

FREMONT ENVIRONMENTAL INC.

July 31, 2023

Mr. Daniel Peterson
Noble Energy Inc.
2115 117th Avenue
Greeley, CO 80634

Subject: **Flowline Closure Data Submittal**
Goldberg N 14-20D
API # 05-123-30115
NWSW Sec. 14, T5N, R67W
Weld County, Colorado
Fremont Project No. C023-211
Facility # 301876, Remediation #29206

Dear Mr. Peterson:

As you requested, Fremont Environmental Inc. (Fremont) personnel conducted Flowline Closure activities for the Noble Energy Inc. (Noble) Goldberg N 14-20D. Impacted soil was encountered during abandonment activities. Details of the Goldberg N 14-20D flowline closure activities are documented in the attached Closure Report. Groundwater was not encountered during flowline abandonment activities.

Please contact me at (303) 956-8714 if you require any additional information. Fremont appreciates the opportunity to provide this service.

Sincerely,

FREMONT ENVIRONMENTAL INC.



Paul V. Henehan, P.E.
Senior Consultant

Attachments:

- Facility Closure Checklist
- Tables
- Figures
- Photos
- Laboratory Reports

**1759 REDWING LANE, BROOMFIELD, CO 80020
(303) 956-8714 (DIRECT)**

Flowline Closure Checklist

COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

Additional Attachments:		Tank Battery Closure		Wellhead Closure		Pit Closure		Partially Buried Vault Closure
Site Name & COGCC Facility Number: Goldberg T5N-R67W-S14 L01 Facility: 331692		Date: 07/29/2023-07/31/2023			Remediation Project #: 29206			
Associated Wells: Goldberg N 14-20D Facility ID: 301876 API: 05-123-30115		Age of Site: 2011			Number of Photos Attached: 5 Photos			

Starting point: (GPS coordinates and descriptions) 40.3979436, -104.8661336

End point: (GPS coordinates and descriptions) 40.3960823, -104.8688854

USCS Soil Type: SC Estimated Depth to Groundwater: N/A

Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)
 Exceedances in 1,2,4 Trimethyl-benzene (0.019mg/kg) and 1,3,5 Trimethyl-benzene (0.025mg/kg) were discovered at the separator tie-in (20FL05@6.0') sample location. Refer to the polycyclic aromatic hydrocarbon soil chemistry table (Table 2) for reference. Impacts were left in place. Further investigation is required.

Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)
 None observed

Flowlines

Flowline type	multi-phase							
Depth	Roughly 3ft							
Age	2011							
Length	1,024 ft							
Construction Material	Black Non-ACM coated steel							
Were flowlines pulled?	Yes							
Visual Integrity of lines	No Damage							
Visual impacts if trenched	N/A							
PID Readings if trenched	N/A							
Sample taken? Location/Sample ID#	20FL01@4.0' 20FL05@6.0'							
Photo Number(s)	Photo 1A-1E							

Other observations regarding on location flowlines: An exceedance in Cadmium (0.494mg/kg) and Lead (62.0mg/kg) was discovered at the wellhead tie-in sample location (20FL01@4.0'). Refer to the metals in soil chemistry table (Table 4) for reference. Additionally exceedances in arsenic and barium were discovered at the wellhead and separator tie-in sample locations (20FL01@4.0' & 20FL05@6.0'). Refer to the metals in soil chemistry table (Table 4) for reference. Although based on corresponding local background sample data, these exceedances in arsenic and barium can be attributed to native soil conditions. Refer to the metals in soil chemistry table (Table 4) for reference.

Summary

Was impacted soil identified?		No	Yes - less than 10 cubic yards	Yes - more than 10 cubic yards
Total number of samples field screened: 3 samples		Total number of samples collected: 20 samples		
Highest PID Reading: High @ 0.7ppm (20FL05@6.0')		Total number of samples submitted to lab for analysis: 17 Samples		
If more than 10 cubic yards of impacted soil were observed:				
Vertical extent: Unknown		Estimated spill volume: Unknown		
Lateral extent: Unknown		Volume of soil removed: None		
Is additional investigation required? Yes				
Was groundwater encountered during the investigation?				
No		Yes - not impacted or in contact with impacted soils		Yes - groundwater impacted and/or in contact with impacted soils
Measured depth to groundwater: N/A		Was remedial groundwater removal conducted? Yes No		
Date Groundwater was encountered: N/A		Commencement date of removal: N/A		
Sheen on groundwater? Yes No		Volume of groundwater removed prior to sampling: N/A		
Free product observed? Yes No		Volume of groundwater removed post sampling: N/A		
Total number of samples collected: N/A		Total Volume of groundwater removed: N/A		
Total number of samples submitted to lab for analysis: N/A				

TABLE 1
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
GOLDBERG N 14-20D, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-211

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 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**		
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500**		
20FL01@4.0'	7/29/2023	4.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
20FL05@6.0'	7/31/2023	6.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	0.019	0.025	<0.0038	32	77	<50

Bold faced values exceed the COGCC Table 915-1 concentrations

Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

* Indicates laboratory minimum detection limit in excess of SSL

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

TABLE 2
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
GOLDBERG N 14-20D, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-211

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
20FL01@4.0'	7/29/2023	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
20FL05@6.0'	7/31/2023	6.0 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

Bold faced values exceed the COGCC Table 915-1 concentrations

Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

* Indicates laboratory minimum detection limit in excess of SSL

TABLE 3
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE ENERGY INC.
GOLDBERG N 14-20D, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-211

Sample ID	Sample Date	Depth (ft)	pH	EC (mmhos/cm)	SAR	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
20FL01@4.0'	7/29/2023	4.0 Ft	8.10	0.220	0.0649	<0.0100
20FL05@6.0'	7/31/2023	6.0 Ft	7.88	0.232	0.118	<0.0100
BKG01@6.0"	8/1/2023	0.5 Ft	7.25	0.257	0.0756	0.130
BKG01@5.0'	8/1/2023	5.0 Ft	8.28	0.625	4.15	0.323
BKG01@6.0'	8/1/2023	6.0 Ft	8.21	0.436	2.43	0.189
BKG02@6.0"	8/1/2023	0.5 Ft	7.57	0.239	0.185	0.115
BKG02@5.0'	8/1/2023	5.0 Ft	8.32	0.437	2.49	0.110
BKG02@6.0'	8/1/2023	6.0 Ft	8.26	0.393	1.99	0.113
BKG03@6.0"	8/1/2023	0.5 Ft	7.24	0.252	0.200	0.118
BKG03@5.0'	8/1/2023	5.0 Ft	7.89	1.86	2.78	0.0811
BKG03@6.0'	8/1/2023	6.0 Ft	8.10	2.33	5.22	0.158
BKG04@6.0"	8/1/2023	0.5 Ft	7.77	0.255	0.0949	0.0624
BKG04@5.0'	8/1/2023	5.0 Ft	8.12	0.384	1.26	0.178
BKG04@6.0'	8/1/2023	6.0 Ft	8.41	1.62	9.55	0.610
BKG05@6.0"	8/1/2023	0.5 Ft	7.77	0.261	0.0839	0.157
BKG05@5.0'	8/1/2023	5.0 Ft	8.43	0.338	1.06	0.155
BKG05@6.0'	8/1/2023	6.0 Ft	8.39	0.560	2.91	0.158

Bold faced values exceed the COGCC Table 915-1 concentrations

Yellow highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

Local Background Samples (BKG01, BKG02, BKG03, BKG04, BKG05)

TABLE 4
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
GOLDBERG N 14-20D, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-211

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
20FL01@4.0'	7/29/2023	4.0 Ft	1.21	101	0.872	<0.30	6.02	62.0	3.35	<0.311	0.0316	23.5
20FL05@6.0'	7/31/2023	6.0 Ft	1.07	85.6	0.244	<0.30	2.89	4.61	3.56	<0.311	0.0292	10.2
BKG01@6.0"	8/1/2023	0.5 Ft	6.15	149	0.358	<0.30	7.08	10.4	8.35	0.220	0.0904	23.0
BKG01@5.0'	8/1/2023	5.0 Ft	4.15	117	0.230	<0.30	5.37	7.51	6.45	<0.276	0.0416	19.6
BKG01@6.0'	8/1/2023	6.0 Ft	3.99	129	0.242	<0.30	5.24	7.06	6.59	<0.277	0.0392	19.8
BKG02@6.0"	8/1/2023	0.5 Ft	5.23	130	0.283	<0.30	6.27	9.85	7.82	<0.286	0.0804	20.1
BKG02@5.0'	8/1/2023	5.0 Ft	4.08	142	0.250	<0.30	5.18	7.38	6.37	<0.280	0.0409	18.7
BKG02@6.0'	8/1/2023	6.0 Ft	4.18	166	0.257	<0.30	5.32	7.38	6.39	<0.280	0.0426	19.4
BKG03@6.0"	8/1/2023	0.5 Ft	4.67	130	0.290	<0.30	5.77	10.8	6.93	<0.290	0.0597	19.3
BKG03@5.0'	8/1/2023	5.0 Ft	4.65	127	0.287	<0.30	5.82	7.96	6.78	<0.282	0.0485	20.9
BKG03@6.0'	8/1/2023	6.0 Ft	4.03	118	0.239	<0.30	4.77	6.80	6.28	0.255	0.0406	19.3
BKG04@6.0"	8/1/2023	0.5 Ft	5.22	147	0.290	<0.30	6.67	8.89	8.20	<0.287	0.104	21.7
BKG04@5.0'	8/1/2023	5.0 Ft	4.66	160	0.273	<0.30	5.61	7.99	6.96	<0.280	0.0417	21.6
BKG04@6.0'	8/1/2023	6.0 Ft	3.83	119	0.281	<0.30	6.26	7.64	6.97	<0.276	0.0485	20.4
BKG05@6.0"	8/1/2023	0.5 Ft	5.22	163	0.303	<0.30	6.30	8.49	7.45	<0.284	0.0402	20.8
BKG05@5.0'	8/1/2023	5.0 Ft	3.33	136	0.210	<0.30	4.97	6.16	5.89	<0.281	0.0299	17.9
BKG05@6.0'	8/1/2023	6.0 Ft	3.91	98.4	0.236	<0.30	5.17	7.13	6.38	<0.276	0.0365	19.5

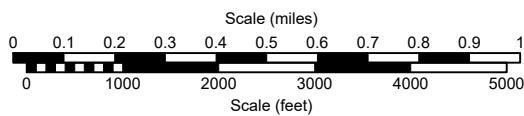
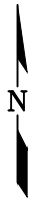
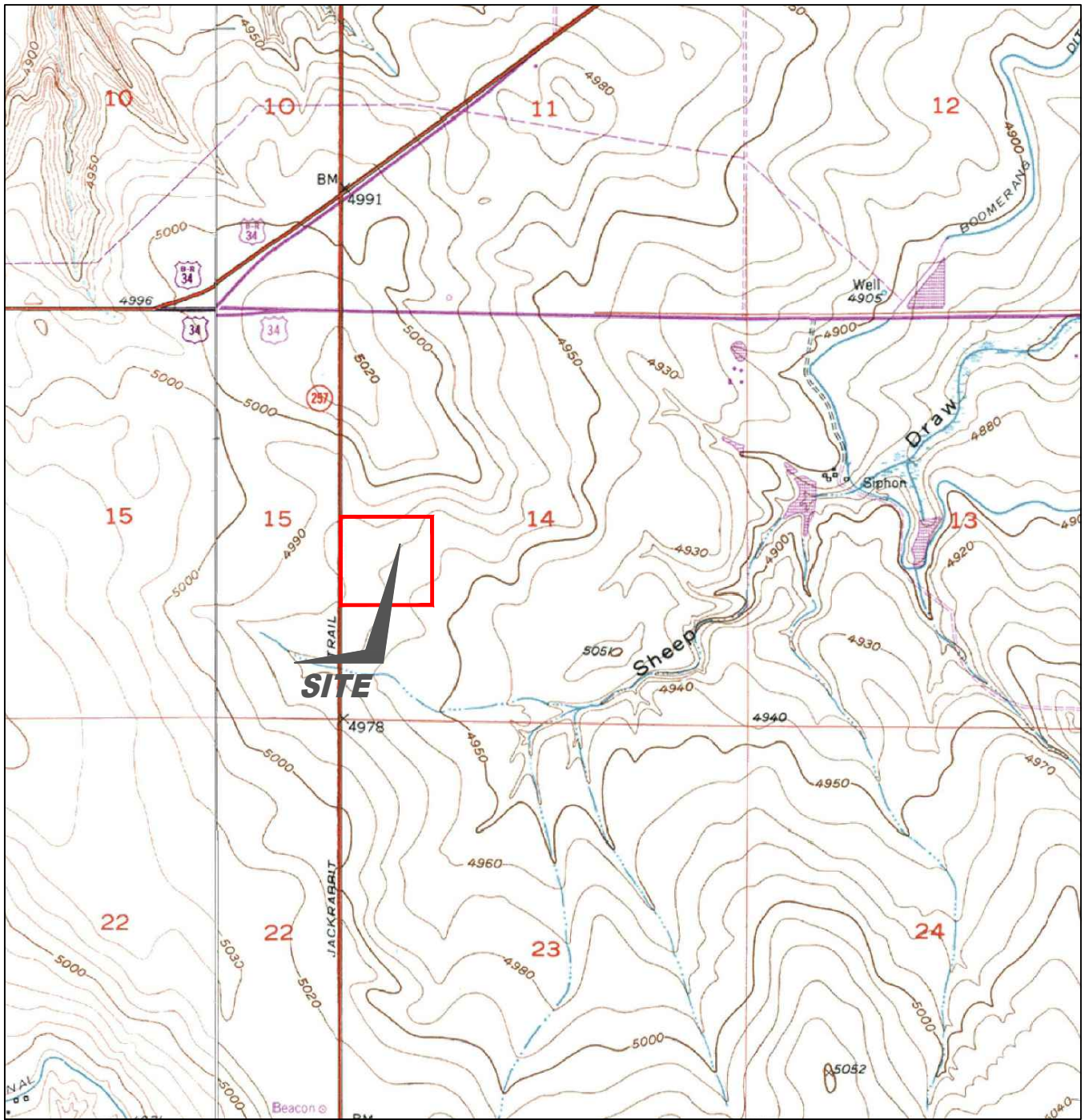
Bold faced values exceed the COGCC Table 915-1 concentrations

Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

* Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed

Local Background Samples (BKG01, BKG02, BKG03, BKG04, BKG05)



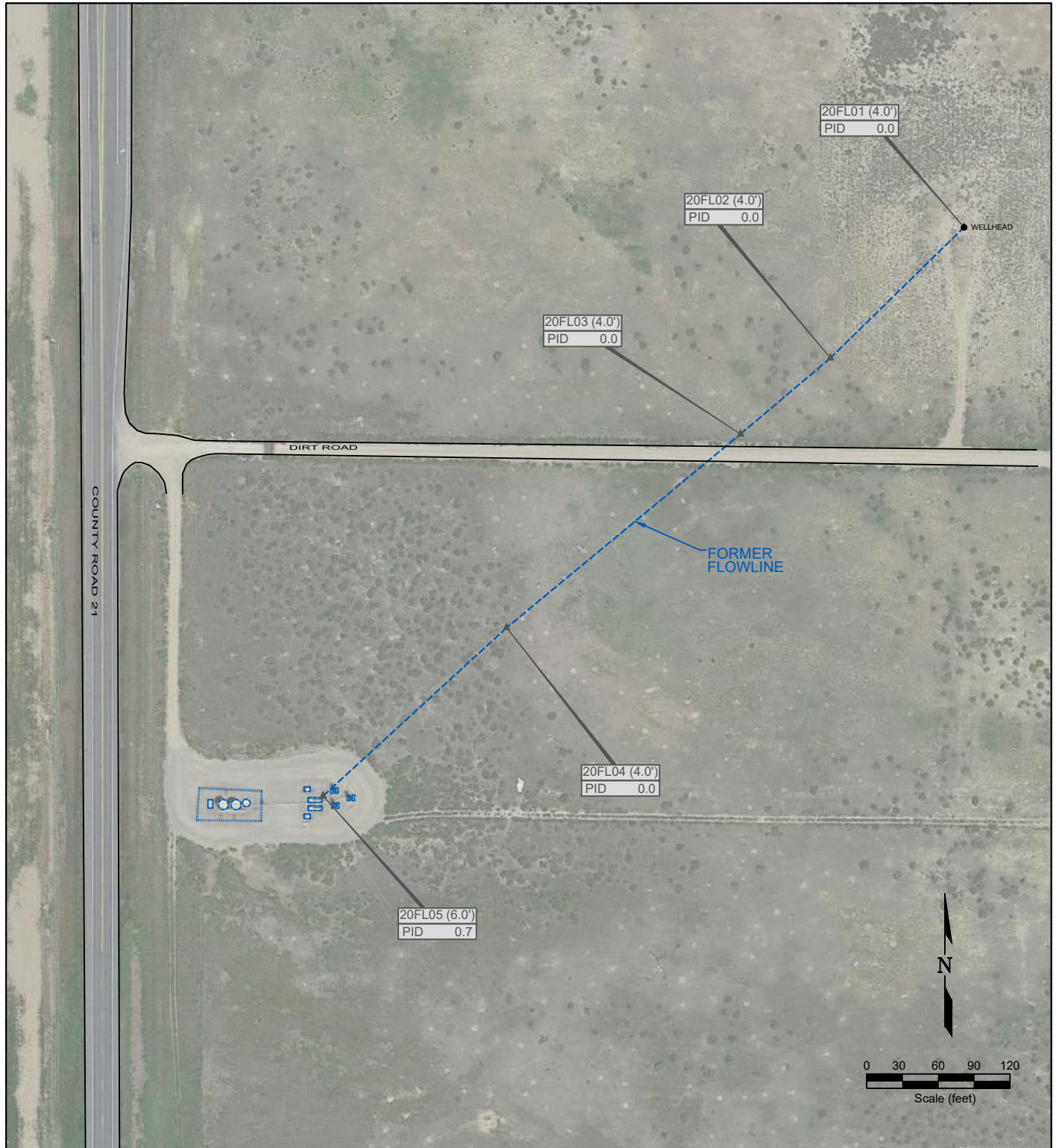
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

NOBLE ENERGY INC - GOLDBERG N 14-20D
 NWSW Sec. 14, T5N, R67W, 6th PM
 Weld County, Colorado
 40.397941°, -104.866134°

Project # CO23-211	API # 05-123-30115	Facility # 301876
Date 10/27/2023	Remediation # 29206	Filename 23211T





LEGEND

- WELLHEAD LOCATION
- ▲ PID READING LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FORMER FACILITY
- FLOW LINE
- CONTAINMENT BERM
- FENCE LINE

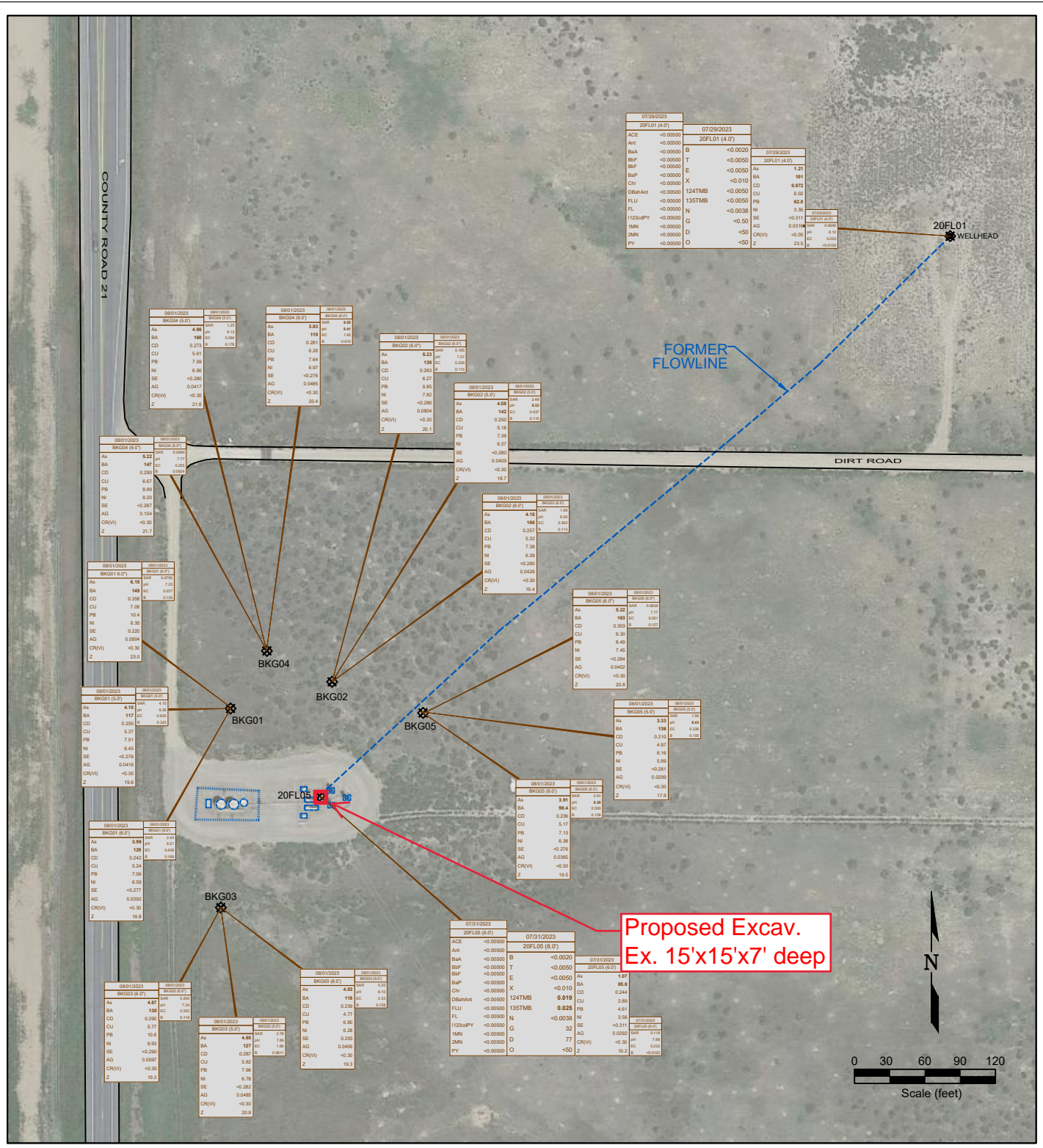
FL01	PID READING LOCATION IDENTIFICATION
PID 0.1	PHOTO IONIZATION DETECTION (ppm)

**Figure 2
SITE MAP**

NOBLE ENERGY INC - GOLDBERG N 14-20D
 NWSW Sec. 14, T5N, R67W, 6th PM
 Weld County, Colorado
 40.397941°, -104.866134°

Project # CO23-211	API # 05-123-30115	Facility # 301876
Date 10/31/23	Remediation # 29206	Filename 23211Q





LEGEND

- WELLHEAD LOCATION
- ABOVE GROUND STORAGE TANK
- ▭ FORMER FACILITY
- FLOW LINE
- ▨ CONTAINMENT BERM
- ▬ FENCE LINE

DATE SAMPLED	SAMPLE ID and DEPTH (ft)	DATE SAMPLED	SAMPLE ID and DEPTH (ft)	DATE SAMPLED	SAMPLE ID and DEPTH (ft)
4/7/2023	FLU1 (0')	07/29/2023	FLU1 (0')	4/7/2023	B (FLU1 (0'))
ACE	<0.00500	ACE	<0.00500	T	<0.00200
As	<0.00500	As	<0.00500	E	<0.00500
Ba	<0.00500	Ba	<0.00500	T	<0.00500
BaP	<0.00500	BaP	<0.00500	124TMB	<0.00500
BaP	<0.00500	BaP	<0.00500	135TMB	<0.00500
Ch	<0.00500	Ch	<0.00500	FLU	<0.00500
DBaA	<0.00500	DBaA	<0.00500	FL	<0.00500
FLU	<0.00500	FLU	<0.00500	1123aPPY	<0.00500
FL	<0.00500	FL	<0.00500	MN	<0.00500
1123aPPY	<0.00500	1123aPPY	<0.00500	MN	<0.00500
1-METHYLNAPHTHALENE	<0.00500	1-METHYLNAPHTHALENE	<0.00500	ZNN	<0.00500
2-METHYLNAPHTHALENE	<0.00500	2-METHYLNAPHTHALENE	<0.00500	PY	<0.00500
PYRENE	<0.00500	PYRENE	<0.00500		

Figure 3
SOIL CHEMISTRY MAP

NOBLE ENERGY INC - GOLDBERG N 14-20D
NWSW Sec. 14, T5N, R67W, 6th PM
Weld County, Colorado
40.397941°, -104.866134°

Project #	API #	Facility #
CO23-211	05-123-30115	301876
Date	Remediation #	Filename
10/31/23	29206	23211Q

Photo Log



Description:

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Photo Log



Description:

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Photo Log



Description:

Photo Log



Description:

Photo Log



Description:

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Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 10, 2023

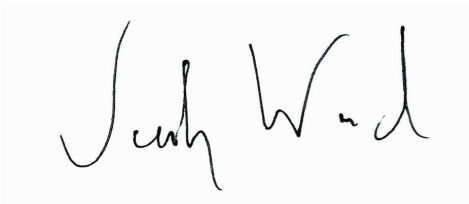
Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549

RE: Noble - Goldberg N14-20D

Work Order #2308022

Enclosed are the results of analyses for samples received by Summit Scientific on 08/01/23 16:53. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN

Project Manager: Paul Henchan

Reported:
08/10/23 11:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
20FL01@4.0'	2308022-01	Soil	07/29/23 00:00	08/01/23 16:53
20FL05@6.0'	2308022-02	Soil	07/31/23 00:00	08/01/23 16:53

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.

S₂

Sample Receipt Checklist

S2 Work Order# 2308022

Client: Fremont Env Client Project ID: Goldberg W 14-~~0~~²⁰

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

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

Temp (°C) 25.20 Thermometer # Ø2

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on ice</u>
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>No project name on jars</u>
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"/>	
<u>Additional Comments (if any):</u>				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

GAC

Custodian Printed Name

9/11/23 16:53

Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:59

20FL01@4.0'
2308022-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/29/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGH0086	08/02/23	08/02/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **07/29/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0268	67.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0386	96.4 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0357	89.2 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/29/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGH0087	08/02/23	08/02/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **07/29/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	12.8	103 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:59

20FL01@4.0'
2308022-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/29/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0072	08/02/23	08/04/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/29/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0156	46.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0146	43.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/29/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGH0088	08/02/23	08/08/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/29/23 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 - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:59

20FL01@4.0'
2308022-01 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.21	0.200	mg/kg dry	1	BGH0100	08/02/23	08/03/23	EPA 6020B
Barium	101	0.400	"	"	"	"	"	"
Cadmium	0.872	0.200	"	"	"	"	"	"
Copper	6.02	0.400	"	"	"	"	"	"
Lead	62.0	0.200	"	"	"	"	"	"
Nickel	3.35	0.400	"	"	"	"	"	"
Selenium	ND	0.311	"	"	"	"	"	"
Silver	0.0316	0.0200	"	"	"	"	"	"
Zinc	23.5	0.400	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/29/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0174	08/04/23	08/04/23	EPA 7196A	

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

Date Sampled: **07/29/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	57.7	0.0598	mg/L dry	1	BGH0164	08/03/23	08/07/23	EPA 6020B	
Magnesium	10.0	0.0598	"	"	"	"	"	"	
Sodium	2.03	0.0598	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/29/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0649	0.00100	units	1	BGH0291	08/08/23	08/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/29/23 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 - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
 Project Manager: Paul Henchan

Reported:
 08/10/23 11:59

20FL01@4.0'
2308022-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.6	%	1	BGH0103	08/02/23	08/02/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/29/23 00:00**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.220	0.0100	mmhos/cm	1	BGH0199	08/04/23	08/04/23	EPA 120.1	

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

Date Sampled: **07/29/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.10		pH Units	1	BGH0200	08/04/23	08/04/23	EPA 9045D	

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Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:59

20FL05@6.0'
2308022-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/31/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGH0086	08/02/23	08/03/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.019	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.025	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	32	0.50	"	"	"	"	"	"	

Date Sampled: **07/31/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0226	56.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0598	150 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0564	141 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/31/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	77	50	mg/kg	1	BGH0087	08/02/23	08/02/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/31/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.9	103 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:59

20FL05@6.0'
2308022-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/31/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0072	08/02/23	08/05/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/31/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0169	50.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0171	51.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/31/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGH0088	08/02/23	08/08/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/31/23 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 - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:59

20FL05@6.0'
2308022-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.07	0.200	mg/kg dry	1	BGH0100	08/02/23	08/03/23	EPA 6020B
Barium	85.6	0.400	"	"	"	"	"	"
Cadmium	0.244	0.200	"	"	"	"	"	"
Copper	2.89	0.400	"	"	"	"	"	"
Lead	4.61	0.200	"	"	"	"	"	"
Nickel	3.56	0.400	"	"	"	"	"	"
Selenium	ND	0.311	"	"	"	"	"	"
Silver	0.0292	0.0200	"	"	"	"	"	"
Zinc	10.2	0.400	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/31/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0174	08/04/23	08/04/23	EPA 7196A	

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

Date Sampled: **07/31/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	68.5	0.0599	mg/L dry	1	BGH0164	08/03/23	08/07/23	EPA 6020B	
Magnesium	16.7	0.0599	"	"	"	"	"	"	
Sodium	4.20	0.0599	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/31/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.118	0.00100	units	1	BGH0291	08/08/23	08/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/31/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 PO Box 1289
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Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
 Project Manager: Paul Henchan

Reported:
 08/10/23 11:59

20FL05@6.0'
2308022-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.5	%	1	BGH0103	08/02/23	08/02/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/31/23 00:00**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.232	0.0100	mmhos/cm	1	BGH0199	08/04/23	08/04/23	EPA 120.1	

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

Date Sampled: **07/31/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.88		pH Units	1	BGH0200	08/04/23	08/04/23	EPA 9045D	

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Wellington CO, 80549

Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:59

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BGH0086 - EPA 5030 Soil MS

Blank (BGH0086-BLK1)

Prepared & Analyzed: 08/02/23

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0324		"	0.0400		81.0	50-150			
<i>Surrogate: Toluene-d8</i>	0.0381		"	0.0400		95.2	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0356		"	0.0400		88.9	50-150			

LCS (BGH0086-BS1)

Prepared & Analyzed: 08/02/23

Benzene	0.127	0.0020	mg/kg	0.125	ND	102	70-130			
Toluene	0.127	0.0050	"	0.125	ND	101	70-130			
Ethylbenzene	0.155	0.0050	"	0.125	ND	124	70-130			
m,p-Xylene	0.306	0.010	"	0.250	ND	122	70-130			
o-Xylene	0.136	0.0050	"	0.125	ND	109	70-130			
1,2,4-Trimethylbenzene	0.146	0.0050	"	0.125	ND	117	70-130			
1,3,5-Trimethylbenzene	0.144	0.0050	"	0.125	ND	116	70-130			
Naphthalene	0.0944	0.0038	"	0.125	ND	75.5	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0269		"	0.0400		67.4	50-150			
<i>Surrogate: Toluene-d8</i>	0.0383		"	0.0400		95.8	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0372		"	0.0400		93.0	50-150			

Matrix Spike (BGH0086-MS1)

Source: 2307600-03

Prepared & Analyzed: 08/02/23

Benzene	0.118	0.0020	mg/kg	0.125	ND	94.8	70-130			
Toluene	0.117	0.0050	"	0.125	ND	93.8	70-130			
Ethylbenzene	0.141	0.0050	"	0.125	ND	113	70-130			
m,p-Xylene	0.270	0.010	"	0.250	ND	108	70-130			
o-Xylene	0.127	0.0050	"	0.125	ND	101	70-130			
1,2,4-Trimethylbenzene	0.131	0.0050	"	0.125	ND	105	70-130			
1,3,5-Trimethylbenzene	0.129	0.0050	"	0.125	ND	103	70-130			
Naphthalene	0.0906	0.0038	"	0.125	ND	72.5	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0295		"	0.0400		73.8	50-150			
<i>Surrogate: Toluene-d8</i>	0.0379		"	0.0400		94.7	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0357		"	0.0400		89.3	50-150			

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Fremont Environmental
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 Wellington CO, 80549

Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
 Project Manager: Paul Henchan

Reported:
 08/10/23 11:59

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 BGH0086 - EPA 5030 Soil MS

Matrix Spike Dup (BGH0086-MSD1)	Source: 2307600-03			Prepared & Analyzed: 08/02/23						
Benzene	0.121	0.0020	mg/kg	0.125	ND	96.9	70-130	2.18	30	
Toluene	0.121	0.0050	"	0.125	ND	96.9	70-130	3.22	30	
Ethylbenzene	0.145	0.0050	"	0.125	ND	116	70-130	2.82	30	
m,p-Xylene	0.279	0.010	"	0.250	ND	112	70-130	3.20	30	
o-Xylene	0.128	0.0050	"	0.125	ND	102	70-130	0.872	30	
1,2,4-Trimethylbenzene	0.131	0.0050	"	0.125	ND	105	70-130	0.160	30	
1,3,5-Trimethylbenzene	0.130	0.0050	"	0.125	ND	104	70-130	0.857	30	
Naphthalene	0.0898	0.0038	"	0.125	ND	71.8	70-130	0.865	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0298</i>		<i>"</i>	<i>0.0400</i>		<i>74.6</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0377</i>		<i>"</i>	<i>0.0400</i>		<i>94.2</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0380</i>		<i>"</i>	<i>0.0400</i>		<i>95.0</i>	<i>50-150</i>			

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 PO Box 1289
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Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
 Project Manager: Paul Henchan

Reported:
 08/10/23 11:59

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGH0087 - EPA 3550A

Blank (BGH0087-BLK1)

Prepared & Analyzed: 08/02/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	12.8		"	12.5	102	30-150					

LCS (BGH0087-BS1)

Prepared & Analyzed: 08/02/23

C10-C28 (DRO)	443	50	mg/kg	500	88.6	70-130					
Surrogate: <i>o</i> -Terphenyl	12.4		"	12.5	99.5	30-150					

Matrix Spike (BGH0087-MS1)

Source: 2307600-03

Prepared & Analyzed: 08/02/23

C10-C28 (DRO)	418	50	mg/kg	500	9.55	81.6	70-130				
Surrogate: <i>o</i> -Terphenyl	12.3		"	12.5	98.6	30-150					

Matrix Spike Dup (BGH0087-MSD1)

Source: 2307600-03

Prepared & Analyzed: 08/02/23

C10-C28 (DRO)	444	50	mg/kg	500	9.55	86.8	70-130	6.10	20		
Surrogate: <i>o</i> -Terphenyl	12.5		"	12.5	100	30-150					

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PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:59

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 BGH0072 - EPA 5030 Soil MS

Blank (BGH0072-BLK1)

Prepared: 08/02/23 Analyzed: 08/04/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0397</i>		"	<i>0.0333</i>		<i>119</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0321</i>		"	<i>0.0333</i>		<i>96.4</i>	<i>40-150</i>			

LCS (BGH0072-BS1)

Prepared: 08/02/23 Analyzed: 08/04/23

Acenaphthene	0.0325	0.00500	mg/kg	0.0333		97.5	31-137			
Anthracene	0.0319	0.00500	"	0.0333		95.7	30-120			
Benzo (a) anthracene	0.0278	0.00500	"	0.0333		83.5	30-120			
Benzo (a) pyrene	0.0388	0.00500	"	0.0333		116	30-120			
Benzo (b) fluoranthene	0.0391	0.00500	"	0.0333		117	30-120			
Benzo (k) fluoranthene	0.0359	0.00500	"	0.0333		108	30-120			
Chrysene	0.0314	0.00500	"	0.0333		94.3	30-120			
Dibenz (a,h) anthracene	0.0391	0.00500	"	0.0333		117	30-120			
Fluoranthene	0.0334	0.00500	"	0.0333		100	30-120			
Fluorene	0.0325	0.00500	"	0.0333		97.6	30-120			
Indeno (1,2,3-cd) pyrene	0.0387	0.00500	"	0.0333		116	30-120			
Pyrene	0.0324	0.00500	"	0.0333		97.2	35-142			
1-Methylnaphthalene	0.0291	0.00500	"	0.0333		87.3	35-142			
2-Methylnaphthalene	0.0350	0.00500	"	0.0333		105	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0269</i>		"	<i>0.0333</i>		<i>80.7</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0339</i>		"	<i>0.0333</i>		<i>102</i>	<i>40-150</i>			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:59

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 BGH0072 - EPA 5030 Soil MS

Matrix Spike (BGH0072-MS1)	Source: 2308020-01			Prepared: 08/02/23 Analyzed: 08/04/23						
Acenaphthene	0.0189	0.00500	mg/kg	0.0333	ND	56.7	31-137			
Anthracene	0.0218	0.00500	"	0.0333	0.00946	36.9	30-120			
Benzo (a) anthracene	0.0181	0.00500	"	0.0333	0.0109	21.7	30-120			QM-01
Benzo (a) pyrene	0.0258	0.00500	"	0.0333	0.0118	42.0	30-120			
Benzo (b) fluoranthene	0.0341	0.00500	"	0.0333	0.0203	41.5	30-120			
Benzo (k) fluoranthene	0.0287	0.00500	"	0.0333	0.00761	63.2	30-120			
Chrysene	0.0225	0.00500	"	0.0333	0.0135	26.9	30-120			QM-01
Dibenz (a,h) anthracene	0.0234	0.00500	"	0.0333	ND	70.1	30-120			
Fluoranthene	0.0357	0.00500	"	0.0333	0.0352	1.48	30-120			QM-01
Fluorene	0.0192	0.00500	"	0.0333	ND	57.5	30-120			
Indeno (1,2,3-cd) pyrene	0.0206	0.00500	"	0.0333	0.00983	32.3	30-120			
Pyrene	0.0303	0.00500	"	0.0333	0.0266	11.1	35-142			QM-01
1-Methylnaphthalene	0.0133	0.00500	"	0.0333	ND	40.0	15-130			
2-Methylnaphthalene	0.0190	0.00500	"	0.0333	ND	57.0	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0181</i>		"	<i>0.0333</i>		<i>54.2</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0182</i>		"	<i>0.0333</i>		<i>54.5</i>	<i>40-150</i>			

Matrix Spike Dup (BGH0072-MSD1)	Source: 2308020-01			Prepared: 08/02/23 Analyzed: 08/04/23						
Acenaphthene	0.0200	0.00500	mg/kg	0.0333	ND	60.0	31-137	5.64	30	
Anthracene	0.0334	0.00500	"	0.0333	0.00946	71.9	30-120	42.2	30	QM-01
Benzo (a) anthracene	0.0374	0.00500	"	0.0333	0.0109	79.6	30-120	69.7	30	QM-01
Benzo (a) pyrene	0.0473	0.00500	"	0.0333	0.0118	107	30-120	59.0	30	QM-01
Benzo (b) fluoranthene	0.0658	0.00500	"	0.0333	0.0203	137	30-120	63.6	30	QM-01
Benzo (k) fluoranthene	0.0405	0.00500	"	0.0333	0.00761	98.8	30-120	34.3	30	QM-01
Chrysene	0.0456	0.00500	"	0.0333	0.0135	96.0	30-120	67.8	30	QM-01
Dibenz (a,h) anthracene	0.0200	0.00500	"	0.0333	ND	59.9	30-120	15.8	30	
Fluoranthene	0.0934	0.00500	"	0.0333	0.0352	175	30-120	89.4	30	QM-01
Fluorene	0.0218	0.00500	"	0.0333	ND	65.2	30-120	12.6	30	
Indeno (1,2,3-cd) pyrene	0.0263	0.00500	"	0.0333	0.00983	49.5	30-120	24.4	30	
Pyrene	0.0762	0.00500	"	0.0333	0.0266	149	35-142	86.1	30	QM-01
1-Methylnaphthalene	0.0230	0.00500	"	0.0333	ND	68.9	15-130	52.9	50	QM-01
2-Methylnaphthalene	0.0150	0.00500	"	0.0333	ND	45.1	15-130	23.3	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0140</i>		"	<i>0.0333</i>		<i>42.0</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0152</i>		"	<i>0.0333</i>		<i>45.5</i>	<i>40-150</i>			

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
 Project Manager: Paul Henchan

Reported:
 08/10/23 11:59

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 BGH0088 - EPA 3050B

Blank (BGH0088-BLK1)

Prepared: 08/02/23 Analyzed: 08/08/23

Boron ND 0.0100 mg/L

LCS (BGH0088-BS1)

Prepared: 08/02/23 Analyzed: 08/08/23

Boron 4.25 0.0100 mg/L 5.00 85.0 80-120

Duplicate (BGH0088-DUP1)

Source: 2308017-01

Prepared: 08/02/23 Analyzed: 08/08/23

Boron 0.224 0.0100 mg/L 0.253 12.1 20

Matrix Spike (BGH0088-MS1)

Source: 2308017-01

Prepared: 08/02/23 Analyzed: 08/08/23

Boron 5.47 0.0100 mg/L 5.00 0.253 104 75-125

Matrix Spike Dup (BGH0088-MSD1)

Source: 2308017-01

Prepared: 08/02/23 Analyzed: 08/08/23

Boron 5.09 0.0100 mg/L 5.00 0.253 96.8 75-125 7.17 25

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:59

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 BGH0100 - EPA 3050B

Blank (BGH0100-BLK1)

Prepared: 08/02/23 Analyzed: 08/03/23

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

LCS (BGH0100-BS1)

Prepared: 08/02/23 Analyzed: 08/03/23

Arsenic	36.9	0.200	mg/kg wet	40.0	92.2	80-120
Barium	32.0	0.400	"	40.0	80.1	80-120
Cadmium	1.64	0.200	"	2.00	81.9	80-120
Copper	35.8	0.400	"	40.0	89.5	80-120
Lead	16.0	0.200	"	20.0	80.2	80-120
Nickel	35.8	0.400	"	40.0	89.4	80-120
Selenium	3.81	0.260	"	4.00	95.1	80-120
Silver	1.62	0.0200	"	2.00	81.2	80-120
Zinc	37.1	0.400	"	40.0	92.6	80-120

Duplicate (BGH0100-DUP1)

Source: 2308022-01

Prepared: 08/02/23 Analyzed: 08/03/23

Arsenic	1.17	0.200	mg/kg dry	1.21	3.63	20	
Barium	93.1	0.400	"	101	7.82	20	
Cadmium	0.533	0.200	"	0.872	48.1	20	QR-01
Copper	5.34	0.400	"	6.02	12.0	20	
Lead	43.6	0.200	"	62.0	34.9	20	QR-04
Nickel	3.15	0.400	"	3.35	6.08	20	
Selenium	ND	0.311	"	ND		20	
Silver	0.0306	0.0200	"	0.0316	3.08	20	
Zinc	20.4	0.400	"	23.5	14.4	20	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
 Project Manager: Paul Henchan

Reported:
 08/10/23 11:59

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 BGH0100 - EPA 3050B

Matrix Spike (BGH0100-MS1)

Source: 2308022-01

Prepared: 08/02/23 Analyzed: 08/03/23

Arsenic	14.4	0.200	mg/kg dry	47.8	1.21	27.6	75-125				QM-07
Barium	128	0.400	"	47.8	101	56.5	75-125				QM-07
Cadmium	1.67	0.200	"	2.39	0.872	33.4	75-125				QM-07
Copper	16.7	0.400	"	47.8	6.02	22.3	75-125				QM-07
Lead	32.7	0.200	"	23.9	62.0	NR	75-125				QM-07
Nickel	16.8	0.400	"	47.8	3.35	28.1	75-125				QM-07
Selenium	3.04	0.311	"	4.78	ND	63.5	75-125				QM-07
Silver	1.30	0.0200	"	2.39	0.0316	53.1	75-125				QM-07
Zinc	29.8	0.400	"	47.8	23.5	13.1	75-125				QM-07

Matrix Spike Dup (BGH0100-MSD1)

Source: 2308022-01

Prepared: 08/02/23 Analyzed: 08/03/23

Arsenic	14.1	0.200	mg/kg dry	47.8	1.21	27.0	75-125	1.88	25		QM-07
Barium	120	0.400	"	47.8	101	40.2	75-125	6.29	25		QM-07
Cadmium	1.82	0.200	"	2.39	0.872	39.8	75-125	8.82	25		QM-07
Copper	19.1	0.400	"	47.8	6.02	27.4	75-125	13.9	25		QM-07
Lead	60.0	0.200	"	23.9	62.0	NR	75-125	58.9	25		QM-07
Nickel	16.4	0.400	"	47.8	3.35	27.4	75-125	2.07	25		QM-07
Selenium	3.39	0.311	"	4.78	ND	71.0	75-125	11.2	25		QM-07
Silver	1.34	0.0200	"	2.39	0.0316	54.8	75-125	3.04	25		QM-07
Zinc	37.7	0.400	"	47.8	23.5	29.6	75-125	23.3	25		QM-07

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
 Project Manager: Paul Henchan

Reported:
 08/10/23 11:59

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BGH0174 - 3060A Mod

Blank (BGH0174-BLK1)

Prepared & Analyzed: 08/04/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGH0174-BS1)

Prepared & Analyzed: 08/04/23

Chromium, Hexavalent 23.4 0.30 mg/kg wet 25.0 93.6 80-120

Duplicate (BGH0174-DUP1)

Source: 2308019-01

Prepared & Analyzed: 08/04/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGH0174-MS1)

Source: 2308019-01

Prepared & Analyzed: 08/04/23

Chromium, Hexavalent 27.3 0.30 mg/kg dry 30.2 ND 90.4 75-125

Matrix Spike Dup (BGH0174-MSD1)

Source: 2308019-01

Prepared & Analyzed: 08/04/23

Chromium, Hexavalent 27.9 0.30 mg/kg dry 30.2 ND 92.4 75-125 2.19 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
 Project Manager: Paul Henchan

Reported:
 08/10/23 11:59

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 BGH0164 - General Preparation

Blank (BGH0164-BLK1)

Prepared: 08/03/23 Analyzed: 08/07/23

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

LCS (BGH0164-BS1)

Prepared: 08/03/23 Analyzed: 08/07/23

Calcium	4.80	0.0500	mg/L wet	5.00		96.0	70-130			
Magnesium	6.45	0.0500	"	5.00		129	70-130			
Sodium	6.27	0.0500	"	5.00		125	70-130			

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
 Project Manager: Paul Henchan

Reported:
 08/10/23 11:59

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

Summit Scientific

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

Batch BGH0103 - General Preparation


Duplicate (BGH0103-DUP1)

Source: 2307596-01

Prepared & Analyzed: 08/02/23

% Solids	84.1		%		82.9			1.45	20	
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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
 Project Manager: Paul Henchan

Reported:
 08/10/23 11:59

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 BGH0199 - General Preparation

Blank (BGH0199-BLK1)

Prepared & Analyzed: 08/04/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGH0199-BS1)

Prepared & Analyzed: 08/04/23

Specific Conductance (EC) 0.157 0.0100 mmhos/cm 0.150 105 95-105

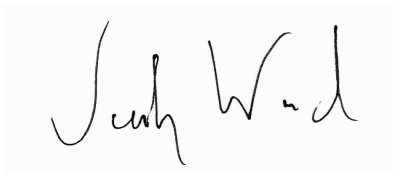
Duplicate (BGH0199-DUP1)

Source: 2308019-01

Prepared & Analyzed: 08/04/23

Specific Conductance (EC) 0.275 0.0100 mmhos/cm 0.274 0.437 20

Summit Scientific



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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
 Project Manager: Paul Henchan

Reported:
 08/10/23 11:59

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 BGH0200 - General Preparation

LCS (BGH0200-BS1)

Prepared & Analyzed: 08/04/23

pH 9.08 pH Units 9.18 98.9 95-105


Duplicate (BGH0200-DUP1)

Source: 2308019-01

Prepared & Analyzed: 08/04/23

pH 7.90 pH Units 8.01 1.38 20

Summit Scientific



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg N14-20D

Project Number: UWRWE-A2139-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:59

Notes and Definitions

- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- 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

August 10, 2023

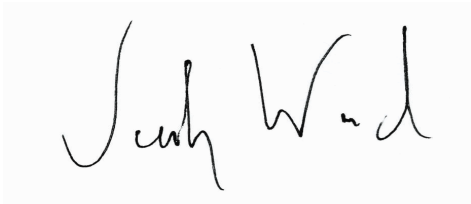
Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549

RE: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Work Order #2308016

Enclosed are the results of analyses for samples received by Summit Scientific on 08/01/23 16:49. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BKG01@6.0"	2308016-01	Soil	08/01/23 00:00	08/01/23 16:49
BKG01@5.0'	2308016-02	Soil	08/01/23 00:00	08/01/23 16:49
BKG01@6.0'	2308016-03	Soil	08/01/23 00:00	08/01/23 16:49
BKG02@6.0"	2308016-04	Soil	08/01/23 00:00	08/01/23 16:49
BKG02@5.0'	2308016-05	Soil	08/01/23 00:00	08/01/23 16:49
BKG02@6.0'	2308016-06	Soil	08/01/23 00:00	08/01/23 16:49
BKG03@6.0"	2308016-07	Soil	08/01/23 00:00	08/01/23 16:49
BKG03@5.0'	2308016-08	Soil	08/01/23 00:00	08/01/23 16:49
BKG03@6.0'	2308016-09	Soil	08/01/23 00:00	08/01/23 16:49
BKG04@6.0"	2308016-10	Soil	08/01/23 00:00	08/01/23 16:49
BKG04@5.0'	2308016-11	Soil	08/01/23 00:00	08/01/23 16:49
BKG04@6.0'	2308016-12	Soil	08/01/23 00:00	08/01/23 16:49
BKG05@6.0"	2308016-13	Soil	08/01/23 00:00	08/01/23 16:49
BKG05@5.0'	2308016-14	Soil	08/01/23 00:00	08/01/23 16:49
BKG05@6.0'	2308016-15	Soil	08/01/23 00:00	08/01/23 16:49

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.

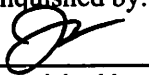
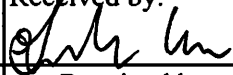
SUMMIT SCIENTIFIC

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

Lab ID
2308014
Page **1** of **1**

Send Data To:		Send Invoice To:	
Client: Fremont Env	Project Manager: Paul Henehan	Company: Noble	
Address:	E-Mail: Paulh@fremontenv.com	Project Name/Location: Goldberg N 14-25	
City/State/Zip:	jeff@fremontenv.com Ethanh@fremontenv.com	AFE#:	
Phone:	Project Name: Goldberg TSN-R67W-S14 L01 (TB)	PO/Billing Codes: UWRWE-A2142-ARN	
Sampler Name: JG	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"	8/1/23		1			X			X			X	X	
2	BK601@5.0'														
3	BK601@6.0'														
4	BK602@6.0"														
5	BK602@5.0'														
6	BK602@6.0'														
7	BK603@6.0"														
8	BK603@5.0'														
9	BK603@6.0'														
10	BK604@6.0"														
11	BK604@5.0'														
12	BK604@6.0'														
13	BK605@6.0"														
14	BK605@5.0'														
15	BK605@6.0'														

Relinquished by: 	Date/Time: 8/1/23	Received by: 	Date/Time: 8/1/23 16:49	TAT Business Days	Field DO	Notes: Bill to Noble
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Standard	X Field Turb.	
Temperature Upon Receipt: 25.50C	Corrected Temperature	IR gun #: 82	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 230801B

Client: Fremont ENU Client Project ID: Goldberg TSN-R67W-S14 Col CTB

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

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

Temp (°C) 25.5^oC Thermometer # 02

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on ice</u>
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>no project name on jars</u>
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.

GAL
Custodian Printed Name

8/1/23 16:49
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)
Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG01@6.0"
2308016-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.130	0.0100	mg/L	1	BGH0085	08/02/23	08/08/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	6.15	0.200	mg/kg dry	1	BGH0062	08/02/23	08/08/23	EPA 6020B	
Barium	149	0.400	"	"	"	"	"	"	
Cadmium	0.358	0.200	"	"	"	"	"	"	
Copper	7.08	0.400	"	"	"	"	"	"	
Lead	10.4	0.200	"	"	"	"	"	"	
Nickel	8.35	0.400	"	"	"	"	"	"	
Selenium	0.220	0.289	"	"	"	"	"	"	
Silver	0.0904	0.0200	"	"	"	"	"	"	
Zinc	23.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0151	08/03/23	08/03/23	EPA 7196A	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	46.1	0.0557	mg/L dry	1	BGH0081	08/02/23	08/07/23	EPA 6020B	
Magnesium	9.93	0.0557	"	"	"	"	"	"	
Sodium	2.17	0.0557	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG01@6.0"
2308016-01 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0756	0.00100	units	1	BGH0294	08/08/23	08/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.8		%	1	BGH0089	08/02/23	08/02/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.257	0.0100	mmhos/cm	1	BGH0155	08/03/23	08/03/23	EPA 120.1	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.25		pH Units	1	BGH0154	08/03/23	08/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG01@5.0'
2308016-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	0.323	0.0100		mg/L	1	BGH0085	08/02/23	08/08/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	4.15	0.200		mg/kg dry	1	BGH0062	08/02/23	08/08/23	EPA 6020B	
Barium	117	0.400		"	"	"	"	"	"	
Cadmium	0.230	0.200		"	"	"	"	"	"	
Copper	5.37	0.400		"	"	"	"	"	"	
Lead	7.51	0.200		"	"	"	"	"	"	
Nickel	6.45	0.400		"	"	"	"	"	"	
Selenium	ND	0.276		"	"	"	"	"	"	
Silver	0.0416	0.0200		"	"	"	"	"	"	
Zinc	19.6	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGH0151	08/03/23	08/03/23	EPA 7196A	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	36.7	0.0531		mg/L dry	1	BGH0081	08/02/23	08/07/23	EPA 6020B	
Magnesium	12.5	0.0531		"	"	"	"	"	"	
Sodium	114	0.0531		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG01@5.0'
2308016-02 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.15	0.00100	units	1	BGH0294	08/08/23	08/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.1		%	1	BGH0089	08/02/23	08/02/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.625	0.0100	mmhos/cm	1	BGH0155	08/03/23	08/03/23	EPA 120.1	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.28		pH Units	1	BGH0154	08/03/23	08/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG01@6.0'
2308016-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	0.189	0.0100	mg/L	1	BGH0085	08/02/23	08/08/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.99	0.200	mg/kg dry	1	BGH0062	08/02/23	08/08/23	EPA 6020B	
Barium	129	0.400	"	"	"	"	"	"	
Cadmium	0.242	0.200	"	"	"	"	"	"	
Copper	5.24	0.400	"	"	"	"	"	"	
Lead	7.06	0.200	"	"	"	"	"	"	
Nickel	6.59	0.400	"	"	"	"	"	"	
Selenium	ND	0.277	"	"	"	"	"	"	
Silver	0.0392	0.0200	"	"	"	"	"	"	
Zinc	19.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0151	08/03/23	08/03/23	EPA 7196A	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	43.9	0.0532	mg/L dry	1	BGH0081	08/02/23	08/07/23	EPA 6020B	
Magnesium	14.3	0.0532	"	"	"	"	"	"	
Sodium	72.4	0.0532	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)
Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG01@6.0'
2308016-03 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.43	0.00100	units	1	BGH0294	08/08/23	08/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.9		%	1	BGH0089	08/02/23	08/02/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.436	0.0100	mmhos/cm	1	BGH0155	08/03/23	08/03/23	EPA 120.1	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.21		pH Units	1	BGH0154	08/03/23	08/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG02@6.0"
2308016-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	0.115	0.0100	mg/L	1	BGH0085	08/02/23	08/08/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	5.23	0.200	mg/kg dry	1	BGH0062	08/02/23	08/08/23	EPA 6020B	
Barium	130	0.400	"	"	"	"	"	"	
Cadmium	0.283	0.200	"	"	"	"	"	"	
Copper	6.27	0.400	"	"	"	"	"	"	
Lead	9.85	0.200	"	"	"	"	"	"	
Nickel	7.82	0.400	"	"	"	"	"	"	
Selenium	ND	0.286	"	"	"	"	"	"	
Silver	0.0804	0.0200	"	"	"	"	"	"	
Zinc	20.1	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0151	08/03/23	08/03/23	EPA 7196A	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	28.7	0.0549	mg/L dry	1	BGH0081	08/02/23	08/07/23	EPA 6020B	
Magnesium	10.4	0.0549	"	"	"	"	"	"	
Sodium	4.55	0.0549	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)
 Project Number: UWRWE-A2142-ABN
 Project Manager: Paul Henchan

Reported:
 08/10/23 11:17

BKG02@6.0"
2308016-04 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.185	0.00100	units	1	BGH0294	08/08/23	08/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.0		%	1	BGH0089	08/02/23	08/02/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.239	0.0100	mmhos/cm	1	BGH0155	08/03/23	08/03/23	EPA 120.1	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.57		pH Units	1	BGH0154	08/03/23	08/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG02@5.0'
2308016-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	0.110	0.0100	mg/L	1	BGH0085	08/02/23	08/08/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.08	0.200	mg/kg dry	1	BGH0062	08/02/23	08/08/23	EPA 6020B	
Barium	142	0.400	"	"	"	"	"	"	
Cadmium	0.250	0.200	"	"	"	"	"	"	
Copper	5.18	0.400	"	"	"	"	"	"	
Lead	7.38	0.200	"	"	"	"	"	"	
Nickel	6.37	0.400	"	"	"	"	"	"	
Selenium	ND	0.280	"	"	"	"	"	"	
Silver	0.0409	0.0200	"	"	"	"	"	"	
Zinc	18.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0151	08/03/23	08/03/23	EPA 7196A	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	23.7	0.0538	mg/L dry	1	BGH0081	08/02/23	08/07/23	EPA 6020B	
Magnesium	17.4	0.0538	"	"	"	"	"	"	
Sodium	65.5	0.0538	"	"	"	"	"	"	

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 - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG02@5.0'
2308016-05 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.49	0.00100	units	1	BGH0294	08/08/23	08/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.0		%	1	BGH0089	08/02/23	08/02/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.437	0.0100	mmhos/cm	1	BGH0155	08/03/23	08/03/23	EPA 120.1	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.32		pH Units	1	BGH0154	08/03/23	08/03/23	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 - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG02@6.0'
2308016-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	0.113	0.0100	mg/L	1	BGH0085	08/02/23	08/08/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.18	0.200	mg/kg dry	1	BGH0062	08/02/23	08/08/23	EPA 6020B	
Barium	166	0.400	"	"	"	"	"	"	
Cadmium	0.257	0.200	"	"	"	"	"	"	
Copper	5.32	0.400	"	"	"	"	"	"	
Lead	7.38	0.200	"	"	"	"	"	"	
Nickel	6.39	0.400	"	"	"	"	"	"	
Selenium	ND	0.280	"	"	"	"	"	"	
Silver	0.0426	0.0200	"	"	"	"	"	"	
Zinc	19.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0151	08/03/23	08/03/23	EPA 7196A	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	24.4	0.0538	mg/L dry	1	BGH0081	08/02/23	08/07/23	EPA 6020B	
Magnesium	19.2	0.0538	"	"	"	"	"	"	
Sodium	54.0	0.0538	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)
Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG02@6.0'
2308016-06 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.99	0.00100	units	1	BGH0294	08/08/23	08/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.9		%	1	BGH0089	08/02/23	08/02/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.393	0.0100	mmhos/cm	1	BGH0155	08/03/23	08/03/23	EPA 120.1	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.26		pH Units	1	BGH0154	08/03/23	08/03/23	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 - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG03@6.0"
2308016-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	0.118	0.0100		mg/L	1	BGH0085	08/02/23	08/08/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	4.67	0.200		mg/kg dry	1	BGH0062	08/02/23	08/08/23	EPA 6020B	
Barium	130	0.400		"	"	"	"	"	"	
Cadmium	0.290	0.200		"	"	"	"	"	"	
Copper	5.77	0.400		"	"	"	"	"	"	
Lead	10.8	0.200		"	"	"	"	"	"	
Nickel	6.93	0.400		"	"	"	"	"	"	
Selenium	ND	0.290		"	"	"	"	"	"	
Silver	0.0597	0.0200		"	"	"	"	"	"	
Zinc	19.3	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGH0151	08/03/23	08/03/23	EPA 7196A	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	23.8	0.0557		mg/L dry	1	BGH0081	08/02/23	08/07/23	EPA 6020B	
Magnesium	8.87	0.0557		"	"	"	"	"	"	
Sodium	4.51	0.0557		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)
Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG03@6.0"
2308016-07 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.200	0.00100	units	1	BGH0294	08/08/23	08/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.8		%	1	BGH0089	08/02/23	08/02/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.252	0.0100	mmhos/cm	1	BGH0155	08/03/23	08/03/23	EPA 120.1	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.24		pH Units	1	BGH0154	08/03/23	08/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG03@5.0'
2308016-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	0.0811	0.0100		mg/L	1	BGH0085	08/02/23	08/08/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	4.65	0.200		mg/kg dry	1	BGH0062	08/02/23	08/08/23	EPA 6020B	
Barium	127	0.400		"	"	"	"	"	"	
Cadmium	0.287	0.200		"	"	"	"	"	"	
Copper	5.82	0.400		"	"	"	"	"	"	
Lead	7.96	0.200		"	"	"	"	"	"	
Nickel	6.78	0.400		"	"	"	"	"	"	
Selenium	ND	0.282		"	"	"	"	"	"	
Silver	0.0485	0.0200		"	"	"	"	"	"	
Zinc	20.9	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGH0151	08/03/23	08/03/23	EPA 7196A	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	67.6	0.0542		mg/L dry	1	BGH0081	08/02/23	08/07/23	EPA 6020B	
Magnesium	147	0.0542		"	"	"	"	"	"	
Sodium	178	0.0542		"	"	"	"	"	"	

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 - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
 Project Manager: Paul Henchan

Reported:
 08/10/23 11:17

BKG03@5.0'
2308016-08 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.78	0.00100	units	1	BGH0294	08/08/23	08/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.3		%	1	BGH0089	08/02/23	08/02/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.86	0.0100	mmhos/cm	1	BGH0155	08/03/23	08/03/23	EPA 120.1	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.89		pH Units	1	BGH0154	08/03/23	08/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG03@6.0'
2308016-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	0.158	0.0100		mg/L	1	BGH0085	08/02/23	08/08/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	4.03	0.200		mg/kg dry	1	BGH0062	08/02/23	08/08/23	EPA 6020B	
Barium	118	0.400		"	"	"	"	"	"	
Cadmium	0.239	0.200		"	"	"	"	"	"	
Copper	4.77	0.400		"	"	"	"	"	"	
Lead	6.80	0.200		"	"	"	"	"	"	
Nickel	6.28	0.400		"	"	"	"	"	"	
Selenium	0.255	0.278		"	"	"	"	"	"	
Silver	0.0406	0.0200		"	"	"	"	"	"	
Zinc	19.3	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGH0151	08/03/23	08/03/23	EPA 7196A	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	51.5	0.0535		mg/L dry	1	BGH0081	08/02/23	08/07/23	EPA 6020B	
Magnesium	146	0.0535		"	"	"	"	"	"	
Sodium	324	0.0535		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG03@6.0'
2308016-09 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.22	0.00100	units	1	BGH0294	08/08/23	08/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.5		%	1	BGH0089	08/02/23	08/02/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.33	0.0100	mmhos/cm	1	BGH0155	08/03/23	08/03/23	EPA 120.1	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.10		pH Units	1	BGH0154	08/03/23	08/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)
Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG04@6.0"
2308016-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	0.0624	0.0100		mg/L	1	BGH0085	08/02/23	08/08/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	5.22	0.200		mg/kg dry	1	BGH0062	08/02/23	08/08/23	EPA 6020B	
Barium	147	0.400		"	"	"	"	"	"	
Cadmium	0.290	0.200		"	"	"	"	"	"	
Copper	6.67	0.400		"	"	"	"	"	"	
Lead	8.89	0.200		"	"	"	"	"	"	
Nickel	8.20	0.400		"	"	"	"	"	"	
Selenium	ND	0.287		"	"	"	"	"	"	
Silver	0.104	0.0200		"	"	"	"	"	"	
Zinc	21.7	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGH0151	08/03/23	08/03/23	EPA 7196A	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	73.5	0.0551		mg/L dry	1	BGH0081	08/02/23	08/07/23	EPA 6020B	
Magnesium	11.7	0.0551		"	"	"	"	"	"	
Sodium	3.32	0.0551		"	"	"	"	"	"	

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 - Goldberg T5N-R67W-S14 L01 (TB)
Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG04@6.0"
2308016-10 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0949	0.00100	units	1	BGH0294	08/08/23	08/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.8		%	1	BGH0089	08/02/23	08/02/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.255	0.0100	mmhos/cm	1	BGH0155	08/03/23	08/03/23	EPA 120.1	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.77		pH Units	1	BGH0154	08/03/23	08/03/23	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 - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG04@5.0'
2308016-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	0.178	0.0100		mg/L	1	BGH0085	08/02/23	08/08/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	4.66	0.200		mg/kg dry	1	BGH0062	08/02/23	08/08/23	EPA 6020B	
Barium	160	0.400		"	"	"	"	"	"	
Cadmium	0.273	0.200		"	"	"	"	"	"	
Copper	5.61	0.400		"	"	"	"	"	"	
Lead	7.99	0.200		"	"	"	"	"	"	
Nickel	6.96	0.400		"	"	"	"	"	"	
Selenium	ND	0.280		"	"	"	"	"	"	
Silver	0.0417	0.0200		"	"	"	"	"	"	
Zinc	21.6	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGH0151	08/03/23	08/03/23	EPA 7196A	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	30.5	0.0538		mg/L dry	1	BGH0081	08/02/23	08/07/23	EPA 6020B	
Magnesium	24.0	0.0538		"	"	"	"	"	"	
Sodium	38.2	0.0538		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG04@5.0'
2308016-11 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.26	0.00100	units	1	BGH0294	08/08/23	08/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.0		%	1	BGH0089	08/02/23	08/02/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.384	0.0100	mmhos/cm	1	BGH0155	08/03/23	08/03/23	EPA 120.1	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.12		pH Units	1	BGH0154	08/03/23	08/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG04@6.0'
2308016-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	0.610	0.0100	mg/L	1	BGH0085	08/02/23	08/08/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.83	0.200	mg/kg dry	1	BGH0062	08/02/23	08/08/23	EPA 6020B	
Barium	119	0.400	"	"	"	"	"	"	
Cadmium	0.281	0.200	"	"	"	"	"	"	
Copper	6.26	0.400	"	"	"	"	"	"	
Lead	7.64	0.200	"	"	"	"	"	"	
Nickel	6.97	0.400	"	"	"	"	"	"	
Selenium	ND	0.276	"	"	"	"	"	"	
Silver	0.0485	0.0200	"	"	"	"	"	"	
Zinc	20.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0151	08/03/23	08/03/23	EPA 7196A	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	19.7	0.0532	mg/L dry	1	BGH0081	08/02/23	08/07/23	EPA 6020B	
Magnesium	39.0	0.0532	"	"	"	"	"	"	
Sodium	317	0.0532	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG04@6.0'
2308016-12 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	9.55	0.00100	units	1	BGH0294	08/08/23	08/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.0		%	1	BGH0089	08/02/23	08/02/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.62	0.0100	mmhos/cm	1	BGH0155	08/03/23	08/03/23	EPA 120.1	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.41		pH Units	1	BGH0154	08/03/23	08/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG05@6.0"
2308016-13 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	0.157	0.0100		mg/L	1	BGH0085	08/02/23	08/08/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	5.22	0.200		mg/kg dry	1	BGH0062	08/02/23	08/08/23	EPA 6020B	
Barium	163	0.400		"	"	"	"	"	"	
Cadmium	0.303	0.200		"	"	"	"	"	"	
Copper	6.30	0.400		"	"	"	"	"	"	
Lead	8.49	0.200		"	"	"	"	"	"	
Nickel	7.45	0.400		"	"	"	"	"	"	
Selenium	ND	0.284		"	"	"	"	"	"	
Silver	0.0402	0.0200		"	"	"	"	"	"	
Zinc	20.8	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGH0151	08/03/23	08/03/23	EPA 7196A	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	49.7	0.0546		mg/L dry	1	BGH0081	08/02/23	08/07/23	EPA 6020B	
Magnesium	8.83	0.0546		"	"	"	"	"	"	
Sodium	2.44	0.0546		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG05@6.0"
2308016-13 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0839	0.00100	units	1	BGH0294	08/08/23	08/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.6		%	1	BGH0089	08/02/23	08/02/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.261	0.0100	mmhos/cm	1	BGH0155	08/03/23	08/03/23	EPA 120.1	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.77		pH Units	1	BGH0154	08/03/23	08/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG05@5.0'
2308016-14 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	0.155	0.0100		mg/L	1	BGH0085	08/02/23	08/08/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	3.33	0.200		mg/kg dry	1	BGH0062	08/02/23	08/08/23	EPA 6020B	
Barium	136	0.400		"	"	"	"	"	"	
Cadmium	0.210	0.200		"	"	"	"	"	"	
Copper	4.97	0.400		"	"	"	"	"	"	
Lead	6.16	0.200		"	"	"	"	"	"	
Nickel	5.89	0.400		"	"	"	"	"	"	
Selenium	ND	0.281		"	"	"	"	"	"	
Silver	0.0299	0.0200		"	"	"	"	"	"	
Zinc	17.9	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGH0151	08/03/23	08/03/23	EPA 7196A	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	20.8	0.0541		mg/L dry	1	BGH0081	08/02/23	08/08/23	EPA 6020B	
Magnesium	22.7	0.0541		"	"	"	"	"	"	
Sodium	29.3	0.0541		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG05@5.0'
2308016-14 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.06	0.00100	units	1	BGH0294	08/08/23	08/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.4		%	1	BGH0089	08/02/23	08/02/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.338	0.0100	mmhos/cm	1	BGH0155	08/03/23	08/03/23	EPA 120.1	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.43		pH Units	1	BGH0154	08/03/23	08/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG05@6.0'
2308016-15 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	0.158	0.0100	mg/L	1	BGH0085	08/02/23	08/08/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.91	0.200	mg/kg dry	1	BGH0062	08/02/23	08/08/23	EPA 6020B	
Barium	98.4	0.400	"	"	"	"	"	"	
Cadmium	0.236	0.200	"	"	"	"	"	"	
Copper	5.17	0.400	"	"	"	"	"	"	
Lead	7.13	0.200	"	"	"	"	"	"	
Nickel	6.38	0.400	"	"	"	"	"	"	
Selenium	ND	0.276	"	"	"	"	"	"	
Silver	0.0365	0.0200	"	"	"	"	"	"	
Zinc	19.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0151	08/03/23	08/03/23	EPA 7196A	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	15.3	0.0530	mg/L dry	1	BGH0081	08/02/23	08/08/23	EPA 6020B	
Magnesium	25.8	0.0530	"	"	"	"	"	"	
Sodium	80.5	0.0530	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

BKG05@6.0'
2308016-15 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.91	0.00100	units	1	BGH0294	08/08/23	08/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.3		%	1	BGH0089	08/02/23	08/02/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.560	0.0100	mmhos/cm	1	BGH0155	08/03/23	08/03/23	EPA 120.1	

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

Date Sampled: **08/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.39		pH Units	1	BGH0154	08/03/23	08/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
 Project Manager: Paul Henchan

Reported:
 08/10/23 11:17

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 BGH0085 - EPA 3050B

Blank (BGH0085-BLK1)

Prepared: 08/02/23 Analyzed: 08/08/23

Boron ND 0.0100 mg/L

LCS (BGH0085-BS1)

Prepared: 08/02/23 Analyzed: 08/08/23

Boron 4.69 0.0100 mg/L 5.00 93.9 80-120

Duplicate (BGH0085-DUP1)

Source: 2307428-01

Prepared: 08/02/23 Analyzed: 08/08/23

Boron 0.147 0.0100 mg/L 0.190 25.9 20 QR-04

Matrix Spike (BGH0085-MS1)

Source: 2307428-01

Prepared: 08/02/23 Analyzed: 08/08/23

Boron 5.07 0.0100 mg/L 5.00 0.190 97.6 75-125

Matrix Spike Dup (BGH0085-MSD1)

Source: 2307428-01

Prepared: 08/02/23 Analyzed: 08/08/23

Boron 4.50 0.0100 mg/L 5.00 0.190 86.2 75-125 12.0 25

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

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 BGH0062 - EPA 3050B

Blank (BGH0062-BLK1)

Prepared: 08/02/23 Analyzed: 08/08/23

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

LCS (BGH0062-BS1)

Prepared: 08/02/23 Analyzed: 08/08/23

Arsenic	41.5	0.200	mg/kg wet	40.0	104	80-120
Barium	39.2	0.400	"	40.0	98.0	80-120
Cadmium	1.88	0.200	"	2.00	94.2	80-120
Copper	37.1	0.400	"	40.0	92.6	80-120
Lead	19.1	0.200	"	20.0	95.6	80-120
Nickel	36.3	0.400	"	40.0	90.8	80-120
Selenium	4.54	0.260	"	4.00	114	80-120
Silver	1.91	0.0200	"	2.00	95.6	80-120
Zinc	37.4	0.400	"	40.0	93.6	80-120

Duplicate (BGH0062-DUP1)

Source: 2308016-01

Prepared: 08/02/23 Analyzed: 08/08/23

Arsenic	5.78	0.200	mg/kg dry	6.15	6.18	20
Barium	145	0.400	"	149	2.97	20
Cadmium	0.318	0.200	"	0.358	11.6	20
Copper	6.75	0.400	"	7.08	4.75	20
Lead	9.81	0.200	"	10.4	5.87	20
Nickel	7.83	0.400	"	8.35	6.34	20
Selenium	0.211	0.289	"	0.220	4.34	20
Silver	0.0833	0.0200	"	0.0904	8.21	20
Zinc	21.5	0.400	"	23.0	6.84	20
Selenium	0.211	0.260	"	0.220	4.34	20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

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 BGH0062 - EPA 3050B

Matrix Spike (BGH0062-MS1)	Source: 2308016-01			Prepared: 08/02/23		Analyzed: 08/08/23					
Arsenic	45.6	0.200	mg/kg dry	44.5	6.15	88.7	75-125				
Barium	187	0.400	"	44.5	149	85.3	75-125				
Cadmium	2.20	0.200	"	2.23	0.358	82.6	75-125				
Copper	25.9	0.400	"	44.5	7.08	42.3	75-125				QM-07
Lead	28.5	0.200	"	22.3	10.4	81.1	75-125				
Nickel	27.3	0.400	"	44.5	8.35	42.7	75-125				QM-07
Selenium	3.92	0.289	"	4.45	0.220	83.1	75-125				
Silver	1.92	0.0200	"	2.23	0.0904	82.3	75-125				
Zinc	42.0	0.400	"	44.5	23.0	42.6	75-125				QM-07

Matrix Spike Dup (BGH0062-MSD1)	Source: 2308016-01			Prepared: 08/02/23		Analyzed: 08/08/23					
Arsenic	46.6	0.200	mg/kg dry	44.5	6.15	90.9	75-125	2.17	25		
Barium	188	0.400	"	44.5	149	88.3	75-125	0.715	25		
Cadmium	2.25	0.200	"	2.23	0.358	84.8	75-125	2.17	25		
Copper	26.4	0.400	"	44.5	7.08	43.5	75-125	2.09	25		QM-07
Lead	29.0	0.200	"	22.3	10.4	83.5	75-125	1.86	25		
Nickel	27.9	0.400	"	44.5	8.35	43.9	75-125	1.99	25		QM-07
Selenium	3.85	0.289	"	4.45	0.220	81.5	75-125	1.78	25		
Silver	1.98	0.0200	"	2.23	0.0904	84.7	75-125	2.72	25		
Zinc	42.8	0.400	"	44.5	23.0	44.3	75-125	1.82	25		QM-07

Summit Scientific

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Fremont Environmental
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 Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
 Project Manager: Paul Henchan

Reported:
 08/10/23 11:17

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 BGH0151 - 3060A Mod

Blank (BGH0151-BLK1)

Prepared & Analyzed: 08/03/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGH0151-BS1)

Prepared & Analyzed: 08/03/23

Chromium, Hexavalent 20.5 0.30 mg/kg wet 25.0 82.0 80-120

Duplicate (BGH0151-DUP1)

Source: 2308016-01

Prepared & Analyzed: 08/03/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND ND 20

Matrix Spike (BGH0151-MS1)

Source: 2308016-01

Prepared & Analyzed: 08/03/23

Chromium, Hexavalent 27.8 0.30 mg/kg dry 27.8 ND 99.8 75-125

Matrix Spike Dup (BGH0151-MSD1)

Source: 2308016-01

Prepared & Analyzed: 08/03/23

Chromium, Hexavalent 27.4 0.30 mg/kg dry 27.8 ND 98.4 75-125 1.41 20

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Fremont Environmental
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 Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
 Project Manager: Paul Henchan

Reported:
 08/10/23 11:17

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

Summit Scientific

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

Batch BGH0081 - General Preparation

Blank (BGH0081-BLK1)

Prepared: 08/02/23 Analyzed: 08/07/23

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

LCS (BGH0081-BS1)

Prepared: 08/02/23 Analyzed: 08/07/23

Calcium	4.81	0.0500	mg/L wet	5.00	96.2	70-130
Magnesium	5.66	0.0500	"	5.00	113	70-130
Sodium	5.54	0.0500	"	5.00	111	70-130

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
 Project Manager: Paul Henchan

Reported:
 08/10/23 11:17

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

Summit Scientific

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

Batch BGH0089 - General Preparation


Duplicate (BGH0089-DUP1)

Source: 2308016-01

Prepared & Analyzed: 08/02/23

% Solids	91.4		%		89.8			1.75	20	
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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
 Project Manager: Paul Henchan

Reported:
 08/10/23 11:17

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 BGH0155 - General Preparation

Blank (BGH0155-BLK1)

Prepared & Analyzed: 08/03/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGH0155-BS1)

Prepared & Analyzed: 08/03/23

Specific Conductance (EC) 0.149 0.0100 mmhos/cm 0.150 99.3 95-105

Duplicate (BGH0155-DUP1)

Source: 2308016-01

Prepared & Analyzed: 08/03/23

Specific Conductance (EC) 0.254 0.0100 mmhos/cm 0.257 1.29 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
 Project Manager: Paul Henchan

Reported:
 08/10/23 11:17

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 BGH0154 - General Preparation

LCS (BGH0154-BS1)

Prepared & Analyzed: 08/03/23

pH	9.16	pH Units	9.18	99.8	95-105
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Duplicate (BGH0154-DUP1)

Source: 2308016-01

Prepared & Analyzed: 08/03/23

pH	7.44	pH Units	7.25	2.59	20
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Goldberg T5N-R67W-S14 L01 (TB)

Project Number: UWRWE-A2142-ABN
Project Manager: Paul Henchan

Reported:
08/10/23 11:17

Notes and Definitions

- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference