPA 6020B	
Barium	49.1	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.19	0.400	"	"	"	"	"	"	
Lead	5.01	0.200	"	"	"	"	"	"	
Nickel	3.34	0.400	"	"	"	"	"	"	
Silver	0.0206	0.0200	"	"	"	"	"	"	
Zinc	13.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0033	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	13.7	0.0500	mg/L dry	1	BHE0979	05/31/24	06/14/24	EPA 6020B	
Magnesium	2.25	0.0500	"	"	"	"	"	"	
Sodium	3.96	0.0500	"	"	"	"	"	"	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG05 4ft
2405471-27 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.261	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.5		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0932	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.59		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG05 5ft
2405471-28 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHE0963	05/31/24	06/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.00	0.200	mg/kg dry	1	BHF0031	06/03/24	06/07/24	EPA 6020B	
Barium	41.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.62	0.400	"	"	"	"	"	"	
Lead	4.80	0.200	"	"	"	"	"	"	
Nickel	2.73	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	11.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0033	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	36.4	0.0500	mg/L dry	1	BHE0979	05/31/24	06/14/24	EPA 6020B	
Magnesium	3.16	0.0500	"	"	"	"	"	"	
Sodium	2.81	0.0500	"	"	"	"	"	"	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

BKG05 5ft
2405471-28 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.120	0.00100	units	1	BHF0413	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.2		%	1	BHF0021	06/03/24	06/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.134	0.0100	mmhos/cm	1	BHE0981	05/31/24	06/03/24	EPA 120.1	

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

Date Sampled: **05/30/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.88		pH Units	1	BHE0982	05/31/24	06/03/24	EPA 9045D	

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

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 BHE0970 - EPA 5030 Soil MS

Blank (BHE0970-BLK1)

Prepared: 05/31/24 Analyzed: 06/01/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0426		"	0.0400		107	50-150			
<i>Surrogate: Toluene-d8</i>	0.0430		"	0.0400		107	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0421		"	0.0400		105	50-150			

LCS (BHE0970-BS1)

Prepared: 05/31/24 Analyzed: 06/01/24

Benzene	0.0889	0.0020	mg/kg	0.100		88.9	70-130			
Toluene	0.111	0.0050	"	0.100		111	70-130			
Ethylbenzene	0.0987	0.0050	"	0.100		98.7	70-130			
m,p-Xylene	0.196	0.010	"	0.200		98.0	70-130			
o-Xylene	0.0958	0.0050	"	0.100		95.8	70-130			
1,2,4-Trimethylbenzene	0.0910	0.0050	"	0.100		91.0	70-130			
1,3,5-Trimethylbenzene	0.0929	0.0050	"	0.100		92.9	70-130			
Naphthalene	0.0823	0.0038	"	0.100		82.3	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0419		"	0.0400		105	50-150			
<i>Surrogate: Toluene-d8</i>	0.0421		"	0.0400		105	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0386		"	0.0400		96.5	50-150			

Matrix Spike (BHE0970-MS1)

Source: 2405471-01

Prepared: 05/31/24 Analyzed: 06/01/24

Benzene	0.0858	0.0020	mg/kg	0.100	ND	85.8	70-130			
Toluene	0.108	0.0050	"	0.100	ND	108	70-130			
Ethylbenzene	0.0935	0.0050	"	0.100	ND	93.5	70-130			
m,p-Xylene	0.186	0.010	"	0.200	ND	92.9	70-130			
o-Xylene	0.0904	0.0050	"	0.100	ND	90.4	70-130			
1,2,4-Trimethylbenzene	0.0824	0.0050	"	0.100	ND	82.4	70-130			
1,3,5-Trimethylbenzene	0.0855	0.0050	"	0.100	ND	85.5	70-130			
Naphthalene	0.0726	0.0038	"	0.100	ND	72.6	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0401		"	0.0400		100	50-150			
<i>Surrogate: Toluene-d8</i>	0.0447		"	0.0400		112	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0388		"	0.0400		97.0	50-150			

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

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 BHE0970 - EPA 5030 Soil MS

Matrix Spike Dup (BHE0970-MSD1)	Source: 2405471-01			Prepared: 05/31/24 Analyzed: 06/01/24						
Benzene	0.0828	0.0020	mg/kg	0.100	ND	82.8	70-130	3.56	30	
Toluene	0.104	0.0050	"	0.100	ND	104	70-130	3.92	30	
Ethylbenzene	0.0899	0.0050	"	0.100	ND	89.9	70-130	3.86	30	
m,p-Xylene	0.174	0.010	"	0.200	ND	87.0	70-130	6.61	30	
o-Xylene	0.0877	0.0050	"	0.100	ND	87.7	70-130	3.00	30	
1,2,4-Trimethylbenzene	0.0774	0.0050	"	0.100	ND	77.4	70-130	6.23	30	
1,3,5-Trimethylbenzene	0.0792	0.0050	"	0.100	ND	79.2	70-130	7.65	30	
Naphthalene	0.0698	0.0038	"	0.100	ND	69.8	70-130	4.00	30	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0389		"	0.0400		97.2	50-150			
Surrogate: Toluene-d8	0.0443		"	0.0400		111	50-150			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		99.0	50-150			

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BHE0973 - EPA 3550A

Blank (BHE0973-BLK1)

Prepared & Analyzed: 05/31/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	13.8		"	12.5	110	30-150					

LCS (BHE0973-BS1)

Prepared & Analyzed: 05/31/24

C10-C28 (DRO)	465	50	mg/kg	500	93.1	70-130					
Surrogate: <i>o</i> -Terphenyl	12.6		"	12.5	100	30-150					

Matrix Spike (BHE0973-MS1)

Source: 2405471-01

Prepared & Analyzed: 05/31/24

C10-C28 (DRO)	450	50	mg/kg	500	99.9	70.1	70-130				
Surrogate: <i>o</i> -Terphenyl	10.7		"	12.5	85.8	30-150					

Matrix Spike Dup (BHE0973-MSD1)

Source: 2405471-01

Prepared & Analyzed: 05/31/24

C10-C28 (DRO)	502	50	mg/kg	500	99.9	80.5	70-130	10.9	20		
Surrogate: <i>o</i> -Terphenyl	12.4		"	12.5	99.2	30-150					

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

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 BHE0967 - EPA 5030 Soil MS

Blank (BHE0967-BLK1)

Prepared: 05/31/24 Analyzed: 06/01/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0228		"	0.0333		68.4	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0273		"	0.0333		81.8	40-150			

LCS (BHE0967-BS1)

Prepared: 05/31/24 Analyzed: 06/01/24

Acenaphthene	0.0244	0.00500	mg/kg	0.0333		73.2	31-137			
Anthracene	0.0241	0.00500	"	0.0333		72.2	30-120			
Benzo (a) anthracene	0.0275	0.00500	"	0.0333		82.4	30-120			
Benzo (a) pyrene	0.0247	0.00500	"	0.0333		74.0	30-120			
Benzo (b) fluoranthene	0.0283	0.00500	"	0.0333		85.0	30-120			
Benzo (k) fluoranthene	0.0259	0.00500	"	0.0333		77.7	30-120			
Chrysene	0.0252	0.00500	"	0.0333		75.7	30-120			
Dibenz (a,h) anthracene	0.0209	0.00500	"	0.0333		62.7	30-120			
Fluoranthene	0.0227	0.00500	"	0.0333		68.2	30-120			
Fluorene	0.0257	0.00500	"	0.0333		77.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0238	0.00500	"	0.0333		71.4	30-120			
Pyrene	0.0341	0.00500	"	0.0333		102	35-142			
1-Methylnaphthalene	0.0267	0.00500	"	0.0333		80.1	35-142			
2-Methylnaphthalene	0.0311	0.00500	"	0.0333		93.3	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0226		"	0.0333		67.8	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0216		"	0.0333		64.7	40-150			

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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

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 BHE0967 - EPA 5030 Soil MS

Matrix Spike (BHE0967-MS1)

Source: 2405471-03

Prepared: 05/31/24 Analyzed: 06/01/24

Acenaphthene	0.0188	0.00500	mg/kg	0.0333	ND	56.3	31-137			
Anthracene	0.0181	0.00500	"	0.0333	ND	54.4	30-120			
Benzo (a) anthracene	0.0221	0.00500	"	0.0333	ND	66.3	30-120			
Benzo (a) pyrene	0.0194	0.00500	"	0.0333	ND	58.3	30-120			
Benzo (b) fluoranthene	0.0220	0.00500	"	0.0333	ND	66.0	30-120			
Benzo (k) fluoranthene	0.0201	0.00500	"	0.0333	ND	60.2	30-120			
Chrysene	0.0209	0.00500	"	0.0333	ND	62.8	30-120			
Dibenz (a,h) anthracene	0.0175	0.00500	"	0.0333	ND	52.4	30-120			
Fluoranthene	0.0172	0.00500	"	0.0333	ND	51.7	30-120			
Fluorene	0.0217	0.00500	"	0.0333	ND	65.1	30-120			
Indeno (1,2,3-cd) pyrene	0.0208	0.00500	"	0.0333	ND	62.3	30-120			
Pyrene	0.0305	0.00500	"	0.0333	ND	91.5	35-142			
1-Methylnaphthalene	0.0249	0.00500	"	0.0333	ND	74.8	15-130			
2-Methylnaphthalene	0.0310	0.00500	"	0.0333	ND	93.1	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0160		"	0.0333		48.0	40-150			
Surrogate: Fluoranthene-d10	0.0164		"	0.0333		49.2	40-150			

Matrix Spike Dup (BHE0967-MSD1)

Source: 2405471-03

Prepared: 05/31/24 Analyzed: 06/01/24

Acenaphthene	0.0177	0.00500	mg/kg	0.0333	ND	53.0	31-137	5.96	30	
Anthracene	0.0181	0.00500	"	0.0333	ND	54.3	30-120	0.171	30	
Benzo (a) anthracene	0.0221	0.00500	"	0.0333	ND	66.3	30-120	0.0226	30	
Benzo (a) pyrene	0.0196	0.00500	"	0.0333	ND	58.9	30-120	1.06	30	
Benzo (b) fluoranthene	0.0228	0.00500	"	0.0333	ND	68.3	30-120	3.43	30	
Benzo (k) fluoranthene	0.0205	0.00500	"	0.0333	ND	61.4	30-120	1.95	30	
Chrysene	0.0212	0.00500	"	0.0333	ND	63.5	30-120	1.11	30	
Dibenz (a,h) anthracene	0.0165	0.00500	"	0.0333	ND	49.6	30-120	5.42	30	
Fluoranthene	0.0183	0.00500	"	0.0333	ND	54.8	30-120	5.83	30	
Fluorene	0.0201	0.00500	"	0.0333	ND	60.2	30-120	7.71	30	
Indeno (1,2,3-cd) pyrene	0.0198	0.00500	"	0.0333	ND	59.5	30-120	4.58	30	
Pyrene	0.0302	0.00500	"	0.0333	ND	90.6	35-142	1.00	30	
1-Methylnaphthalene	0.0258	0.00500	"	0.0333	ND	77.3	15-130	3.26	50	
2-Methylnaphthalene	0.0327	0.00500	"	0.0333	ND	98.1	15-130	5.26	50	
Surrogate: 2-Methylnaphthalene-d10	0.0157		"	0.0333		47.2	40-150			
Surrogate: Fluoranthene-d10	0.0173		"	0.0333		51.8	40-150			

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

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 BHG0147 - EPA 5030 Soil MS

Blank (BHG0147-BLK1)

Prepared & Analyzed: 07/08/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0214</i>		"	<i>0.0333</i>		<i>64.2</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0281</i>		"	<i>0.0333</i>		<i>84.2</i>	<i>40-150</i>			

LCS (BHG0147-BS1)

Prepared & Analyzed: 07/08/24

Acenaphthene	0.0271	0.00500	mg/kg	0.0333		81.2	31-137			
Anthracene	0.0281	0.00500	"	0.0333		84.4	30-120			
Benzo (a) anthracene	0.0312	0.00500	"	0.0333		93.6	30-120			
Benzo (a) pyrene	0.0281	0.00500	"	0.0333		84.2	30-120			
Benzo (b) fluoranthene	0.0288	0.00500	"	0.0333		86.5	30-120			
Benzo (k) fluoranthene	0.0292	0.00500	"	0.0333		87.7	30-120			
Chrysene	0.0302	0.00500	"	0.0333		90.5	30-120			
Dibenz (a,h) anthracene	0.0277	0.00500	"	0.0333		83.2	30-120			
Fluoranthene	0.0292	0.00500	"	0.0333		87.7	30-120			
Fluorene	0.0290	0.00500	"	0.0333		87.1	30-120			
Indeno (1,2,3-cd) pyrene	0.0268	0.00500	"	0.0333		80.5	30-120			
Pyrene	0.0316	0.00500	"	0.0333		94.8	35-142			
1-Methylnaphthalene	0.0236	0.00500	"	0.0333		70.7	35-142			
2-Methylnaphthalene	0.0227	0.00500	"	0.0333		68.0	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0195</i>		"	<i>0.0333</i>		<i>58.6</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0301</i>		"	<i>0.0333</i>		<i>90.3</i>	<i>40-150</i>			

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

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 BHG0147 - EPA 5030 Soil MS

Matrix Spike (BHG0147-MS1)	Source: 2407016-01			Prepared & Analyzed: 07/08/24						
Acenaphthene	0.0232	0.00500	mg/kg	0.0333	ND	69.6	31-137			
Anthracene	0.0227	0.00500	"	0.0333	ND	68.2	30-120			
Benzo (a) anthracene	0.0261	0.00500	"	0.0333	ND	78.4	30-120			
Benzo (a) pyrene	0.0258	0.00500	"	0.0333	ND	77.4	30-120			
Benzo (b) fluoranthene	0.0338	0.00500	"	0.0333	0.00638	82.2	30-120			
Benzo (k) fluoranthene	0.0255	0.00500	"	0.0333	ND	76.6	30-120			
Chrysene	0.0443	0.00500	"	0.0333	0.0244	59.6	30-120			
Dibenz (a,h) anthracene	0.0136	0.00500	"	0.0333	ND	40.8	30-120			
Fluoranthene	0.0275	0.00500	"	0.0333	ND	82.4	30-120			
Fluorene	0.0140	0.00500	"	0.0333	ND	41.9	30-120			
Indeno (1,2,3-cd) pyrene	0.0157	0.00500	"	0.0333	ND	47.2	30-120			
Pyrene	0.0345	0.00500	"	0.0333	0.00828	78.7	35-142			
1-Methylnaphthalene	0.0258	0.00500	"	0.0333	ND	77.5	15-130			
2-Methylnaphthalene	0.0199	0.00500	"	0.0333	ND	59.8	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0169</i>		<i>"</i>	<i>0.0333</i>		<i>50.8</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0216</i>		<i>"</i>	<i>0.0333</i>		<i>64.7</i>	<i>40-150</i>			

Matrix Spike Dup (BHG0147-MSD1)	Source: 2407016-01			Prepared & Analyzed: 07/08/24						
Acenaphthene	0.0198	0.00500	mg/kg	0.0333	ND	59.5	31-137	15.7	30	
Anthracene	0.0175	0.00500	"	0.0333	ND	52.4	30-120	26.3	30	
Benzo (a) anthracene	0.0214	0.00500	"	0.0333	ND	64.2	30-120	19.9	30	
Benzo (a) pyrene	0.0277	0.00500	"	0.0333	ND	83.0	30-120	6.95	30	
Benzo (b) fluoranthene	0.0377	0.00500	"	0.0333	0.00638	93.9	30-120	10.9	30	
Benzo (k) fluoranthene	0.0278	0.00500	"	0.0333	ND	83.3	30-120	8.37	30	
Chrysene	0.0409	0.00500	"	0.0333	0.0244	49.5	30-120	7.94	30	
Dibenz (a,h) anthracene	0.0140	0.00500	"	0.0333	ND	41.9	30-120	2.69	30	
Fluoranthene	0.0193	0.00500	"	0.0333	ND	57.9	30-120	35.0	30	QR-02
Fluorene	0.0140	0.00500	"	0.0333	ND	42.2	30-120	0.688	30	
Indeno (1,2,3-cd) pyrene	0.0139	0.00500	"	0.0333	ND	41.8	30-120	12.0	30	
Pyrene	0.0294	0.00500	"	0.0333	0.00828	63.2	35-142	16.2	30	
1-Methylnaphthalene	0.0284	0.00500	"	0.0333	ND	85.2	15-130	9.46	50	
2-Methylnaphthalene	0.0197	0.00500	"	0.0333	ND	59.1	15-130	1.09	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0175</i>		<i>"</i>	<i>0.0333</i>		<i>52.4</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0173</i>		<i>"</i>	<i>0.0333</i>		<i>51.8</i>	<i>40-150</i>			

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

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

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

Batch BHE0963 - EPA 3050B

Blank (BHE0963-BLK1)											
Prepared: 05/31/24 Analyzed: 06/08/24											
Boron	ND	2.00	mg/L								
LCS (BHE0963-BS1)											
Prepared: 05/31/24 Analyzed: 06/08/24											
Boron	4.84	2.00	mg/L	5.00		96.9	80-120				
Duplicate (BHE0963-DUP1)											
Source: 2405471-09 Prepared: 05/31/24 Analyzed: 06/08/24											
Boron	0.259	2.00	mg/L		0.270			3.99	20		
Matrix Spike (BHE0963-MS1)											
Source: 2405471-09 Prepared: 05/31/24 Analyzed: 06/08/24											
Boron	5.01	2.00	mg/L	5.03	0.270	94.4	75-125				
Matrix Spike Dup (BHE0963-MSD1)											
Source: 2405471-09 Prepared: 05/31/24 Analyzed: 06/08/24											
Boron	5.01	2.00	mg/L	5.03	0.270	94.4	75-125	0.0636	25		

Batch BHF0022 - EPA 3050B

Blank (BHF0022-BLK1)											
Prepared: 06/03/24 Analyzed: 06/10/24											
Boron	ND	2.00	mg/L								
LCS (BHF0022-BS1)											
Prepared: 06/03/24 Analyzed: 06/10/24											
Boron	5.06	2.00	mg/L	5.00		101	80-120				
Duplicate (BHF0022-DUP1)											
Source: 2405471-01 Prepared: 06/03/24 Analyzed: 06/10/24											
Boron	0.260	2.00	mg/L		0.285			9.25	20		
Matrix Spike (BHF0022-MS1)											
Source: 2405471-01 Prepared: 06/03/24 Analyzed: 06/10/24											
Boron	5.74	2.00	mg/L	5.01	0.285	109	75-125				

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

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

Summit Scientific

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

Batch BHF0022 - EPA 3050B

Matrix Spike Dup (BHF0022-MSD1)

Source: 2405471-01

Prepared: 06/03/24 Analyzed: 06/10/24

Boron	5.69	2.00	mg/L	5.01	0.285	108	75-125	0.893	25	
-------	------	------	------	------	-------	-----	--------	-------	----	--

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHF0029 - EPA 3050B

Blank (BHF0029-BLK1)

Prepared: 06/03/24 Analyzed: 06/07/24

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

LCS (BHF0029-BS1)

Prepared: 06/03/24 Analyzed: 06/07/24

Arsenic	36.0	0.200	mg/kg wet	38.2	94.4	80-120
Barium	37.2	0.400	"	38.2	97.3	80-120
Cadmium	1.76	0.200	"	1.91	92.4	80-120
Copper	35.5	0.400	"	38.2	93.0	80-120
Lead	17.9	0.200	"	19.1	93.8	80-120
Nickel	35.2	0.400	"	38.2	92.1	80-120
Silver	1.84	0.0200	"	1.91	96.6	80-120
Zinc	33.9	0.400	"	38.2	88.8	80-120
Selenium	3.39	0.260	"	3.82	88.9	80-120

Duplicate (BHF0029-DUP1)

Source: 2405471-01

Prepared: 06/03/24 Analyzed: 06/07/24

Arsenic	1.78	0.200	mg/kg dry	1.47	18.8	20	
Barium	45.1	0.400	"	36.9	19.9	20	
Cadmium	0.105	0.200	"	0.0792	28.0	20	QR-01
Copper	4.94	0.400	"	3.45	35.5	20	QR-04
Lead	2.72	0.200	"	2.45	10.5	20	
Nickel	4.05	0.400	"	3.06	28.0	20	QR-04
Silver	0.00705	0.0200	"	0.00475	39.0	20	QR-01
Zinc	13.5	0.400	"	11.4	16.3	20	
Selenium	ND	0.260	"	ND		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 - Shoemaker PC A12-69HN Facility
Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHF0029 - EPA 3050B

Matrix Spike (BHF0029-MS1)		Source: 2405471-01			Prepared: 06/03/24		Analyzed: 06/07/24				
Arsenic	27.0	0.180	mg/kg dry	37.3	1.47	68.4	75-125				QM-07
Barium	77.7	0.360	"	37.3	36.9	109	75-125				
Cadmium	1.82	0.180	"	1.86	0.0792	93.2	75-125				
Copper	37.1	0.360	"	37.3	3.45	90.3	75-125				
Lead	19.8	0.180	"	18.6	2.45	92.9	75-125				
Nickel	37.2	0.360	"	37.3	3.06	91.5	75-125				
Silver	1.73	0.0180	"	1.86	0.00475	92.3	75-125				
Zinc	45.6	0.360	"	37.3	11.4	91.6	75-125				
Selenium	2.87	0.234	"	3.73	ND	76.9	75-125				

Matrix Spike Dup (BHF0029-MSD1)		Source: 2405471-01			Prepared: 06/03/24		Analyzed: 06/07/24				
Arsenic	30.1	0.200	mg/kg dry	39.3	1.47	72.8	75-125	10.8	25		QM-07
Barium	75.3	0.400	"	39.3	36.9	97.6	75-125	3.14	25		
Cadmium	1.96	0.200	"	1.96	0.0792	95.8	75-125	7.58	25		
Copper	38.0	0.400	"	39.3	3.45	88.0	75-125	2.32	25		
Lead	20.6	0.200	"	19.6	2.45	92.5	75-125	4.18	25		
Nickel	37.8	0.400	"	39.3	3.06	88.4	75-125	1.56	25		
Silver	1.86	0.0200	"	1.96	0.00475	94.6	75-125	7.66	25		
Zinc	45.8	0.400	"	39.3	11.4	87.4	75-125	0.385	25		
Selenium	3.06	0.260	"	3.93	ND	77.9	75-125	6.42	25		

Batch BHF0031 - EPA 3050B

Blank (BHF0031-BLK1)					Prepared: 06/03/24		Analyzed: 06/07/24				
Arsenic	ND	0.200	mg/kg wet								
Barium	ND	0.400	"								
Cadmium	ND	0.200	"								
Copper	ND	0.400	"								
Lead	ND	0.200	"								
Nickel	ND	0.400	"								
Silver	ND	0.0200	"								
Zinc	ND	0.400	"								
Selenium	ND	0.260	"								

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHF0031 - EPA 3050B

LCS (BHF0031-BS1)

Prepared: 06/03/24 Analyzed: 06/07/24

Arsenic	35.9	0.200	mg/kg wet	38.8		92.5	80-120			
Barium	37.6	0.400	"	38.8		96.9	80-120			
Cadmium	1.90	0.200	"	1.94		98.2	80-120			
Copper	40.9	0.400	"	38.8		106	80-120			
Lead	19.3	0.200	"	19.4		99.6	80-120			
Nickel	40.2	0.400	"	38.8		104	80-120			
Silver	1.92	0.0200	"	1.94		99.0	80-120			
Zinc	39.9	0.400	"	38.8		103	80-120			
Selenium	3.70	0.260	"	3.88		95.5	80-120			

Duplicate (BHF0031-DUP1)

Source: 2405471-20

Prepared: 06/03/24 Analyzed: 06/07/24

Arsenic	1.78	0.200	mg/kg dry		2.05			13.7	20	
Barium	33.6	0.400	"		34.8			3.34	20	
Cadmium	0.129	0.200	"		0.141			9.13	20	
Copper	4.02	0.400	"		4.25			5.48	20	
Lead	4.63	0.200	"		5.06			8.79	20	
Nickel	2.49	0.400	"		2.59			3.94	20	
Silver	0.0143	0.0200	"		0.0186			26.2	20	QR-01
Zinc	13.2	0.400	"		13.5			2.07	20	
Selenium	ND	0.260	"		ND				20	

Matrix Spike (BHF0031-MS1)

Source: 2405471-20

Prepared: 06/03/24 Analyzed: 06/07/24

Arsenic	37.3	0.200	mg/kg dry	38.2	2.05	92.2	75-125			
Barium	76.0	0.400	"	38.2	34.8	108	75-125			
Cadmium	2.08	0.200	"	1.91	0.141	102	75-125			
Copper	32.3	0.400	"	38.2	4.25	73.5	75-125			QM-07
Lead	24.2	0.200	"	19.1	5.06	100	75-125			
Nickel	30.6	0.400	"	38.2	2.59	73.3	75-125			QM-07
Silver	1.92	0.0200	"	1.91	0.0186	99.7	75-125			
Zinc	41.1	0.400	"	38.2	13.5	72.4	75-125			QM-07
Selenium	3.79	0.260	"	3.82	ND	99.2	75-125			

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHF0031 - EPA 3050B

Matrix Spike Dup (BHF0031-MSD1)	Source: 2405471-20			Prepared: 06/03/24 Analyzed: 06/07/24							
Arsenic	41.8	0.200	mg/kg dry	40.9	2.05	97.2	75-125	11.4	25		
Barium	77.7	0.400	"	40.9	34.8	105	75-125	2.27	25		
Cadmium	2.19	0.200	"	2.05	0.141	99.9	75-125	4.73	25		
Copper	34.4	0.400	"	40.9	4.25	73.6	75-125	6.16	25	QM-07	
Lead	25.8	0.200	"	20.5	5.06	102	75-125	6.68	25		
Nickel	33.0	0.400	"	40.9	2.59	74.4	75-125	7.62	25	QM-07	
Silver	2.01	0.0200	"	2.05	0.0186	97.1	75-125	4.23	25		
Zinc	44.1	0.400	"	40.9	13.5	75.0	75-125	7.05	25		
Selenium	3.87	0.260	"	4.09	ND	94.7	75-125	2.16	25		

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BHF0018 - 3060A Mod

Blank (BHF0018-BLK1)											Prepared & Analyzed: 06/03/24	
Chromium, Hexavalent	ND	0.30	mg/kg wet									
LCS (BHF0018-BS1)											Prepared & Analyzed: 06/03/24	
Chromium, Hexavalent	25.9	0.30	mg/kg wet	25.0		104	80-120					
Duplicate (BHF0018-DUP1)											Prepared & Analyzed: 06/03/24	
			Source: 2405471-01									
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20		
Matrix Spike (BHF0018-MS1)											Prepared & Analyzed: 06/03/24	
			Source: 2405471-01									
Chromium, Hexavalent	26.3	0.30	mg/kg dry	25.4	ND	103	75-125					
Matrix Spike Dup (BHF0018-MSD1)											Prepared & Analyzed: 06/03/24	
			Source: 2405471-01									
Chromium, Hexavalent	25.7	0.30	mg/kg dry	25.9	ND	99.0	75-125	2.37		20		

Batch BHF0033 - 3060A Mod

Blank (BHF0033-BLK1)											Prepared & Analyzed: 06/03/24	
Chromium, Hexavalent	ND	0.30	mg/kg wet									
LCS (BHF0033-BS1)											Prepared & Analyzed: 06/03/24	
Chromium, Hexavalent	25.4	0.30	mg/kg wet	25.0		102	80-120					
Duplicate (BHF0033-DUP1)											Prepared & Analyzed: 06/03/24	
			Source: 2405471-21									
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20		
Matrix Spike (BHF0033-MS1)											Prepared & Analyzed: 06/03/24	
			Source: 2405471-21									
Chromium, Hexavalent	27.1	0.30	mg/kg dry	26.3	ND	103	75-125					

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

Hexavalent Chromium by EPA Method 7196 - Quality Control

Summit Scientific

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

Batch BHF0033 - 3060A Mod

Matrix Spike Dup (BHF0033-MSD1)

Source: 2405471-21

Prepared & Analyzed: 06/03/24

Chromium, Hexavalent	26.5	0.30	mg/kg dry	27.1	ND	97.6	75-125	2.40	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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

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

Summit Scientific

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

Batch BHE0979 - General Preparation

Blank (BHE0979-BLK1)

Prepared: 05/31/24 Analyzed: 06/13/24

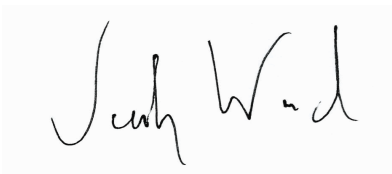
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BHE0979-BS1)

Prepared: 05/31/24 Analyzed: 06/13/24

Calcium	5.92	0.0500	mg/L wet	5.00	118	70-130				
Magnesium	5.30	0.0500	"	5.00	106	70-130				
Sodium	5.29	0.0500	"	5.00	106	70-130				

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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

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

Summit Scientific

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

Batch BHF0021 - General Preparation

Duplicate (BHF0021-DUP1)

Source: 2405471-02

Prepared & Analyzed: 06/03/24

% Solids	94.4		%		95.6			1.21	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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

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

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

Batch BHE0981 - General Preparation

Blank (BHE0981-BLK1)

Prepared: 05/31/24 Analyzed: 06/03/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHE0981-BS1)

Prepared: 05/31/24 Analyzed: 06/03/24

Specific Conductance (EC) 0.156 0.0100 mmhos/cm 0.150 104 95-105

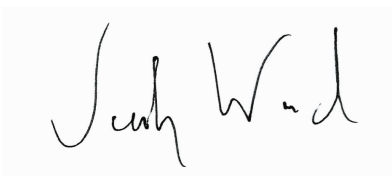
Duplicate (BHE0981-DUP1)

Source: 2405471-01

Prepared: 05/31/24 Analyzed: 06/03/24

Specific Conductance (EC) 0.365 0.0100 mmhos/cm 0.373 2.22 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 - Shoemaker PC A12-69HN Facility
 Project Number: UWRWE-A4004-ABN
 Project Manager: Paul Henchan

Reported:
 07/11/24 11:02

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

Summit Scientific

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

Batch BHE0982 - General Preparation

LCS (BHE0982-BS1)

Prepared: 05/31/24 Analyzed: 06/03/24

pH	9.13		pH Units	9.18		99.5	95-105			
----	------	--	----------	------	--	------	--------	--	--	--

Duplicate (BHE0982-DUP1)

Source: 2405471-01

Prepared: 05/31/24 Analyzed: 06/03/24

pH	9.97		pH Units		10.1			1.30	20	
----	------	--	----------	--	------	--	--	------	----	--

Batch BHG0145 - General Preparation

LCS (BHG0145-BS1)

Prepared: 07/08/24 Analyzed: 07/09/24

pH	9.19		pH Units	9.18		100	95-105			
----	------	--	----------	------	--	-----	--------	--	--	--

Duplicate (BHG0145-DUP1)

Source: 2404371-02RE1

Prepared: 07/08/24 Analyzed: 07/09/24

pH	9.25		pH Units		9.26			0.108	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 - Shoemaker PC A12-69HN Facility

Project Number: UWRWE-A4004-ABN
Project Manager: Paul Henchan

Reported:
07/11/24 11:02

Notes and Definitions

- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- 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.
- O-05 This sample was extracted outside of the EPA recommended holding time.
- O-04 This sample was analyzed above the recommended temperature.
- I-04 Sample was analyzed out of recommended holding time per clients request.
- 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