

**TABLE 1
FIELD DATA SUMMARY TABLE
NOBLE 100322
MARKUS 1, WELD COUNTY, COLORADO
REM # 30452**

Sample ID	Sample Date	Depth	GPS Data Latitude/Longitude		PDOP Value	VOC Concentration (ppm)
FL01@4.0'	6/11/2024	4.0 Ft	40.3648518	-104.6707779	0.90	2.5 ppm
FL02@3.0'	6/11/2024	3.0 Ft	40.3648169	-104.6704931	0.90	6.8 ppm
FL03@4.0'	6/10/2024	4.0 Ft	40.3647492	-104.6700395	0.90	0.0 ppm
FL04@5.0'	6/10/2024	5.0 Ft	40.3648800	-104.6700074	0.90	0.0 ppm
GW01	6/11/2024	3.0 Ft	40.3648518	-104.6707779	0.90	N/A
GW02	6/11/2024	3.0 Ft	40.3648169	-104.6704931	0.90	N/A

1. Global Positioning System (GPS) data is provided in decimal degrees using North American Datum (NAD) 83 UTMZone 13 North.

2. Volatile organic compound (VOC) concentrations are measured in the field using a photoionization detector (PID).

PDOP = Position Dilution of Precision

ppm = Parts per million

in. = Inches

ft. = Feet

bgs = Below ground surface

= Source material characterization sample, excavated and transported off site for disposal.

= Material excavated and transported off site for disposal.

TABLE 2
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE 100322
MARKUS 1, WELD COUNTY, COLORADO
REM # 30452

Sample ID	Sample Date	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	1,2,4-Trimethyl-Benzene (mg/kg)	1,3,5-Trimethyl-Benzene (mg/kg)	Naphthalene (mg/kg)	TPH (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500	500**		
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500	500**		
FL01@4.0'	6/11/2024	4.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
FL02@3.0'	6/11/2024	3.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
FL03@4.0'	6/10/2024	4.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
FL04@5.0'	6/10/2024	5.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50

1. Bold values exceed the ECMC Table 915-1 limit(s)

2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)

3. * Indicates laboratory minimum detection limit in excess of SSL

4. ** Summation of GRO+DRO+ORO must be less than 500 mg/kg

NA - Not analyzed

= Source material characterization sample, excavated and transported off site for disposal.

= Material excavated and transported off site for disposal.

TABLE 3
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE 100322
MARKUS 1, WELD COUNTY, COLORADO
REM # 30452

Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
FL01@4.0'	6/11/2024	4.0 Ft	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL02@3.0'	6/11/2024	3.0 Ft	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL03@4.0'	6/10/2024	4.0 Ft	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL04@5.0'	6/10/2024	5.0 Ft	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

1. Bold values exceed the ECMC Table 915-1 limit(s)

2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)

3. * Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed

= Source material characterization sample, excavated and transported off site for disposal.

= Material excavated and transported off site for disposal.

TABLE 4
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE 100322
MARKUS 1, WELD COUNTY, COLORADO
REM # 30452

Sample ID	Sample Date	Depth (ft)	pH (Standard Units)	EC (mmhos/cm)	SAR (Standard Units)	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
FL01@4.0'	6/11/2024	4.0 Ft	8.48	0.241	0.964	<2.00
FL02@3.0'	6/11/2024	3.0 Ft	8.38	0.322	1.17	<2.00
FL03@4.0'	6/10/2024	4.0 Ft	9.02	0.476	1.70	<2.00
FL04@5.0'	6/10/2024	5.0 Ft	7.87	0.0633	0.201	<2.00
BKG01@6.0"	6/11/2024	0.5 Ft	9.11	2.14	9.65	<2.00
BKG01@4.0'	6/11/2024	4.0 Ft	8.12	0.573	2.01	<2.00
BKG01@5.0'	6/11/2024	5.0 Ft	8.26	0.364	1.72	<2.00
BKG02@6.0"	6/11/2024	0.5 Ft	8.41	0.656	0.996	2.62
BKG02@4.0'	6/11/2024	4.0 Ft	8.33	1.01	5.57	<2.00
BKG02@5.0'	6/11/2024	5.0 Ft	8.70	0.309	1.23	<2.00
BKG03@6.0"	6/11/2024	0.5 Ft	8.38	1.25	3.51	<0.0198
BKG03@4.0'	6/11/2024	4.0 Ft	8.25	0.789	2.86	<2.00
BKG03@5.0'	6/11/2024	5.0 Ft	8.04	0.466	2.22	<2.00
BKG04@6.0"	6/11/2024	0.5 Ft	8.37	0.875	4.12	<2.00
BKG04@4.0'	6/11/2024	4.0 Ft	7.92	0.289	0.709	<2.00
BKG04@5.0'	6/11/2024	5.0 Ft	8.22	0.293	1.04	<2.00
BKG05@6.0"	6/11/2024	0.5 Ft	8.52	0.546	2.03	<2.00
BKG05@4.0'	6/11/2024	4.0 Ft	8.38	0.343	1.60	<2.00
BKG05@5.0'	6/11/2024	5.0 Ft	8.23	0.614	1.88	<2.00
Maximum Root Background Concentration (0 - 3 ft)			9.11	2.14	9.65	2.62

Sample ID	Sample Date	Depth (ft)	pH (Standard Units)	EC (mmhos/cm)	SAR (Standard Units)	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
Average Root Background Concentration (0 - 3 ft)			8.56	1.09	4.06	<2.00
Maximum Background Concentration			9.11	2.14	9.65	2.62
Average Background Concentration			8.35	0.701	2.74	<2.00

1. Bold faced values exceed the ECMC Table 915-1 limit(s)

2. Blue highlighted soil analytical values indicate a regulatory exceedance

NA - Not analyzed

 = Source material characterization sample, excavated and transported off site for disposal.

 = Material excavated and transported off site for disposal.

TABLE 5
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE 100322
MARKUS 1, WELD COUNTY, COLORADO
REM # 30452

Sample ID	Sample Date	Depth (ft)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
FL01@4.0'	6/11/2024	4.0 Ft	1.42	253	0.203	<0.30	4.57	8.52	3.37	1.24	0.0475	21.1
FL02@3.0'	6/11/2024	3.0 Ft	2.34	138	0.222	<0.30	4.82	7.78	3.47	1.95	0.0636	19.4
FL03@4.0'	6/10/2024	4.0 Ft	1.26	50.9	<0.179	<0.30	3.13	4.50	2.45	<0.232	0.0276	14.1
FL04@5.0'	6/10/2024	5.0 Ft	1.31	50.6	<0.200	<0.30	2.74	3.34	2.40	<0.260	<0.0200	13.2
BKG01@6.0"	6/6/2024	0.5 Ft	1.72	35.4	<0.200	<0.30	3.38	7.02	1.95	<0.260	0.0213	16.0
BKG01@4.0'	6/6/2024	4.0 Ft	0.779	41.3	<0.200	<0.30	2.85	2.50	2.13	<0.260	<0.0200	12.7
BKG01@5.0'	6/6/2024	5.0 Ft	0.824	31.0	<0.200	<0.30	3.82	2.62	2.04	<0.260	<0.0200	12.0
BKG02@6.0"	6/6/2024	0.5 Ft	1.72	92.5	0.491	<0.30	9.73	17.0	3.56	0.392	0.105	40.2
BKG02@4.0'	6/6/2024	4.0 Ft	0.618	62.5	<0.200	<0.30	4.32	3.00	2.19	0.697	0.0215	10.1
BKG02@5.0'	6/6/2024	5.0 Ft	0.205	19.5	<0.179	<0.30	1.54	1.63	0.678	<0.232	<0.0179	4.45
BKG03@6.0"	6/6/2024	0.5 Ft	1.59	48.4	<0.200	<0.30	5.20	6.18	3.24	<0.260	0.0248	20.0
BKG03@4.0'	6/6/2024	4.0 Ft	2.90	73.4	<0.200	<0.30	4.56	6.17	4.13	<0.260	0.0331	16.5
BKG03@5.0'	6/6/2024	5.0 Ft	1.70	77.5	<0.200	<0.30	3.60	4.15	3.29	<0.260	0.0262	14.5
BKG04@6.0"	6/6/2024	0.5 Ft	3.16	62.2	0.385	<0.30	5.80	12.5	3.12	<0.234	0.175	25.0
BKG04@4.0'	6/6/2024	4.0 Ft	0.816	66.6	<0.200	<0.30	3.00	3.84	2.66	1.61	0.0206	13.9
BKG04@5.0'	6/6/2024	5.0 Ft	0.274	10.6	<0.200	<0.30	0.966	1.13	0.682	0.671	<0.0200	3.93
BKG05@6.0"	6/6/2024	0.5 Ft	3.69	102	0.335	<0.30	5.53	7.47	4.76	<0.260	0.0697	24.6
BKG05@4.0'	6/6/2024	4.0 Ft	0.462	12.6	<0.181	<0.30	0.686	1.34	0.801	<0.236	<0.0181	4.11
BKG05@5.0'	6/6/2024	5.0 Ft	1.32	64.3	<0.200	<0.30	3.68	5.66	2.10	1.35	0.0367	14.8
Maximum Root Zone Background Concentration (0 - 3 ft)			3.69	102	0.491	<0.30	9.73	17.0	4.76	0.392	0.175	40.2
125% Average Root Zone Background Concentration (0 - 3 ft)			2.97	85.1	0.402	<0.30	7.41	12.5	4.16	0.351	0.0990	31.5
Maximum Background Concentration			3.69	102	0.491	<0.30	9.73	17.0	4.76	1.61	0.175	40.2
125% Average Background Concentration			1.81	66.7	0.297	<0.30	4.89	6.85	3.11	0.603	0.0524	19.4

1. Bold values exceed the ECMC Table 915-1 limit(s)

2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)

* Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed

= Source material characterization sample, excavated and transported off site for disposal.

= Material excavated and transported off site for disposal.

TABLE 5
SUMMARY OF GROUNDWATER ELEVATION DATA AND ORGANIC CHEMISTRY DATA
NOBLE 100322
MARKUS 1, WELD COUNTY, COLORADO
REM # 30452

Sample ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4- Trimethyl- Benzene (µg/L)	1,3,5- Trimethyl- Benzene (µg/L)	TOC Elevation (ft)	Depth to Groundwater Below TOC (ft)	Depth to Groundwater Below Ground Surface (ft)	Groundwater Elevation (ft)	LNAPL Thickness (ft)
ECMC Table 915-1 Limits		5.0	560	700	1400	140	67	67					
GW01	6/11/2024	170	1.4	<1.0	<2.0	1.3	<1.0	<1.0	N/A	N/A	3.0 Ft	N/A	NP
GW02	6/11/2024	<1.0	<1.0	<1.0	<2.0	2.8	<1.0	<1.0	N/A	N/A	3.0 Ft	N/A	NP

1. Bold values exceed the ECMC limit(s)

2. Red highlighted groundwater analytical values indicate a regulatory exceedance

NP - No measurable LNAPL, NA - Not Analyzed, INA - Inaccessible, IW - Insufficient Water, DES - Destroyed

TABLE 6
SUMMARY OF INORGANIC GROUNDWATER CHEMISTRY DATA
NOBLE 100322
MARKUS 1, WELD COUNTY, COLORADO
REM # 30452

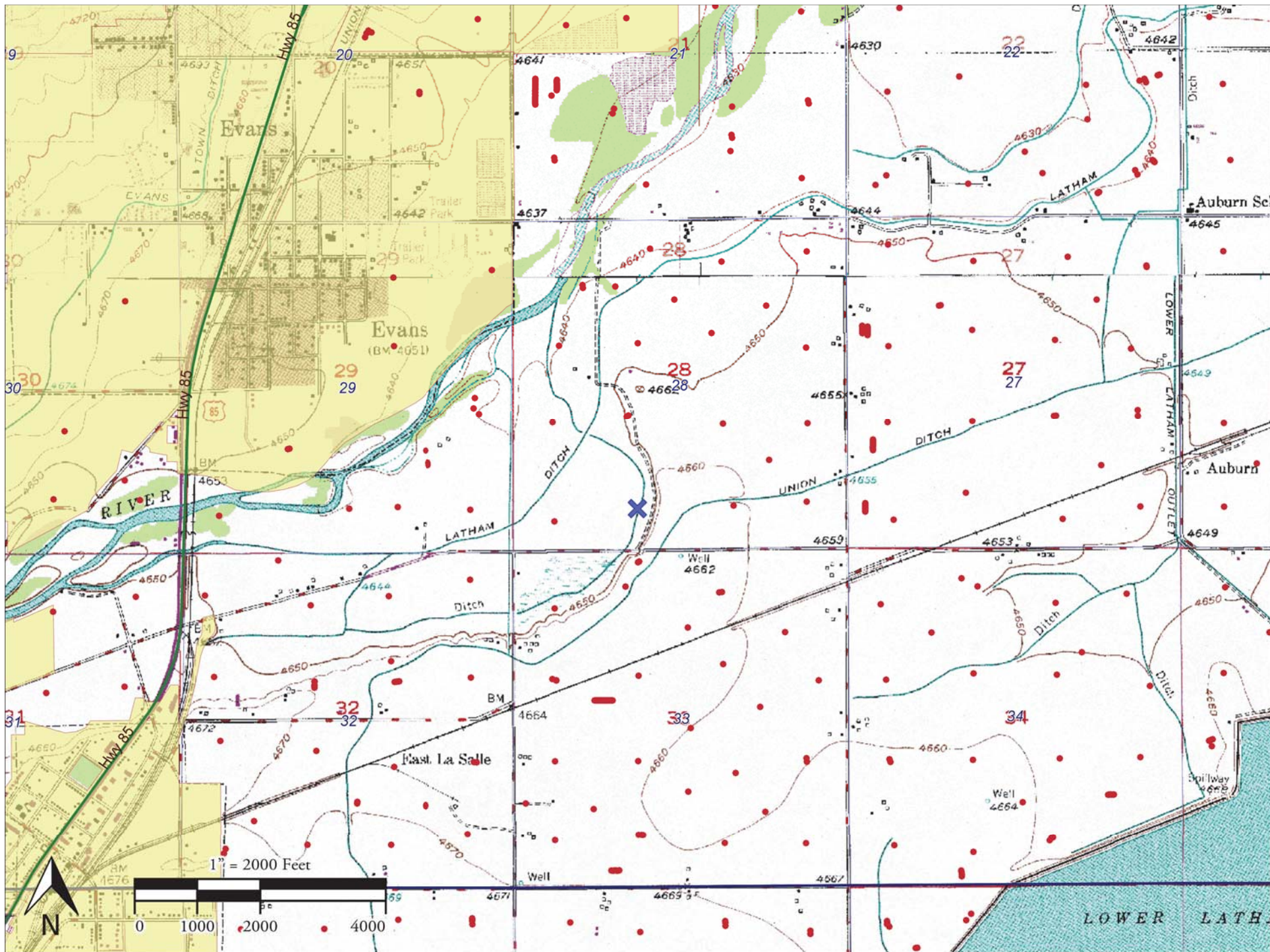
Sample ID	Sample Date	Total Dissolved Solids (mg/L)	Chloride Ion (mg/L)	Sulfate Ion (mg/L)
ECMC Table 915-1 Limits		<1.25 x local background	250 or <1.25 x local background	250 or <1.25 x local background
GW01	6/11/2024	794	164	330
GW02	6/11/2024	768	138	293
Background Concentration (Current)		NA	NA	NA

1. Bold values exceed the ECMC limit(s)

2. Blue highlighted groundwater analytical values indicate a regulatory exceedance

NP - No measurable LNAPL, NA - Not Analyzed, INA - Inaccessible, IW - Insufficient Water, DES - Destroyed

Markus 1 Topo Map



Markus 1

Remediation #: 30452
API: 05-123-10994
Facility ID: 243203
Lat/Long: 40.364880, -104.670780
SESW Sec. 28, T5N, R65W
Fremont Proj. C024-129



Photo Log



Description:

#1A - Markus 1 (Flowline) - Wellhead Tie-in - Sample Collected in the Saturation Zone - FL01@4.0' - Staining Present - No Odor - PID: 2.5ppm

Photo Log



Description:

#1B - Markus 1 (Flowline) - Wellhead Tie-in - Groundwater - GW01 - No Odor - No Sheen - Depth to Groundwater 3ft Below Ground Surface

Photo Log



Description:

#1C - Markus 1 (Flowline) - FL02@3.0' - Sample Collected in Saturation Zone - Staining Present - No Odor - PID: 6.8ppm

Photo Log



Description:

#1D - Markus 1 (Flowline) - Groundwater at FL02@3.0' - GW02 - No Odor - No Sheen - Depth to Groundwater 3ft Below Ground Surface

Photo Log



Description:

#1E - Markus 1 (Flowline) - Directional Change - FL03@4.0' - No Impacts Noted - PID: 0.0ppm



Description:

#1F - Markus 1 (Flowline) - Separator Tie-in - FL04@5.0' - No Impacts Noted - PID: 0.0ppm

Photo Log



Description:

#2A - Markus 1 (Flowline) - 1st Local Background Sample Bore - BKG01 - Samples Collected at 0.5ft, 4.0ft and 5.0ft

Photo Log



Description:

#2B - Markus 1 (Flowline) - 2nd Local Background Sample Bore - BKG02 - Samples Collected at 0.5ft, 4.0ft and 5.0ft

Photo Log



Description:

#2C - Markus 1 (Flowline) - 3rd Local Background Sample Bore - BKG03 - Samples Collected at 0.5ft, 4.0ft and 5.0ft

Photo Log



Description:

#2D - Markus 1 (Flowline) - 4th Local Background Sample Bore - BKG04 - Samples Collected at 0.5ft, 4.0ft and 5.0ft



Description:

#2E - Markus 1 (Flowline) - 5th Local Background Sample Bore - BKG05 - Samples Collected at 0.5ft, 4.0ft and 5.0ft

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 09, 2024

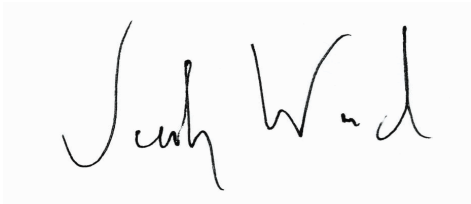
Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549

RE: Noble - Markus 1

Work Order #2406141

Enclosed are the results of analyses for samples received by Summit Scientific on 06/11/24 15:35. 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 blue background behind it.

Jacob Wood For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01@4.0'	2406141-01	Soil	06/11/24 00:00	06/11/24 15:35
FL02@3.0'	2406141-02	Soil	06/11/24 00:00	06/11/24 15:35
FL03@4.0'	2406141-03	Soil	06/11/24 00:00	06/11/24 15:35
FL04@5.0'	2406141-04	Soil	06/11/24 00:00	06/11/24 15:35
GW01	2406141-05	Water	06/11/24 00:00	06/11/24 15:35
GW02	2406141-06	Water	06/11/24 00:00	06/11/24 15:35

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.

SUMMIT SCIENTIFIC

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

Lab ID	Page <u>1</u> of <u>1</u>
<u>2406141</u>	

Send Data To:		Send Invoice To:	
Client: <u>Fremont Env</u>	Project Manager: <u>Paul Henehan</u>	Company: <u>Noble</u>	
Address:	E-Mail: <u>Paulhe@fremontenv.com</u>	Project Name/Location:	
City/State/Zip:	<u>jeff@fremontenv.com Ethunb@fremontenv.com</u>	AFE#:	
Phone:	Project Name: <u>Markus 1</u>	PO/Billing Codes: <u>UWRWE-A3314-ABN</u>	
Sampler Name: <u>J6</u>	Project Number:	Contact:	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested							Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX+N	TMS (915)	DRP, ORP, GRO	PAHS (915)	EC, PH, SAR, BORON	Metals (915)		TDS, Cl, Sulfate
1	FLO1@4.0'	6/11/24		1			X			X			X	X	X	X	X	X		
2	FLO2@3.0'	6/11/24		1																
3	FLO3@4.0'	6/10/24		1																
4	FLO4@5.0'	6/10/24		2			X			X					X	X	X	X		
5	GW01	6/11/24		5	X				X										X	
6	GW02	6/11/24		5	X				X										X	
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by: <u>[Signature]</u> Date/Time: <u>6/11/24 15:35</u>	Received by: <u>[Signature]</u> Date/Time: <u>6/11/24 15:35</u>	TAT Business Days	Field DO	Notes:
		Same Day	Field EC	
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____	1 Day	Field ORP	
		2 Days	Field pH	
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____	3 Days	Field Temp.	
Temperature Upon Receipt: <u>24.9</u>	Corrected Temperature _____	Standard	X Field Turb.	
	IR gun #: <u>2</u>	HNO3 lot #: _____		

S₂

S2 Work Order# 2406141

Sample Receipt Checklist

Client: Fremont Client Project ID: Mark 5 1

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

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

Temp (°C) 24.9

Thermometer # 2

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

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

Vih Wif
Custodian Printed Name

6/11/24 15:35
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

FL01@4.0'
2406141-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHF0323	06/12/24	06/12/24	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: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0461	115 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	98.0 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0394	98.6 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHF0324	06/12/24	06/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.90	63.2 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
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Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

FL01@4.0'
2406141-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0321	06/12/24	06/12/24	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: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0204	61.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0213	63.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0338	06/12/24	06/14/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/11/24 00:00**

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

Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

FL01@4.0'
2406141-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.42	0.200	mg/kg dry	1	BHF0360	06/13/24	06/18/24	EPA 6020B
Barium	253	0.400	"	"	"	"	"	"
Cadmium	0.203	0.200	"	"	"	"	"	"
Copper	4.57	0.400	"	"	"	"	"	"
Lead	8.52	0.200	"	"	"	"	"	"
Nickel	3.37	0.400	"	"	"	"	"	"
Silver	0.0475	0.0200	"	"	"	"	"	"
Zinc	21.1	0.400	"	"	"	"	"	"
Selenium	1.24	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0326	06/12/24	06/12/24	EPA 7196A	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	39.9	0.0500	mg/L dry	1	BHF0472	06/17/24	06/18/24	EPA 6020B	
Magnesium	6.72	0.0500	"	"	"	"	"	"	
Sodium	25.0	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.964	0.00100	units	1	BHF0558	06/19/24	06/19/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/11/24 00:00**

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

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Markus 1
 Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 07/09/24 13:04

FL01@4.0'
2406141-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	88.9	%	1	BHF0341	06/12/24	06/12/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/11/24 00:00**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.241	0.0100	mmhos/cm	1	BHF0473	06/17/24	06/18/24	EPA 120.1	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.48		pH Units	1	BHF0474	06/17/24	06/18/24	EPA 9045D	

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PO Box 1289
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Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

FL02@3.0'
2406141-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHF0323	06/12/24	06/12/24	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: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0482	121 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	97.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0417	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0324	06/12/24	06/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.88	71.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

FL02@3.0'
2406141-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0321	06/12/24	06/12/24	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: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0211	63.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0202	60.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0338	06/12/24	06/14/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/11/24 00:00**

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

Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

FL02@3.0'
2406141-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.34	0.200	mg/kg dry	1	BHF0360	06/13/24	06/18/24	EPA 6020B	
Barium	138	0.400	"	"	"	"	"	"	
Cadmium	0.222	0.200	"	"	"	"	"	"	
Copper	4.82	0.400	"	"	"	"	"	"	
Lead	7.78	0.200	"	"	"	"	"	"	
Nickel	3.47	0.400	"	"	"	"	"	"	
Silver	0.0636	0.0200	"	"	"	"	"	"	
Zinc	19.4	0.400	"	"	"	"	"	"	
Selenium	1.95	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0326	06/12/24	06/12/24	EPA 7196A	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	56.7	0.0500	mg/L dry	1	BHF0472	06/17/24	06/18/24	EPA 6020B	
Magnesium	6.54	0.0500	"	"	"	"	"	"	
Sodium	34.8	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.17	0.00100	units	1	BHF0558	06/19/24	06/19/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental
 PO Box 1289
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Project: Noble - Markus 1
 Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 07/09/24 13:04

FL02@3.0'
2406141-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	94.5	%	1	BHF0341	06/12/24	06/12/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/11/24 00:00**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.322	0.0100	mmhos/cm	1	BHF0473	06/17/24	06/18/24	EPA 120.1	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.38		pH Units	1	BHF0474	06/17/24	06/18/24	EPA 9045D	

Summit Scientific



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PO Box 1289
Wellington CO, 80549

Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

FL03@4.0'
2406141-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHF0323	06/12/24	06/12/24	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: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0462	116 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0387	96.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0409	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0324	06/12/24	06/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.14	73.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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PO Box 1289
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Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

FL03@4.0'
2406141-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0321	06/12/24	06/12/24	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: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0207	62.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0223	67.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0338	06/12/24	06/14/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/11/24 00:00**

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

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

FL03@4.0'
2406141-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.26	0.179	mg/kg dry	1	BHF0360	06/13/24	06/18/24	EPA 6020B	
Barium	50.9	0.357	"	"	"	"	"	"	
Cadmium	ND	0.179	"	"	"	"	"	"	
Copper	3.13	0.357	"	"	"	"	"	"	
Lead	4.50	0.179	"	"	"	"	"	"	
Nickel	2.45	0.357	"	"	"	"	"	"	
Silver	0.0276	0.0179	"	"	"	"	"	"	
Zinc	14.1	0.357	"	"	"	"	"	"	
Selenium	ND	0.232	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0326	06/12/24	06/12/24	EPA 7196A	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	114	0.0500	mg/L dry	1	BHF0472	06/17/24	06/18/24	EPA 6020B	
Magnesium	4.52	0.0500	"	"	"	"	"	"	
Sodium	68.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.70	0.00100	units	1	BHF0558	06/19/24	06/19/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Fremont Environmental
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 Wellington CO, 80549

Project: Noble - Markus 1
 Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 07/09/24 13:04

FL03@4.0'
2406141-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	98.3		%	1	BHF0341	06/12/24	06/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.476	0.0100	mmhos/cm	1	BHF0473	06/17/24	06/18/24	EPA 120.1	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.02		pH Units	1	BHF0474	06/17/24	06/18/24	EPA 9045D	

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Wellington CO, 80549

Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

FL04@5.0'
2406141-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHF0323	06/12/24	06/12/24	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: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0467	117 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	98.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0324	06/12/24	06/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.91	63.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

FL04@5.0'
2406141-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0321	06/12/24	06/12/24	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: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0244	73.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0261	78.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0338	06/12/24	06/14/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/11/24 00:00**

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

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

FL04@5.0'
2406141-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.31	0.200	mg/kg dry	1	BHF0360	06/13/24	06/18/24	EPA 6020B	
Barium	50.6	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.74	0.400	"	"	"	"	"	"	
Lead	3.34	0.200	"	"	"	"	"	"	
Nickel	2.40	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	13.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0326	06/12/24	06/12/24	EPA 7196A	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	103	0.0500	mg/L dry	1	BHF0472	06/17/24	06/18/24	EPA 6020B	
Magnesium	2.17	0.0500	"	"	"	"	"	"	
Sodium	7.53	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.201	0.00100	units	1	BHF0558	06/19/24	06/19/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Markus 1
 Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 07/09/24 13:04

FL04@5.0'
2406141-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.7		%	1	BHF0341	06/12/24	06/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0633	0.0100	mmhos/cm	1	BHF0473	06/17/24	06/18/24	EPA 120.1	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.87		pH Units	1	BHF0474	06/17/24	06/18/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

GW01
2406141-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	170	1.0		ug/l	1	BHF0369	06/13/24	06/13/24	EPA 8260B	
Toluene	1.4	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	1.3	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	11.4	85.1 %		23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>	12.4	93.1 %		20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	13.0	97.7 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	164	12.0		mg/L	200	BHF0929	06/27/24	06/29/24	EPA 300.0	
Sulfate	330	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	794	10.0		mg/L	1	BHF0355	06/13/24	06/13/24	SM2540C	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

GW02
2406141-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BHF0369	06/13/24	06/13/24	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	2.8	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	11.4	85.1 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	12.4	93.2 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	12.7	95.5 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	138	12.0		mg/L	200	BHF0929	06/27/24	06/29/24	EPA 300.0	
Sulfate	293	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	768	10.0		mg/L	1	BHF0355	06/13/24	06/13/24	SM2540C	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

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 BHF0323 - EPA 5030 Soil MS

Blank (BHF0323-BLK1)

Prepared & Analyzed: 06/12/24

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>	0.0471		"	0.0400		118	50-150			
<i>Surrogate: Toluene-d8</i>	0.0401		"	0.0400		100	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0402		"	0.0400		100	50-150			

LCS (BHF0323-BS1)

Prepared & Analyzed: 06/12/24

Benzene	0.121	0.0020	mg/kg	0.100		121	70-130			
Toluene	0.129	0.0050	"	0.100		129	70-130			
Ethylbenzene	0.121	0.0050	"	0.100		121	70-130			
m,p-Xylene	0.237	0.010	"	0.200		119	70-130			
o-Xylene	0.117	0.0050	"	0.100		117	70-130			
1,2,4-Trimethylbenzene	0.117	0.0050	"	0.100		117	70-130			
1,3,5-Trimethylbenzene	0.117	0.0050	"	0.100		117	70-130			
Naphthalene	0.114	0.0038	"	0.100		114	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0469		"	0.0400		117	50-150			
<i>Surrogate: Toluene-d8</i>	0.0419		"	0.0400		105	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0406		"	0.0400		102	50-150			

Matrix Spike (BHF0323-MS1)

Source: 2406141-01

Prepared & Analyzed: 06/12/24

Benzene	0.106	0.0020	mg/kg	0.100	ND	106	70-130			
Toluene	0.108	0.0050	"	0.100	ND	108	70-130			
Ethylbenzene	0.108	0.0050	"	0.100	ND	108	70-130			
m,p-Xylene	0.216	0.010	"	0.200	ND	108	70-130			
o-Xylene	0.102	0.0050	"	0.100	ND	102	70-130			
1,2,4-Trimethylbenzene	0.117	0.0050	"	0.100	ND	117	70-130			
1,3,5-Trimethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130			
Naphthalene	0.104	0.0038	"	0.100	ND	104	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0466		"	0.0400		117	50-150			
<i>Surrogate: Toluene-d8</i>	0.0417		"	0.0400		104	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0400		"	0.0400		100	50-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

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 BHF0323 - EPA 5030 Soil MS

Matrix Spike Dup (BHF0323-MSD1)	Source: 2406141-01			Prepared & Analyzed: 06/12/24						
Benzene	0.115	0.0020	mg/kg	0.100	ND	115	70-130	7.36	30	
Toluene	0.117	0.0050	"	0.100	ND	117	70-130	8.37	30	
Ethylbenzene	0.111	0.0050	"	0.100	ND	111	70-130	2.90	30	
m,p-Xylene	0.221	0.010	"	0.200	ND	110	70-130	2.31	30	
o-Xylene	0.106	0.0050	"	0.100	ND	106	70-130	3.96	30	
1,2,4-Trimethylbenzene	0.114	0.0050	"	0.100	ND	114	70-130	2.54	30	
1,3,5-Trimethylbenzene	0.105	0.0050	"	0.100	ND	105	70-130	4.48	30	
Naphthalene	0.0994	0.0038	"	0.100	ND	99.4	70-130	4.48	30	
Surrogate: 1,2-Dichloroethane-d4	0.0496		"	0.0400		124	50-150			
Surrogate: Toluene-d8	0.0420		"	0.0400		105	50-150			
Surrogate: 4-Bromofluorobenzene	0.0410		"	0.0400		103	50-150			

Batch BHF0369 - EPA 5030 Water MS

Blank (BHF0369-BLK1)	Prepared & Analyzed: 06/13/24									
Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Naphthalene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	10.9		"	13.3		81.8	23-173			
Surrogate: Toluene-d8	12.4		"	13.3		92.7	20-170			
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.5	21-167			

LCS (BHF0369-BS1)	Prepared & Analyzed: 06/13/24									
Benzene	35.3	1.0	ug/l	33.3		106	51-132			
Toluene	35.5	1.0	"	33.3		106	51-138			
Ethylbenzene	36.6	1.0	"	33.3		110	58-146			
m,p-Xylene	75.0	2.0	"	66.7		112	57-144			
o-Xylene	36.2	1.0	"	33.3		108	53-146			
Naphthalene	40.4	1.0	"	33.3		121	70-130			
1,2,4-Trimethylbenzene	40.1	1.0	"	33.3		120	70-130			
1,3,5-Trimethylbenzene	38.6	1.0	"	33.3		116	70-130			
Surrogate: 1,2-Dichloroethane-d4	11.0		"	13.3		82.8	23-173			
Surrogate: Toluene-d8	12.5		"	13.3		93.5	20-170			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		95.7	21-167			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

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 BHF0369 - EPA 5030 Water MS

Matrix Spike (BHF0369-MS1)

Source: 2406140-01

Prepared & Analyzed: 06/13/24

Benzene	33.8	1.0	ug/l	33.3	ND	101	34-141			
Toluene	33.8	1.0	"	33.3	ND	101	27-151			
Ethylbenzene	35.1	1.0	"	33.3	ND	105	29-160			
m,p-Xylene	72.1	2.0	"	66.7	ND	108	20-166			
o-Xylene	35.1	1.0	"	33.3	ND	105	33-159			
Naphthalene	41.4	1.0	"	33.3	ND	124	70-130			
1,2,4-Trimethylbenzene	38.5	1.0	"	33.3	ND	116	70-130			
1,3,5-Trimethylbenzene	36.8	1.0	"	33.3	ND	110	70-130			
Surrogate: 1,2-Dichloroethane-d4	11.0		"	13.3		82.3	23-173			
Surrogate: Toluene-d8	12.3		"	13.3		92.4	20-170			
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.6	21-167			

Matrix Spike Dup (BHF0369-MSD1)

Source: 2406140-01

Prepared & Analyzed: 06/13/24

Benzene	35.0	1.0	ug/l	33.3	ND	105	34-141	3.43	30	
Toluene	35.0	1.0	"	33.3	ND	105	27-151	3.34	30	
Ethylbenzene	36.4	1.0	"	33.3	ND	109	29-160	3.63	30	
m,p-Xylene	74.9	2.0	"	66.7	ND	112	20-166	3.85	30	
o-Xylene	36.0	1.0	"	33.3	ND	108	33-159	2.50	30	
Naphthalene	43.3	1.0	"	33.3	ND	130	70-130	4.47	30	
1,2,4-Trimethylbenzene	39.8	1.0	"	33.3	ND	119	70-130	3.37	30	
1,3,5-Trimethylbenzene	37.8	1.0	"	33.3	ND	113	70-130	2.71	30	
Surrogate: 1,2-Dichloroethane-d4	11.4		"	13.3		85.4	23-173			
Surrogate: Toluene-d8	12.3		"	13.3		92.6	20-170			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		95.9	21-167			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BHF0324 - EPA 3550A

Blank (BHF0324-BLK1)

Prepared & Analyzed: 06/12/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	14.9		"	12.5		119	30-150			

LCS (BHF0324-BS1)

Prepared & Analyzed: 06/12/24

C10-C28 (DRO)	562	50	mg/kg	500		112	70-130			
Surrogate: <i>o</i> -Terphenyl	14.0		"	12.5		112	30-150			

Matrix Spike (BHF0324-MS1)

Source: 2406140-08

Prepared & Analyzed: 06/12/24

C10-C28 (DRO)	590	50	mg/kg	500	25.3	113	70-130			
Surrogate: <i>o</i> -Terphenyl	13.8		"	12.5		110	30-150			

Matrix Spike Dup (BHF0324-MSD1)

Source: 2406140-08

Prepared & Analyzed: 06/12/24

C10-C28 (DRO)	538	50	mg/kg	500	25.3	103	70-130	9.24	20	
Surrogate: <i>o</i> -Terphenyl	14.2		"	12.5		114	30-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

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 BHF0321 - EPA 5030 Soil MS

Blank (BHF0321-BLK1)

Prepared & Analyzed: 06/12/24

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>	0.0279		"	0.0333		83.6	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0294		"	0.0333		88.1	40-150			

LCS (BHF0321-BS1)

Prepared & Analyzed: 06/12/24

Acenaphthene	0.0230	0.00500	mg/kg	0.0333		69.1	31-137			
Anthracene	0.0232	0.00500	"	0.0333		69.6	30-120			
Benzo (a) anthracene	0.0246	0.00500	"	0.0333		73.8	30-120			
Benzo (a) pyrene	0.0208	0.00500	"	0.0333		62.5	30-120			
Benzo (b) fluoranthene	0.0217	0.00500	"	0.0333		65.1	30-120			
Benzo (k) fluoranthene	0.0227	0.00500	"	0.0333		68.0	30-120			
Chrysene	0.0240	0.00500	"	0.0333		71.9	30-120			
Dibenz (a,h) anthracene	0.0184	0.00500	"	0.0333		55.2	30-120			
Fluoranthene	0.0234	0.00500	"	0.0333		70.3	30-120			
Fluorene	0.0268	0.00500	"	0.0333		80.4	30-120			
Indeno (1,2,3-cd) pyrene	0.0132	0.00500	"	0.0333		39.5	30-120			
Pyrene	0.0272	0.00500	"	0.0333		81.8	35-142			
1-Methylnaphthalene	0.0265	0.00500	"	0.0333		79.6	35-142			
2-Methylnaphthalene	0.0275	0.00500	"	0.0333		82.5	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0269		"	0.0333		80.8	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0250		"	0.0333		75.1	40-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

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 BHF0321 - EPA 5030 Soil MS

Matrix Spike (BHF0321-MS1)	Source: 2406139-01			Prepared & Analyzed: 06/12/24						
Acenaphthene	0.0291	0.00500	mg/kg	0.0333	ND	87.2	31-137			
Anthracene	0.0280	0.00500	"	0.0333	ND	84.0	30-120			
Benzo (a) anthracene	0.0326	0.00500	"	0.0333	ND	97.9	30-120			
Benzo (a) pyrene	0.0280	0.00500	"	0.0333	ND	84.1	30-120			
Benzo (b) fluoranthene	0.0264	0.00500	"	0.0333	ND	79.2	30-120			
Benzo (k) fluoranthene	0.0234	0.00500	"	0.0333	ND	70.3	30-120			
Chrysene	0.0318	0.00500	"	0.0333	ND	95.4	30-120			
Dibenz (a,h) anthracene	0.0260	0.00500	"	0.0333	ND	78.0	30-120			
Fluoranthene	0.0296	0.00500	"	0.0333	ND	88.9	30-120			
Fluorene	0.0284	0.00500	"	0.0333	ND	85.3	30-120			
Indeno (1,2,3-cd) pyrene	0.0323	0.00500	"	0.0333	ND	97.0	30-120			
Pyrene	0.0379	0.00500	"	0.0333	ND	114	35-142			
1-Methylnaphthalene	0.0292	0.00500	"	0.0333	ND	87.5	15-130			
2-Methylnaphthalene	0.0273	0.00500	"	0.0333	ND	82.0	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0302</i>		<i>"</i>	<i>0.0333</i>		<i>90.5</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0288</i>		<i>"</i>	<i>0.0333</i>		<i>86.4</i>	<i>40-150</i>			

Matrix Spike Dup (BHF0321-MSD1)	Source: 2406139-01			Prepared & Analyzed: 06/12/24						
Acenaphthene	0.0232	0.00500	mg/kg	0.0333	ND	69.5	31-137	22.7	30	
Anthracene	0.0240	0.00500	"	0.0333	ND	72.1	30-120	15.2	30	
Benzo (a) anthracene	0.0254	0.00500	"	0.0333	ND	76.3	30-120	24.8	30	
Benzo (a) pyrene	0.0215	0.00500	"	0.0333	ND	64.5	30-120	26.3	30	
Benzo (b) fluoranthene	0.0213	0.00500	"	0.0333	ND	63.9	30-120	21.4	30	
Benzo (k) fluoranthene	0.0192	0.00500	"	0.0333	ND	57.5	30-120	20.0	30	
Chrysene	0.0239	0.00500	"	0.0333	ND	71.6	30-120	28.6	30	
Dibenz (a,h) anthracene	0.0232	0.00500	"	0.0333	ND	69.6	30-120	11.4	30	
Fluoranthene	0.0244	0.00500	"	0.0333	ND	73.2	30-120	19.4	30	
Fluorene	0.0241	0.00500	"	0.0333	ND	72.4	30-120	16.4	30	
Indeno (1,2,3-cd) pyrene	0.0276	0.00500	"	0.0333	ND	82.8	30-120	15.9	30	
Pyrene	0.0281	0.00500	"	0.0333	ND	84.3	35-142	29.6	30	
1-Methylnaphthalene	0.0228	0.00500	"	0.0333	ND	68.4	15-130	24.5	50	
2-Methylnaphthalene	0.0233	0.00500	"	0.0333	ND	69.9	15-130	16.0	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0224</i>		<i>"</i>	<i>0.0333</i>		<i>67.1</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0257</i>		<i>"</i>	<i>0.0333</i>		<i>77.0</i>	<i>40-150</i>			

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Markus 1
 Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 07/09/24 13:04

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

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

Batch BHF0338 - EPA 3050B

Blank (BHF0338-BLK1)

Prepared: 06/12/24 Analyzed: 06/14/24

Boron ND 2.00 mg/L

LCS (BHF0338-BS1)

Prepared: 06/12/24 Analyzed: 06/14/24

Boron 5.30 2.00 mg/L 5.00 106 80-120

Duplicate (BHF0338-DUP1)

Source: 2406113-01

Prepared: 06/12/24 Analyzed: 06/14/24

Boron 0.249 2.00 mg/L 0.292 15.8 20

Matrix Spike (BHF0338-MS1)

Source: 2406113-01

Prepared: 06/12/24 Analyzed: 06/14/24

Boron 5.13 2.00 mg/L 4.99 0.292 97.0 75-125

Matrix Spike Dup (BHF0338-MSD1)

Source: 2406113-01

Prepared: 06/12/24 Analyzed: 06/14/24

Boron 5.12 2.00 mg/L 4.99 0.292 96.8 75-125 0.116 25

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Markus 1
 Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 07/09/24 13:04

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHF0360 - EPA 3050B

Blank (BHF0360-BLK1)

Prepared: 06/13/24 Analyzed: 06/18/24

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 (BHF0360-BS1)

Prepared: 06/13/24 Analyzed: 06/18/24

Arsenic	40.7	0.200	mg/kg wet	40.0	102	80-120
Barium	39.9	0.400	"	40.0	99.7	80-120
Cadmium	1.96	0.200	"	2.00	97.9	80-120
Copper	39.9	0.400	"	40.0	99.6	80-120
Lead	18.6	0.200	"	20.0	93.2	80-120
Nickel	39.9	0.400	"	40.0	99.6	80-120
Silver	1.95	0.0200	"	2.00	97.4	80-120
Zinc	39.8	0.400	"	40.0	99.5	80-120
Selenium	3.79	0.260	"	4.00	94.8	80-120

Duplicate (BHF0360-DUP1)

Source: 2406141-01

Prepared: 06/13/24 Analyzed: 06/18/24

Arsenic	2.10	0.200	mg/kg dry	1.42	38.2	20
Barium	336	0.400	"	253	28.2	20
Cadmium	0.203	0.200	"	0.203	0.117	20
Copper	4.49	0.400	"	4.57	1.64	20
Lead	12.0	0.200	"	8.52	34.2	20
Nickel	3.48	0.400	"	3.37	3.15	20
Silver	0.0527	0.0200	"	0.0475	10.3	20
Zinc	30.2	0.400	"	21.1	35.4	20
Selenium	1.17	0.260	"	1.24	6.38	20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus 1

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

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 BHF0360 - EPA 3050B

Matrix Spike (BHF0360-MS1)

Source: 2406141-01

Prepared: 06/13/24 Analyzed: 06/18/24

Arsenic	44.0	0.200	mg/kg dry	42.3	1.42	101	75-125			
Barium	254	0.400	"	42.3	253	3.36	75-125			
Cadmium	2.27	0.200	"	2.11	0.203	97.7	75-125			
Copper	30.5	0.400	"	42.3	4.57	61.3	75-125			
Lead	32.2	0.200	"	21.1	8.52	112	75-125			
Nickel	29.6	0.400	"	42.3	3.37	62.1	75-125			
Silver	2.07	0.0200	"	2.11	0.0475	95.9	75-125			
Zinc	50.4	0.400	"	42.3	21.1	69.2	75-125			
Selenium	3.99	0.260	"	4.23	1.24	65.0	75-125			

Matrix Spike Dup (BHF0360-MSD1)

Source: 2406141-01

Prepared: 06/13/24 Analyzed: 06/18/24

Arsenic	44.3	0.200	mg/kg dry	42.0	1.42	102	75-125	0.637	25
Barium	541	0.400	"	42.0	253	688	75-125	72.2	25
Cadmium	2.24	0.200	"	2.10	0.203	97.3	75-125	1.01	25
Copper	31.6	0.400	"	42.0	4.57	64.5	75-125	3.75	25
Lead	42.5	0.200	"	21.0	8.52	162	75-125	27.4	25
Nickel	31.3	0.400	"	42.0	3.37	66.6	75-125	5.51	25
Silver	2.07	0.0200	"	2.10	0.0475	96.4	75-125	0.200	25
Zinc	53.2	0.400	"	42.0	21.1	76.4	75-125	5.46	25
Selenium	4.09	0.260	"	4.20	1.24	67.9	75-125	2.57	25

Post Spike (BHF0360-PS1)

Source: 2406141-01

Prepared: 06/13/24 Analyzed: 06/18/24

Arsenic	116		ug/l	100	3.42	112	75-125		
Barium	724		"	100	607	117	75-125		
Cadmium	5.70		"	5.00	0.488	104	75-125		
Copper	67.8		"	100	11.0	56.8	75-125		
Lead	62.7		"	50.0	20.5	84.5	75-125		
Nickel	65.5		"	100	8.10	57.4	75-125		
Silver	5.27		"	5.00	0.114	103	75-125		
Zinc	109		"	100	50.7	58.3	75-125		
Selenium	11.6		"	10.0	2.98	85.8	75-125		

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Markus 1
 Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 07/09/24 13:04

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 BHF0326 - 3060A Mod

Blank (BHF0326-BLK1)			Prepared & Analyzed: 06/12/24								
Chromium, Hexavalent	ND	0.30	mg/kg wet								
LCS (BHF0326-BS1)			Prepared & Analyzed: 06/12/24								
Chromium, Hexavalent	25.2	0.30	mg/kg wet	25.0	101	80-120					
Duplicate (BHF0326-DUP1)			Source: 2406127-01			Prepared & Analyzed: 06/12/24					
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20	
Matrix Spike (BHF0326-MS1)			Source: 2406127-01			Prepared & Analyzed: 06/12/24					
Chromium, Hexavalent	29.3	0.30	mg/kg dry	30.4	ND	96.2	75-125				
Matrix Spike Dup (BHF0326-MSD1)			Source: 2406127-01			Prepared & Analyzed: 06/12/24					
Chromium, Hexavalent	27.3	0.30	mg/kg dry	29.2	ND	93.4	75-125	6.99		20	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Markus 1

Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 07/09/24 13:04

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

Summit Scientific

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

Batch BHF0472 - General Preparation

Blank (BHF0472-BLK1)

Prepared: 06/17/24 Analyzed: 06/18/24

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

LCS (BHF0472-BS1)

Prepared: 06/17/24 Analyzed: 06/18/24

Calcium	5.27	0.0500	mg/L wet	5.00		105	70-130			
Magnesium	5.07	0.0500	"	5.00		101	70-130			
Sodium	4.87	0.0500	"	5.00		97.3	70-130			

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Markus 1

Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 07/09/24 13:04

Anions by EPA Method 300.0 - Quality Control
Summit Scientific

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

Batch BHF0929 - General Preparation

Blank (BHF0929-BLK1)

Prepared: 06/27/24 Analyzed: 06/29/24

Chloride	ND	0.0600	mg/L							
Sulfate	ND	0.300	"							

LCS (BHF0929-BS1)

Prepared: 06/27/24 Analyzed: 06/29/24

Chloride	0.303	0.0600	mg/L	3.00	10.1	90-110				QM-01
Sulfate	1.41	0.300	"	15.0	9.38	90-110				QM-01

Duplicate (BHF0929-DUP1)

Source: 2406124-01

Prepared: 06/27/24 Analyzed: 06/29/24

Chloride	233	12.0	mg/L		223		4.68	20		
Sulfate	416	60.0	"		384		7.87	20		

Matrix Spike (BHF0929-MS1)

Source: 2406124-01

Prepared: 06/27/24 Analyzed: 06/29/24

Chloride	893	12.0	mg/L	600	223	112	80-120			
Sulfate	3510	60.0	"	3000	384	104	80-120			

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 - Markus 1

Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 07/09/24 13:04

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

Summit Scientific

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

Batch BHF0341 - General Preparation

Duplicate (BHF0341-DUP2)

Source: 2406140-08

Prepared & Analyzed: 06/12/24

% Solids	95.3		%		95.7			0.481	20	
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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 - Markus 1

Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 07/09/24 13:04

Total Dissolved Solids by SM2540C - Quality Control
Summit Scientific

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

Batch BHF0355 - General Preparation

Blank (BHF0355-BLK1)

Prepared & Analyzed: 06/13/24

Total Dissolved Solids ND 10.0 mg/L


Duplicate (BHF0355-DUP1)

Source: 2406140-01

Prepared & Analyzed: 06/13/24

Total Dissolved Solids 2340 10.0 mg/L 2370 1.40 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 - Markus 1
 Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 07/09/24 13:04

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 BHF0473 - General Preparation

Blank (BHF0473-BLK1)

Prepared: 06/17/24 Analyzed: 06/18/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHF0473-BS1)

Prepared: 06/17/24 Analyzed: 06/18/24

Specific Conductance (EC) 0.150 0.0100 mmhos/cm 0.150 99.9 95-105

Duplicate (BHF0473-DUP1)

Source: 2406139-01

Prepared: 06/17/24 Analyzed: 06/18/24

Specific Conductance (EC) 0.184 0.0100 mmhos/cm 0.192 3.93 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 - Markus 1

Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 07/09/24 13:04

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

Summit Scientific

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

Batch BHF0474 - General Preparation

LCS (BHF0474-BS1)

Prepared: 06/17/24 Analyzed: 06/18/24

pH	9.20	pH Units	9.18	100	95-105
----	------	----------	------	-----	--------

Duplicate (BHF0474-DUP1)

Source: 2406139-01

Prepared: 06/17/24 Analyzed: 06/18/24

pH	7.62	pH Units	7.71	1.17	20
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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 - Markus 1
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
07/09/24 13:04

Notes and Definitions

- QM-01 The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
- 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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 21, 2024

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549

RE: Noble - Markus (Backgrounds)

Work Order #2406142

Enclosed are the results of analyses for samples received by Summit Scientific on 06/11/24 15:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Natalie Tessier For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN

Project Manager: Paul Henchan

Reported:
06/21/24 07:55

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BKG01@6.0"	2406142-01	Soil	06/11/24 00:00	06/11/24 15:35
BKG01@4.0'	2406142-02	Soil	06/11/24 00:00	06/11/24 15:35
BKG01@5.0'	2406142-03	Soil	06/11/24 00:00	06/11/24 15:35
BKG02@6.0"	2406142-04	Soil	06/11/24 00:00	06/11/24 15:35
BKG02@4.0'	2406142-05	Soil	06/11/24 00:00	06/11/24 15:35
BKG02@5.0'	2406142-06	Soil	06/11/24 00:00	06/11/24 15:35
BKG03@6.0"	2406142-07	Soil	06/11/24 00:00	06/11/24 15:35
BKG03@4.0'	2406142-08	Soil	06/11/24 00:00	06/11/24 15:35
BKG03@5.0'	2406142-09	Soil	06/11/24 00:00	06/11/24 15:35
BKG04@6.0"	2406142-10	Soil	06/11/24 00:00	06/11/24 15:35
BKG04@4.0'	2406142-11	Soil	06/11/24 00:00	06/11/24 15:35
BKG04@5.0'	2406142-12	Soil	06/11/24 00:00	06/11/24 15:35
BKG05@6.0"	2406142-13	Soil	06/11/24 00:00	06/11/24 15:35
BKG05@4.0'	2406142-14	Soil	06/11/24 00:00	06/11/24 15:35
BKG05@5.0'	2406142-15	Soil	06/11/24 00:00	06/11/24 15:35

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.

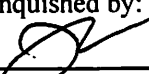
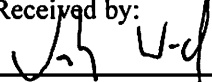
SUMMIT SCIENTIFIC

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

Lab ID	Page 1 of 1
240642	

Client: Fremont Env		Send Data To:		Send Invoice To:	
Address:		Project Manager:		Company: Noble	
City/State/Zip:		E-Mail: Pwllh@fremontenv.com		Project Name/Location:	
Phone:		Jeff@fremontenv.com Ethamb@fremontenv.com		AFE#:	
Sampler Name: JG		Project Name: Markus (Backgrounds)		PO/Billing Codes: UWRWF-A3314-ABN	
		Project Number:		Contact:	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested				Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	EC, pH, SAR, Boron	Metals (915)		
1	BK601@6.0'	6/11/24		1			X			X			X	X		
2	BK601@4.0'															
3	BK601@5.0'															
4	BK602@6.0'															
5	BK602@4.0'															
6	BK602@5.0'															
7	BK603@6.0'															
8	BK603@4.0'															
9	BK603@5.0'															
10	BK604@6.0'															
11	BK604@4.0'															
12	BK604@5.0'															
13	BK605@6.0'															
14	BK605@4.0'															
15	BK605@5.0'															

Relinquished by: 	Date/Time: 6/11/24 15:35	Received by: 	Date/Time: 6/11/24 15:35	TAT Business Days	Field DO	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
Relinquished by:	Date/Time:	Received by:	Date/Time:	2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
Temperature Upon Receipt: 24.4	Corrected Temperature:	IR gun #: 2	HNO3 lot #:	Standard	<input checked="" type="checkbox"/> Field Turb.	

S₂

S2 Work Order# 2406142

Sample Receipt Checklist

Client: Fremont Client Project ID: Merkus (Backgrounds)

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

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

Temp (°C) 24.4

Thermometer # 2

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

W. J. W. J.
Custodian Printed Name

6/11/24 15:35
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG01@6.0"
2406142-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHF0340	06/12/24	06/15/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	1.72	0.200		mg/kg dry	1	BHF0360	06/13/24	06/18/24	EPA 6020B	
Barium	35.4	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	3.38	0.400		"	"	"	"	"	"	
Lead	7.02	0.200		"	"	"	"	"	"	
Nickel	1.95	0.400		"	"	"	"	"	"	
Silver	0.0213	0.0200		"	"	"	"	"	"	
Zinc	16.0	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHF0345	06/12/24	06/13/24	EPA 7196A	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	40.8	0.0500		mg/L dry	1	BHF0435	06/14/24	06/19/24	EPA 6020B	
Magnesium	16.2	0.0500		"	"	"	"	"	"	
Sodium	288	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG01@6.0"
2406142-01 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	9.65	0.00100	units	1	BHF0611	06/20/24	06/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.8		%	1	BHF0341	06/12/24	06/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.14	0.0100	mmhos/cm	1	BHF0436	06/14/24	06/17/24	EPA 120.1	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.11		pH Units	1	BHF0437	06/14/24	06/17/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG01@4.0'
2406142-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHF0340	06/12/24	06/15/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.779	0.200	mg/kg dry	1	BHF0360	06/13/24	06/18/24	EPA 6020B	
Barium	41.3	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.85	0.400	"	"	"	"	"	"	
Lead	2.50	0.200	"	"	"	"	"	"	
Nickel	2.13	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	12.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0345	06/12/24	06/13/24	EPA 7196A	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	40.5	0.0500	mg/L dry	1	BHF0435	06/14/24	06/19/24	EPA 6020B	
Magnesium	16.3	0.0500	"	"	"	"	"	"	
Sodium	59.8	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 - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG01@4.0'
2406142-02 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.01	0.00100	units	1	BHF0611	06/20/24	06/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.6		%	1	BHF0341	06/12/24	06/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.573	0.0100	mmhos/cm	1	BHF0436	06/14/24	06/17/24	EPA 120.1	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.12		pH Units	1	BHF0437	06/14/24	06/17/24	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 - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG01@5.0'
2406142-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHF0340	06/12/24	06/15/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.824	0.200	mg/kg dry	1	BHF0360	06/13/24	06/18/24	EPA 6020B	
Barium	31.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.82	0.400	"	"	"	"	"	"	
Lead	2.62	0.200	"	"	"	"	"	"	
Nickel	2.04	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	12.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0345	06/12/24	06/13/24	EPA 7196A	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	40.4	0.0500	mg/L dry	1	BHF0435	06/14/24	06/19/24	EPA 6020B	
Magnesium	14.0	0.0500	"	"	"	"	"	"	
Sodium	49.7	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 - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG01@5.0'
2406142-03 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.72	0.00100	units	1	BHF0611	06/20/24	06/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.8		%	1	BHF0341	06/12/24	06/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.364	0.0100	mmhos/cm	1	BHF0436	06/14/24	06/17/24	EPA 120.1	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.26		pH Units	1	BHF0437	06/14/24	06/17/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG02@6.0"
2406142-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	2.62	2.00		mg/L	1	BHF0340	06/12/24	06/15/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	1.72	0.200		mg/kg dry	1	BHF0360	06/13/24	06/18/24	EPA 6020B	
Barium	92.5	0.400		"	"	"	"	"	"	
Cadmium	0.491	0.200		"	"	"	"	"	"	
Copper	9.73	0.400		"	"	"	"	"	"	
Lead	17.0	0.200		"	"	"	"	"	"	
Nickel	3.56	0.400		"	"	"	"	"	"	
Silver	0.105	0.0200		"	"	"	"	"	"	
Zinc	40.2	0.400		"	"	"	"	"	"	
Selenium	0.392	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHF0345	06/12/24	06/13/24	EPA 7196A	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	159	0.0500		mg/L dry	1	BHF0435	06/14/24	06/19/24	EPA 6020B	
Magnesium	35.2	0.0500		"	"	"	"	"	"	
Sodium	53.3	0.0500		"	"	"	"	"	"	

Calculated Analysis

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Markus (Backgrounds)
 Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 06/21/24 07:55

BKG02@6.0"
2406142-04 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.996	0.00100	units	1	BHF0611	06/20/24	06/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.1		%	1	BHF0341	06/12/24	06/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.656	0.0100	mmhos/cm	1	BHF0436	06/14/24	06/17/24	EPA 120.1	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.41		pH Units	1	BHF0437	06/14/24	06/17/24	EPA 9045D	

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Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG02@4.0'
2406142-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHF0340	06/12/24	06/15/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	0.618	0.200		mg/kg dry	1	BHF0360	06/13/24	06/18/24	EPA 6020B	
Barium	62.5	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	4.32	0.400		"	"	"	"	"	"	
Lead	3.00	0.200		"	"	"	"	"	"	
Nickel	2.19	0.400		"	"	"	"	"	"	
Silver	0.0215	0.0200		"	"	"	"	"	"	
Zinc	10.1	0.400		"	"	"	"	"	"	
Selenium	0.697	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHF0345	06/12/24	06/13/24	EPA 7196A	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	50.1	0.0500		mg/L dry	1	BHF0435	06/14/24	06/19/24	EPA 6020B	
Magnesium	20.4	0.0500		"	"	"	"	"	"	
Sodium	185	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG02@4.0'
2406142-05 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.57	0.00100	units	1	BHF0611	06/20/24	06/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.6		%	1	BHF0341	06/12/24	06/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.01	0.0100	mmhos/cm	1	BHF0436	06/14/24	06/17/24	EPA 120.1	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.33		pH Units	1	BHF0437	06/14/24	06/17/24	EPA 9045D	

Summit Scientific

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PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG02@5.0'
2406142-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHF0340	06/12/24	06/15/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.205	0.179	mg/kg dry	1	BHF0360	06/13/24	06/18/24	EPA 6020B	
Barium	19.5	0.357	"	"	"	"	"	"	
Cadmium	ND	0.179	"	"	"	"	"	"	
Copper	1.54	0.357	"	"	"	"	"	"	
Lead	1.63	0.179	"	"	"	"	"	"	
Nickel	0.678	0.357	"	"	"	"	"	"	
Silver	ND	0.0179	"	"	"	"	"	"	
Zinc	4.45	0.357	"	"	"	"	"	"	
Selenium	ND	0.232	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0345	06/12/24	06/13/24	EPA 7196A	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	51.0	0.0500	mg/L dry	1	BHF0435	06/14/24	06/19/24	EPA 6020B	
Magnesium	15.9	0.0500	"	"	"	"	"	"	
Sodium	39.2	0.0500	"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG02@5.0'
2406142-06 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.23	0.00100	units	1	BHF0611	06/20/24	06/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.7		%	1	BHF0341	06/12/24	06/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.309	0.0100	mmhos/cm	1	BHF0436	06/14/24	06/17/24	EPA 120.1	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.70		pH Units	1	BHF0437	06/14/24	06/17/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG03@6.0"
2406142-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	0.0198		mg/L	1	BHF0340	06/12/24	06/15/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	1.59	0.200		mg/kg dry	1	BHF0360	06/13/24	06/18/24	EPA 6020B	
Barium	48.4	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	5.20	0.400		"	"	"	"	"	"	
Lead	6.18	0.200		"	"	"	"	"	"	
Nickel	3.24	0.400		"	"	"	"	"	"	
Silver	0.0248	0.0200		"	"	"	"	"	"	
Zinc	20.0	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHF0345	06/12/24	06/13/24	EPA 7196A	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	80.7	0.0500		mg/L dry	1	BHF0435	06/14/24	06/19/24	EPA 6020B	
Magnesium	44.4	0.0500		"	"	"	"	"	"	
Sodium	158	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
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Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG03@6.0"
2406142-07 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.51	0.00100	units	1	BHF0611	06/20/24	06/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.3		%	1	BHF0341	06/12/24	06/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.25	0.0100	mmhos/cm	1	BHF0436	06/14/24	06/17/24	EPA 120.1	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.38		pH Units	1	BHF0437	06/14/24	06/17/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG03@4.0'
2406142-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHF0340	06/12/24	06/15/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	2.90	0.200		mg/kg dry	1	BHF0360	06/13/24	06/18/24	EPA 6020B	
Barium	73.4	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	4.56	0.400		"	"	"	"	"	"	
Lead	6.17	0.200		"	"	"	"	"	"	
Nickel	4.13	0.400		"	"	"	"	"	"	
Silver	0.0331	0.0200		"	"	"	"	"	"	
Zinc	16.5	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHF0345	06/12/24	06/13/24	EPA 7196A	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	54.5	0.0500		mg/L dry	1	BHF0435	06/14/24	06/19/24	EPA 6020B	
Magnesium	20.9	0.0500		"	"	"	"	"	"	
Sodium	97.9	0.0500		"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG03@4.0'
2406142-08 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.86	0.00100	units	1	BHF0611	06/20/24	06/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.1		%	1	BHF0341	06/12/24	06/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.789	0.0100	mmhos/cm	1	BHF0436	06/14/24	06/17/24	EPA 120.1	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.25		pH Units	1	BHF0437	06/14/24	06/17/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG03@5.0'
2406142-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHF0340	06/12/24	06/15/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.70	0.200	mg/kg dry	1	BHF0360	06/13/24	06/18/24	EPA 6020B	
Barium	77.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.60	0.400	"	"	"	"	"	"	
Lead	4.15	0.200	"	"	"	"	"	"	
Nickel	3.29	0.400	"	"	"	"	"	"	
Silver	0.0262	0.0200	"	"	"	"	"	"	
Zinc	14.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0345	06/12/24	06/13/24	EPA 7196A	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	30.9	0.0500	mg/L dry	1	BHF0435	06/14/24	06/19/24	EPA 6020B	
Magnesium	11.1	0.0500	"	"	"	"	"	"	
Sodium	56.5	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)
Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG03@5.0'
2406142-09 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.22	0.00100	units	1	BHF0611	06/20/24	06/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.6		%	1	BHF0341	06/12/24	06/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.466	0.0100	mmhos/cm	1	BHF0436	06/14/24	06/17/24	EPA 120.1	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.04		pH Units	1	BHF0437	06/14/24	06/17/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG04@6.0"
2406142-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHF0340	06/12/24	06/15/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	3.16	0.180		mg/kg dry	1	BHF0360	06/13/24	06/18/24	EPA 6020B	
Barium	62.2	0.360		"	"	"	"	"	"	
Cadmium	0.385	0.180		"	"	"	"	"	"	
Copper	5.80	0.360		"	"	"	"	"	"	
Lead	12.5	0.180		"	"	"	"	"	"	
Nickel	3.12	0.360		"	"	"	"	"	"	
Silver	0.175	0.0180		"	"	"	"	"	"	
Zinc	25.0	0.360		"	"	"	"	"	"	
Selenium	ND	0.234		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHF0345	06/12/24	06/13/24	EPA 7196A	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	42.5	0.0500		mg/L dry	1	BHF0435	06/14/24	06/19/24	EPA 6020B	
Magnesium	22.1	0.0500		"	"	"	"	"	"	
Sodium	133	0.0500		"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG04@6.0"
2406142-10 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.12	0.00100	units	1	BHF0611	06/20/24	06/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.1		%	1	BHF0341	06/12/24	06/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.875	0.0100	mmhos/cm	1	BHF0436	06/14/24	06/17/24	EPA 120.1	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.37		pH Units	1	BHF0437	06/14/24	06/17/24	EPA 9045D	

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PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG04@4.0'
2406142-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHF0340	06/12/24	06/15/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	0.816	0.200		mg/kg dry	1	BHF0360	06/13/24	06/18/24	EPA 6020B	
Barium	66.6	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	3.00	0.400		"	"	"	"	"	"	
Lead	3.84	0.200		"	"	"	"	"	"	
Nickel	2.66	0.400		"	"	"	"	"	"	
Silver	0.0206	0.0200		"	"	"	"	"	"	
Zinc	13.9	0.400		"	"	"	"	"	"	
Selenium	1.61	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHF0345	06/12/24	06/13/24	EPA 7196A	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	198	0.0500		mg/L dry	1	BHF0435	06/14/24	06/19/24	EPA 6020B	
Magnesium	77.5	0.0500		"	"	"	"	"	"	
Sodium	46.5	0.0500		"	"	"	"	"	"	

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Fremont Environmental
 PO Box 1289
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Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 06/21/24 07:55

BKG04@4.0'
2406142-11 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.709	0.00100	units	1	BHF0611	06/20/24	06/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.8		%	1	BHF0341	06/12/24	06/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.289	0.0100	mmhos/cm	1	BHF0436	06/14/24	06/17/24	EPA 120.1	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.92		pH Units	1	BHF0437	06/14/24	06/17/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG04@5.0'
2406142-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHF0340	06/12/24	06/15/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.274	0.200	mg/kg dry	1	BHF0360	06/13/24	06/18/24	EPA 6020B	
Barium	10.6	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	0.966	0.400	"	"	"	"	"	"	
Lead	1.13	0.200	"	"	"	"	"	"	
Nickel	0.682	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	3.93	0.400	"	"	"	"	"	"	
Selenium	0.671	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0345	06/12/24	06/13/24	EPA 7196A	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	45.1	0.0500	mg/L dry	1	BHF0435	06/14/24	06/19/24	EPA 6020B	
Magnesium	18.8	0.0500	"	"	"	"	"	"	
Sodium	33.1	0.0500	"	"	"	"	"	"	

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Fremont Environmental
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Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG04@5.0'
2406142-12 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.04	0.00100	units	1	BHF0611	06/20/24	06/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.4		%	1	BHF0341	06/12/24	06/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.293	0.0100	mmhos/cm	1	BHF0436	06/14/24	06/17/24	EPA 120.1	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.22		pH Units	1	BHF0437	06/14/24	06/17/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG05@6.0"
2406142-13 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHF0340	06/12/24	06/15/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.69	0.200	mg/kg dry	1	BHF0360	06/13/24	06/18/24	EPA 6020B	
Barium	102	0.400	"	"	"	"	"	"	
Cadmium	0.335	0.200	"	"	"	"	"	"	
Copper	5.53	0.400	"	"	"	"	"	"	
Lead	7.47	0.200	"	"	"	"	"	"	
Nickel	4.76	0.400	"	"	"	"	"	"	
Silver	0.0697	0.0200	"	"	"	"	"	"	
Zinc	24.6	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0345	06/12/24	06/13/24	EPA 7196A	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	53.2	0.0500	mg/L dry	1	BHF0435	06/14/24	06/19/24	EPA 6020B	
Magnesium	24.1	0.0500	"	"	"	"	"	"	
Sodium	71.2	0.0500	"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG05@6.0"
2406142-13 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.03	0.00100	units	1	BHF0611	06/20/24	06/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	76.7		%	1	BHF0341	06/12/24	06/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.546	0.0100	mmhos/cm	1	BHF0436	06/14/24	06/17/24	EPA 120.1	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.52		pH Units	1	BHF0437	06/14/24	06/17/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG05@4.0'
2406142-14 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHF0340	06/12/24	06/15/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.462	0.181	mg/kg dry	1	BHF0360	06/13/24	06/18/24	EPA 6020B	
Barium	12.6	0.362	"	"	"	"	"	"	
Cadmium	ND	0.181	"	"	"	"	"	"	
Copper	0.686	0.362	"	"	"	"	"	"	
Lead	1.34	0.181	"	"	"	"	"	"	
Nickel	0.801	0.362	"	"	"	"	"	"	
Silver	ND	0.0181	"	"	"	"	"	"	
Zinc	4.11	0.362	"	"	"	"	"	"	
Selenium	ND	0.236	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0345	06/12/24	06/13/24	EPA 7196A	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	28.6	0.0500	mg/L dry	1	BHF0435	06/14/24	06/19/24	EPA 6020B	
Magnesium	14.3	0.0500	"	"	"	"	"	"	
Sodium	42.0	0.0500	"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG05@4.0'
2406142-14 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.60	0.00100	units	1	BHF0611	06/20/24	06/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.8		%	1	BHF0341	06/12/24	06/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.343	0.0100	mmhos/cm	1	BHF0436	06/14/24	06/17/24	EPA 120.1	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.38		pH Units	1	BHF0437	06/14/24	06/17/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG05@5.0'
2406142-15 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHF0340	06/12/24	06/15/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	1.32	0.200		mg/kg dry	1	BHF0360	06/13/24	06/18/24	EPA 6020B	
Barium	64.3	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	3.68	0.400		"	"	"	"	"	"	
Lead	5.66	0.200		"	"	"	"	"	"	
Nickel	2.10	0.400		"	"	"	"	"	"	
Silver	0.0367	0.0200		"	"	"	"	"	"	
Zinc	14.8	0.400		"	"	"	"	"	"	
Selenium	1.35	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHF0345	06/12/24	06/13/24	EPA 7196A	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	68.8	0.0500		mg/L dry	1	BHF0435	06/14/24	06/19/24	EPA 6020B	
Magnesium	24.9	0.0500		"	"	"	"	"	"	
Sodium	71.7	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

BKG05@5.0'
2406142-15 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.88	0.00100	units	1	BHF0611	06/20/24	06/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.6		%	1	BHF0341	06/12/24	06/12/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.614	0.0100	mmhos/cm	1	BHF0436	06/14/24	06/17/24	EPA 120.1	

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

Date Sampled: **06/11/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.23		pH Units	1	BHF0437	06/14/24	06/17/24	EPA 9045D	

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 06/21/24 07:55

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

Summit Scientific

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

Batch BHF0340 - EPA 3050B

Blank (BHF0340-BLK1)

Prepared: 06/12/24 Analyzed: 06/14/24

Boron ND 2.00 mg/L

LCS (BHF0340-BS1)

Prepared: 06/12/24 Analyzed: 06/15/24

Boron 4.84 2.00 mg/L 5.00 96.7 80-120

Duplicate (BHF0340-DUP1)

Source: 2406142-01

Prepared: 06/12/24 Analyzed: 06/15/24

Boron 0.877 2.00 mg/L 0.883 0.672 20

Matrix Spike (BHF0340-MS1)

Source: 2406142-01

Prepared: 06/12/24 Analyzed: 06/15/24

Boron 6.20 2.00 mg/L 5.00 0.883 106 75-125

Matrix Spike Dup (BHF0340-MSD1)

Source: 2406142-01

Prepared: 06/12/24 Analyzed: 06/15/24

Boron 6.35 2.00 mg/L 5.00 0.883 109 75-125 2.42 25

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHF0360 - EPA 3050B

Blank (BHF0360-BLK1)

Prepared: 06/13/24 Analyzed: 06/18/24

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 (BHF0360-BS1)

Prepared: 06/13/24 Analyzed: 06/18/24

Arsenic	40.7	0.200	mg/kg wet	40.0		102	80-120
Barium	39.9	0.400	"	40.0		99.7	80-120
Cadmium	1.96	0.200	"	2.00		97.9	80-120
Copper	39.9	0.400	"	40.0		99.6	80-120
Lead	18.6	0.200	"	20.0		93.2	80-120
Nickel	39.9	0.400	"	40.0		99.6	80-120
Silver	1.95	0.0200	"	2.00		97.4	80-120
Zinc	39.8	0.400	"	40.0		99.5	80-120
Selenium	3.79	0.260	"	4.00		94.8	80-120

Duplicate (BHF0360-DUP1)

Source: 2406141-01

Prepared: 06/13/24 Analyzed: 06/18/24

Arsenic	2.10	0.200	mg/kg dry		1.42		38.2	20
Barium	336	0.400	"		253		28.2	20
Cadmium	0.203	0.200	"		0.203		0.117	20
Copper	4.49	0.400	"		4.57		1.64	20
Lead	12.0	0.200	"		8.52		34.2	20
Nickel	3.48	0.400	"		3.37		3.15	20
Silver	0.0527	0.0200	"		0.0475		10.3	20
Zinc	30.2	0.400	"		21.1		35.4	20
Selenium	1.17	0.260	"		1.24		6.38	20

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Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

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 BHF0360 - EPA 3050B

Matrix Spike (BHF0360-MS1)

Source: 2406141-01

Prepared: 06/13/24 Analyzed: 06/18/24

Arsenic	44.0	0.200	mg/kg dry	42.3	1.42	101	75-125			
Barium	254	0.400	"	42.3	253	3.36	75-125			
Cadmium	2.27	0.200	"	2.11	0.203	97.7	75-125			
Copper	30.5	0.400	"	42.3	4.57	61.3	75-125			
Lead	32.2	0.200	"	21.1	8.52	112	75-125			
Nickel	29.6	0.400	"	42.3	3.37	62.1	75-125			
Silver	2.07	0.0200	"	2.11	0.0475	95.9	75-125			
Zinc	50.4	0.400	"	42.3	21.1	69.2	75-125			
Selenium	3.99	0.260	"	4.23	1.24	65.0	75-125			

Matrix Spike Dup (BHF0360-MSD1)

Source: 2406141-01

Prepared: 06/13/24 Analyzed: 06/18/24

Arsenic	44.3	0.200	mg/kg dry	42.0	1.42	102	75-125	0.637	25
Barium	541	0.400	"	42.0	253	688	75-125	72.2	25
Cadmium	2.24	0.200	"	2.10	0.203	97.3	75-125	1.01	25
Copper	31.6	0.400	"	42.0	4.57	64.5	75-125	3.75	25
Lead	42.5	0.200	"	21.0	8.52	162	75-125	27.4	25
Nickel	31.3	0.400	"	42.0	3.37	66.6	75-125	5.51	25
Silver	2.07	0.0200	"	2.10	0.0475	96.4	75-125	0.200	25
Zinc	53.2	0.400	"	42.0	21.1	76.4	75-125	5.46	25
Selenium	4.09	0.260	"	4.20	1.24	67.9	75-125	2.57	25

Post Spike (BHF0360-PS1)

Source: 2406141-01

Prepared: 06/13/24 Analyzed: 06/18/24

Arsenic	116		ug/l	100	3.42	112	75-125		
Barium	724		"	100	607	117	75-125		
Cadmium	5.70		"	5.00	0.488	104	75-125		
Copper	67.8		"	100	11.0	56.8	75-125		
Lead	62.7		"	50.0	20.5	84.5	75-125		
Nickel	65.5		"	100	8.10	57.4	75-125		
Silver	5.27		"	5.00	0.114	103	75-125		
Zinc	109		"	100	50.7	58.3	75-125		
Selenium	11.6		"	10.0	2.98	85.8	75-125		

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Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 06/21/24 07:55

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BHF0345 - 3060A Mod

Blank (BHF0345-BLK1)

Prepared: 06/12/24 Analyzed: 06/13/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHF0345-BS1)

Prepared: 06/12/24 Analyzed: 06/13/24

Chromium, Hexavalent 25.3 0.30 mg/kg wet 25.0 101 80-120

Duplicate (BHF0345-DUP1)

Source: 2406142-01

Prepared: 06/12/24 Analyzed: 06/13/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHF0345-MS1)

Source: 2406142-01

Prepared: 06/12/24 Analyzed: 06/13/24

Chromium, Hexavalent 27.9 0.30 mg/kg dry 28.4 ND 98.2 75-125

Matrix Spike Dup (BHF0345-MSD1)

Source: 2406142-01

Prepared: 06/12/24 Analyzed: 06/13/24

Chromium, Hexavalent 28.3 0.30 mg/kg dry 27.0 ND 105 75-125 1.67 20

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Fremont Environmental
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Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 06/21/24 07:55

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 BHF0435 - General Preparation

Blank (BHF0435-BLK1)

Prepared: 06/14/24 Analyzed: 06/19/24

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

LCS (BHF0435-BS1)

Prepared: 06/14/24 Analyzed: 06/19/24

Calcium	5.49	0.0500	mg/L wet	5.00	110	70-130
Magnesium	5.28	0.0500	"	5.00	106	70-130
Sodium	5.19	0.0500	"	5.00	104	70-130

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Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 06/21/24 07:55

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

Summit Scientific

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

Batch BHF0341 - General Preparation

Duplicate (BHF0341-DUP2)

Source: 2406140-08

Prepared & Analyzed: 06/12/24

% Solids	95.3		%		95.7			0.481	20	
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Fremont Environmental
 PO Box 1289
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Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 06/21/24 07:55

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 BHF0436 - General Preparation

Blank (BHF0436-BLK1)

Prepared: 06/14/24 Analyzed: 06/17/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHF0436-BS1)

Prepared: 06/14/24 Analyzed: 06/17/24

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BHF0436-DUP1)

Source: 2406142-01

Prepared: 06/14/24 Analyzed: 06/17/24

Specific Conductance (EC) 2.14 0.0100 mmhos/cm 2.14 0.0466 20

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
 Project Manager: Paul Henchan

Reported:
 06/21/24 07:55

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

Summit Scientific

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

Batch BHF0437 - General Preparation

LCS (BHF0437-BS1)

Prepared: 06/14/24 Analyzed: 06/17/24

pH	9.21	pH Units	9.18	100	95-105
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Duplicate (BHF0437-DUP1)

Source: 2406142-01

Prepared: 06/14/24 Analyzed: 06/17/24

pH	9.09	pH Units	9.11	0.220	20
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Markus (Backgrounds)

Project Number: UWRWE-A3314-ABN
Project Manager: Paul Henchan

Reported:
06/21/24 07:55

Notes and Definitions

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