

**TABLE 1**  
**SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA**  
**NOBLE ENERGY INC.**  
**CDOT F 1-10, WELD COUNTY, COLORADO**  
**FREMONT PROJECT NO. C024-010**

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**		
FL01 3'	01/12/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
FL02 3'	01/12/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50

Bold faced values exceed the ECMC Table 915-1 concentrations

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

Green highlighted cells indicate soil removed via excavation

\* Indicates laboratory minimum detection limit in excess of SSL

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

NA - Not analyzed

TABLE 2  
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA  
NOBLE ENERGY INC.  
CDOT F 1-10, WELD COUNTY, COLORADO  
FREMONT PROJECT NO. C024-010

Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
FL01 3'	01/12/2024	3	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL02 3'	01/12/2024	3	<0.00500	0.00605	<b>0.0122</b>	0.0132	0.016	0.00675	0.012	<0.00500	0.0307	<0.00500	<0.00500	0.0288	<0.00500	<0.00500

Bold faced values exceed the ECMC 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

Green highlighted cells indicate soil removed via excavation

**TABLE 3**  
**SUMMARY OF SOIL SUITABILITY FOR RECLAMATION**  
**NOBLE ENERGY INC.**  
**CDOT F 1-10, WELD COUNTY, COLORADO**  
**FREMONT PROJECT NO. C024-010**

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
Max. Background Concentration (or Concentration Range)			9.09	-	-	-
FL01 3'	01/12/2024	3	9.06	0.114	0.0587	<2.00
FL02 3'	01/12/2024	3	8.13	0.278	0.456	<2.00
BKG 3'	01/12/2024	3	<b>9.09</b>	0.109	0.0695	<2.00
BKG01 3'	01/12/2024	3	<b>8.93</b>	0.134	0.0409	<2.00
BKG02 3'	01/12/2024	3	<b>8.38</b>	0.331	0.688	<2.00
BKG03 3'	01/12/2024	3	8.27	0.482	0.401	<2.00
BKG04 3'	01/12/2024	3	<b>8.43</b>	0.352	0.253	<2.00
BKG05 3'	01/12/2024	3	<b>8.33</b>	0.404	0.884	<2.00

Bold faced, yellow highlighted values exceed the ECMC Table 915-1 concentrations

Green highlighted cells indicate soil removed via excavation

Orange highlighted cells exceed of the maximum background concentration, or concentration range

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

NA - Not analyzed

**TABLE 4**  
**SUMMARY OF METALS IN SOIL CHEMISTRY DATA**  
**NOBLE ENERGY INC.**  
**CDOT F 1-10, WELD COUNTY, COLORADO**  
**FREMONT PROJECT NO. C024-010**

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
125% Max. Background Concentration			9.1	194	-	-	-	-	-	0.571	-	-
FL01 3'	01/12/2024	3	0.632	14.7	<0.200	<0.30	<0.400	1.21	0.583	<0.260	<0.0200	1.88
FL02 3'	01/12/2024	3	1.5	131	0.287	<0.30	2.93	11.4	2.67	0.301	0.0734	11.8
BKG 3'	01/12/2024	3	<b>1.19</b>	15.6	<0.200	<0.30	1.36	1.76	0.875	<0.260	<0.0200	2.84
BKG01 3'	01/12/2024	3	<b>0.852</b>	11	<0.200	<0.30	0.504	0.995	0.698	<0.260	<0.0200	2.84
BKG02 3'	01/12/2024	3	<b>3.55</b>	79.6	0.29	<0.30	6.02	9.05	4.9	<0.260	0.0502	24.1
BKG03 3'	01/12/2024	3	<b>5.92</b>	<b>141</b>	<b>0.48</b>	<0.30	8.2	13.7	6.82	<b>0.385</b>	0.0948	30
BKG04 3'	01/12/2024	3	<b>7.29</b>	<b>155</b>	<b>0.59</b>	<0.30	9.38	<b>16.8</b>	7.71	<b>0.457</b>	0.114	33.3
BKG05 3'	01/12/2024	3	<b>4.71</b>	<b>115</b>	<b>0.43</b>	<0.30	7.73	12.4	6.19	<b>0.401</b>	0.0784	32.2

Bold faced values exceed the ECMC Table 915-1 concentrations

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

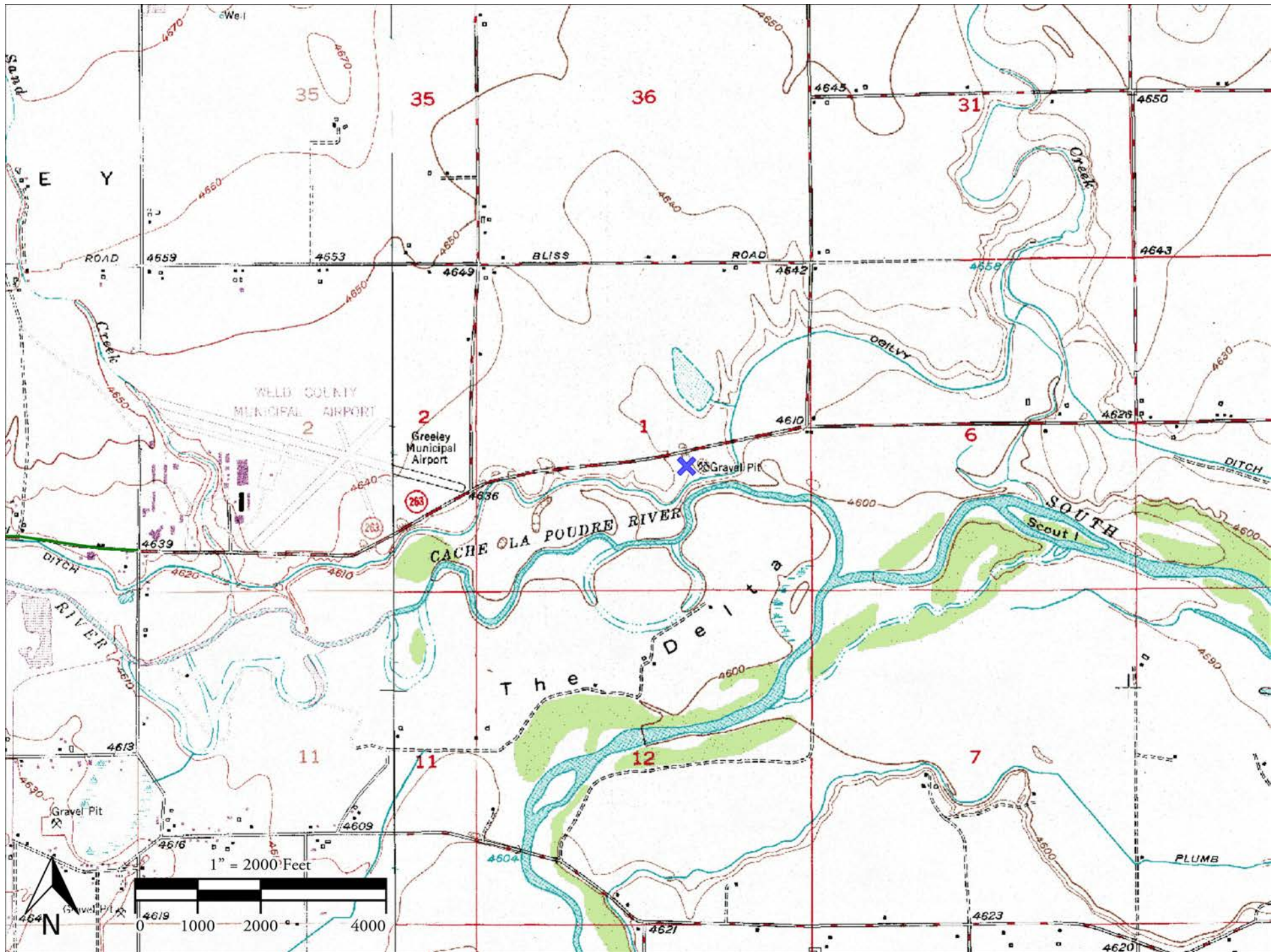
Orange highlighted cells exceed 125% of the maximum background concentration

\* Indicates laboratory minimum detection limit in excess of SSL

Green highlighted cells indicate soil removed via excavation

NA - Not analyzed

Noble - CDOT F 1-10



# CDOT F 1-10

API # 05-123-25082  
NWSE Sec. 1, T5N, R65W  
40.426254, -104.608822  
Remediation # 31034  
Fremont No. C024-010

**Legend**

- ⊙ Background Sample Location
- Impacted Soil Sample Location

Proposed Excav.  
Extent: 10'x10'x4'  
deep (not to scale)

● L02 3'

BKG05  
● BKG04/BKG 3'  
BKG01  
● BKG02  
BKG03

Ogilvy Ditch



# Photo Log



*Description:*

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 22, 2024

Paul Henchan

Fremont Environmental

PO Box 1289

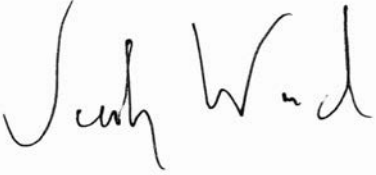
Wellington, CO 80549

RE: Noble - CDOT F-65N65W 1NWSE

Work Order #2401249

Enclosed are the results of analyses for samples received by Summit Scientific on 01/12/24 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Jacob Wood For Paul Shrewsbury

President



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST 0.5'	2401249-01	Soil	01/12/24 12:15	01/12/24 16:30
PWV W Wall 2'	2401249-02	Soil	01/12/24 12:20	01/12/24 16:30
SEP01 DL 3'	2401249-03	Soil	01/12/24 12:25	01/12/24 16:30
SEP02 DL 3'	2401249-04	Soil	01/12/24 12:30	01/12/24 16:30
BKG01 0.5'	2401249-05	Soil	01/12/24 12:35	01/12/24 16:30
BKG01 2'	2401249-06	Soil	01/12/24 12:40	01/12/24 16:30
BKG01 3'	2401249-07	Soil	01/12/24 12:45	01/12/24 16:30
BKG02 0.5'	2401249-08	Soil	01/12/24 12:50	01/12/24 16:30
BKG02 2'	2401249-09	Soil	01/12/24 12:55	01/12/24 16:30
BKG02 3'	2401249-10	Soil	01/12/24 13:00	01/12/24 16:30
BKG03 0.5'	2401249-11	Soil	01/12/24 13:05	01/12/24 16:30
BKG03 2'	2401249-12	Soil	01/12/24 13:10	01/12/24 16:30
BKG03 3'	2401249-13	Soil	01/12/24 13:15	01/12/24 16:30
BKG04 0.5'	2401249-14	Soil	01/12/24 13:20	01/12/24 16:30
BKG04 2'	2401249-15	Soil	01/12/24 13:25	01/12/24 16:30
BKG04 3'	2401249-16	Soil	01/12/24 13:30	01/12/24 16:30
BKG05 0.5'	2401249-17	Soil	01/12/24 13:35	01/12/24 16:30
BKG05 2'	2401249-18	Soil	01/12/24 13:40	01/12/24 16:30
BKG05 3'	2401249-19	Soil	01/12/24 13:45	01/12/24 16:30

Summit Scientific

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





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

Lab ID Page 2 of 2  
2401249.2

Client: Fremont Environmental		Send Data To: Project Manager: Paul Henehan		Send Invoice To: Company: <u>Noble</u>	
Address:		E-Mail: Fremont Distribution List		Project Name/Location:	
City/State/Zip:				AFE#:	
Phone: 303-261-6246		Project Name: <u>CDOT F-65N65W 1NWSE</u>		PO/Billing Codes: <u>UWRWE-A3472-ABN</u>	
Sampler Name: Stanley Gilbert		Project Number:		Contact: <u>Mike Montoya</u>	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested					Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX, TMBs, Naph.	TPH	PAH (915)	EC, SAR, Ph, Boron	Metals (915)		TDS, Chloride, Sulfate
1	BK604 3'	11/2/23	13:30	1			X			X						X	X		
2	BK605 0.5'	I	13:35	I			X			X						X	X		
3	BK605 2'	I	13:40	I			X			X						X	X		
4	BK605 3'	I	13:45	I			X			X						X	X		
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by: <u>[Signature]</u> Date/Time: <u>11/2/23 15:30</u>	Received by: <u>Summit North</u> Date/Time: <u>11/2/23 15:30</u>	TAT Business Days	Field DO	Notes:
		Same Day	Field EC	
Relinquished by: <u>[Signature]</u> Date/Time: <u>11/2/24 10:30</u>	Received by: <u>[Signature]</u> Date/Time: <u>11/2/24 10:30</u>	1 Day	Field ORP	
		2 Days	Field pH	
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____	3 Days	Field Temp.	
		Standard	Field Turb.	
Temperature Upon Receipt: <u>9.3</u>	Corrected Temperature: <u>E</u>	IR gun #: <u>1</u>	HNO3 lot #:	

S<sub>2</sub>

2/2

Sample Receipt Checklist

S2 Work Order# 2401249

Client: Fremont Client Project ID: CDOT F-WONL6W 1 NWSE

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

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

Temp (°C)  Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> <b>NOTE:</b> 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"/>	OUTAGE
If custody seals are present, are they intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , 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? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	no time stamps
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)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> 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):				

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

AS  
Custodian Printed Name

1/12/24  
Date/Time



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG01 0.5'**  
**2401249-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/12/24 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHA0598	01/16/24	01/18/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/12/24 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	4.11	0.200		mg/kg dry	1	BHA0558	01/15/24	01/19/24	EPA 6020B	
Barium	85.1	0.400		"	"	"	"	"	"	
Cadmium	0.356	0.200		"	"	"	"	"	"	
Copper	6.92	0.400		"	"	"	"	"	"	
Lead	10.3	0.200		"	"	"	"	"	"	
Nickel	5.44	0.400		"	"	"	"	"	"	
Silver	0.0671	0.0200		"	"	"	"	"	"	
Zinc	53.3	0.400		"	"	"	"	"	"	
Selenium	0.498	0.260		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/12/24 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHA0550	01/15/24	01/16/24	EPA 7196A	

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

Date Sampled: **01/12/24 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	118	0.0500		mg/L dry	1	BHA0582	01/16/24	01/18/24	EPA 6020B	
Magnesium	36.1	0.0500		"	"	"	"	"	"	
Sodium	25.7	0.0500		"	"	"	"	"	"	

**Calculated Analysis**

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG01 0.5'**  
**2401249-05 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/12/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.531	0.00100	units	1	BHA0684	01/19/24	01/19/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/12/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.0		%	1	BHA0525	01/15/24	01/15/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/12/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.60	0.0100	mmhos/cm	1	BHA0611	01/17/24	01/17/24	EPA 120.1	

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

Date Sampled: **01/12/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.60		pH Units	1	BHA0610	01/17/24	01/17/24	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG01 2'**  
**2401249-06 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/12/24 12:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHA0598	01/16/24	01/18/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/12/24 12:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.42	0.200	mg/kg dry	1	BHA0558	01/15/24	01/19/24	EPA 6020B	
Barium	110	0.400	"	"	"	"	"	"	
Cadmium	0.393	0.200	"	"	"	"	"	"	
Copper	7.50	0.400	"	"	"	"	"	"	
Lead	12.3	0.200	"	"	"	"	"	"	
Nickel	6.16	0.400	"	"	"	"	"	"	
Silver	0.0731	0.0200	"	"	"	"	"	"	
Zinc	29.7	0.400	"	"	"	"	"	"	
Selenium	0.364	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/12/24 12:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0550	01/15/24	01/16/24	EPA 7196A	

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

Date Sampled: **01/12/24 12:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	67.8	0.0500	mg/L dry	1	BHA0582	01/16/24	01/18/24	EPA 6020B	
Magnesium	8.79	0.0500	"	"	"	"	01/18/24	"	
Sodium	25.8	0.0500	"	"	"	"	01/18/24	"	

**Calculated Analysis**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG01 2'**  
**2401249-06 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/12/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.783	0.00100	units	1	BHA0684	01/19/24	01/19/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/12/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	79.3		%	1	BHA0525	01/15/24	01/15/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/12/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.356	0.0100	mmhos/cm	1	BHA0611	01/17/24	01/17/24	EPA 120.1	

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

Date Sampled: **01/12/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.38		pH Units	1	BHA0610	01/17/24	01/17/24	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG01 3'**  
**2401249-07 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/12/24 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHA0598	01/16/24	01/18/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/12/24 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Arsenic</b>	<b>0.852</b>	0.200	mg/kg dry	1	BHA0558	01/15/24	01/19/24	EPA 6020B	
<b>Barium</b>	<b>11.0</b>	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
<b>Copper</b>	<b>0.504</b>	0.400	"	"	"	"	"	"	
<b>Lead</b>	<b>0.995</b>	0.200	"	"	"	"	"	"	
<b>Nickel</b>	<b>0.698</b>	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
<b>Zinc</b>	<b>2.84</b>	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/12/24 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0550	01/15/24	01/16/24	EPA 7196A	

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

Date Sampled: **01/12/24 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Calcium</b>	<b>34.1</b>	0.0500	mg/L dry	1	BHA0582	01/16/24	01/18/24	EPA 6020B	
<b>Magnesium</b>	<b>5.62</b>	0.0500	"	"	"	"	"	"	
<b>Sodium</b>	<b>0.979</b>	0.0500	"	"	"	"	01/18/24	"	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG01 3'**  
**2401249-07 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/12/24 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0409	0.00100	units	1	BHA0684	01/19/24	01/19/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/12/24 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	98.3		%	1	BHA0525	01/15/24	01/15/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/12/24 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.134	0.0100	mmhos/cm	1	BHA0611	01/17/24	01/17/24	EPA 120.1	

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

Date Sampled: **01/12/24 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.93		pH Units	1	BHA0610	01/17/24	01/17/24	EPA 9045D	

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Fremont Environmental  
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Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG02 0.5'**  
**2401249-08 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/12/24 12:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHA0598	01/16/24	01/18/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/12/24 12:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.55	0.200	mg/kg dry	1	BHA0558	01/15/24	01/19/24	EPA 6020B	
Barium	80.3	0.400	"	"	"	"	"	"	
Cadmium	0.337	0.200	"	"	"	"	"	"	
Copper	6.47	0.400	"	"	"	"	"	"	
Lead	9.54	0.200	"	"	"	"	"	"	
Nickel	5.28	0.400	"	"	"	"	"	"	
Silver	0.0645	0.0200	"	"	"	"	"	"	
Zinc	53.0	0.400	"	"	"	"	"	"	
Selenium	0.445	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/12/24 12:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0550	01/15/24	01/16/24	EPA 7196A	

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

Date Sampled: **01/12/24 12:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	92.3	0.0500	mg/L dry	1	BHA0582	01/16/24	01/18/24	EPA 6020B	
Magnesium	35.1	0.0500	"	"	"	"	01/18/24	"	
Sodium	26.6	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

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Project: Noble - CDOT F-65N65W 1NWSE  
 Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/22/24 09:46

**BKG02 0.5'**  
**2401249-08 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/12/24 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	<b>0.598</b>	0.00100	units	1	BHA0684	01/19/24	01/19/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/12/24 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>86.8</b>		%	1	BHA0525	01/15/24	01/15/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/12/24 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>1.14</b>	0.0100	mmhos/cm	1	BHA0611	01/17/24	01/17/24	EPA 120.1	

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

Date Sampled: **01/12/24 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>7.80</b>		pH Units	1	BHA0610	01/17/24	01/17/24	EPA 9045D	

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Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG02 2'**  
**2401249-09 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/12/24 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHA0598	01/16/24	01/18/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/12/24 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	<b>3.91</b>	0.200		mg/kg dry	1	BHA0558	01/15/24	01/19/24	EPA 6020B	
Barium	<b>89.3</b>	0.400		"	"	"	"	"	"	
Cadmium	<b>0.334</b>	0.200		"	"	"	"	"	"	
Copper	<b>6.89</b>	0.400		"	"	"	"	"	"	
Lead	<b>10.6</b>	0.200		"	"	"	"	"	"	
Nickel	<b>5.58</b>	0.400		"	"	"	"	"	"	
Silver	<b>0.0609</b>	0.0200		"	"	"	"	"	"	
Zinc	<b>30.3</b>	0.400		"	"	"	"	"	"	
Selenium	<b>0.288</b>	0.260		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/12/24 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHA0550	01/15/24	01/16/24	EPA 7196A	

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

Date Sampled: **01/12/24 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	<b>71.2</b>	0.0500		mg/L dry	1	BHA0582	01/16/24	01/18/24	EPA 6020B	
Magnesium	<b>21.0</b>	0.0500		"	"	"	"	"	"	
Sodium	<b>23.0</b>	0.0500		"	"	"	"	"	"	

**Calculated Analysis**

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG02 2'**  
**2401249-09 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/12/24 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.616	0.00100	units	1	BHA0684	01/19/24	01/19/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/12/24 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.5		%	1	BHA0525	01/15/24	01/15/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/12/24 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.372	0.0100	mmhos/cm	1	BHA0611	01/17/24	01/17/24	EPA 120.1	

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

Date Sampled: **01/12/24 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.34		pH Units	1	BHA0610	01/17/24	01/17/24	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG02 3'**  
**2401249-10 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/12/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHA0598	01/16/24	01/18/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/12/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.55	0.200	mg/kg dry	1	BHA0558	01/15/24	01/19/24	EPA 6020B	
Barium	79.6	0.400	"	"	"	"	"	"	
Cadmium	0.287	0.200	"	"	"	"	"	"	
Copper	6.02	0.400	"	"	"	"	"	"	
Lead	9.05	0.200	"	"	"	"	"	"	
Nickel	4.90	0.400	"	"	"	"	"	"	
Silver	0.0502	0.0200	"	"	"	"	"	"	
Zinc	24.1	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/12/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0550	01/15/24	01/16/24	EPA 7196A	

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

Date Sampled: **01/12/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	32.7	0.0500	mg/L dry	1	BHA0582	01/16/24	01/18/24	EPA 6020B	
Magnesium	19.0	0.0500	"	"	"	"	01/18/24	"	
Sodium	20.0	0.0500	"	"	"	"	"	"	

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Project: Noble - CDOT F-65N65W 1NWSE  
 Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/22/24 09:46

**BKG02 3'**  
**2401249-10 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/12/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	<b>0.688</b>	0.00100	units	1	BHA0684	01/19/24	01/19/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/12/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>81.2</b>		%	1	BHA0525	01/15/24	01/15/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/12/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.331</b>	0.0100	mmhos/cm	1	BHA0611	01/17/24	01/17/24	EPA 120.1	

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

Date Sampled: **01/12/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.38</b>		pH Units	1	BHA0610	01/17/24	01/17/24	EPA 9045D	

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Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG03 0.5'**  
**2401249-11 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/12/24 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHA0598	01/16/24	01/18/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/12/24 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	2.47	0.200		mg/kg dry	1	BHA0558	01/15/24	01/19/24	EPA 6020B	
Barium	63.8	0.400		"	"	"	"	"	"	
Cadmium	0.288	0.200		"	"	"	"	"	"	
Copper	4.82	0.400		"	"	"	"	"	"	
Lead	6.91	0.200		"	"	"	"	"	"	
Nickel	3.91	0.400		"	"	"	"	"	"	
Silver	0.0340	0.0200		"	"	"	"	"	"	
Zinc	20.3	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/12/24 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHA0550	01/15/24	01/16/24	EPA 7196A	

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

Date Sampled: **01/12/24 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	31.9	0.0500		mg/L dry	1	BHA0582	01/16/24	01/18/24	EPA 6020B	
Magnesium	7.92	0.0500		"	"	"	"	01/18/24	"	
Sodium	8.81	0.0500		"	"	"	"	01/18/24	"	

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Project: Noble - CDOT F-65N65W 1NWSE  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG03 0.5'**  
**2401249-11 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/12/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	<b>0.362</b>	0.00100	units	1	BHA0684	01/19/24	01/19/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/12/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>87.1</b>		%	1	BHA0525	01/15/24	01/15/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/12/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.349</b>	0.0100	mmhos/cm	1	BHA0611	01/17/24	01/17/24	EPA 120.1	

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

Date Sampled: **01/12/24 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.29</b>		pH Units	1	BHA0610	01/17/24	01/17/24	EPA 9045D	

Summit Scientific

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Fremont Environmental  
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Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG03 2'**  
**2401249-12 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/12/24 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHA0598	01/16/24	01/18/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/12/24 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	3.29	0.200		mg/kg dry	1	BHA0558	01/15/24	01/19/24	EPA 6020B	
Barium	96.3	0.400		"	"	"	"	"	"	
Cadmium	0.316	0.200		"	"	"	"	"	"	
Copper	6.58	0.400		"	"	"	"	"	"	
Lead	9.39	0.200		"	"	"	"	"	"	
Nickel	4.94	0.400		"	"	"	"	"	"	
Silver	0.0533	0.0200		"	"	"	"	"	"	
Zinc	26.6	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/12/24 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHA0550	01/15/24	01/16/24	EPA 7196A	

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

Date Sampled: **01/12/24 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	29.7	0.0500		mg/L dry	1	BHA0582	01/16/24	01/18/24	EPA 6020B	
Magnesium	8.22	0.0500		"	"	"	"	01/18/24	"	
Sodium	10.3	0.0500		"	"	"	"	"	"	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG03 2'**  
**2401249-12 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/12/24 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	<b>0.431</b>	0.00100	units	1	BHA0684	01/19/24	01/19/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/12/24 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>84.8</b>		%	1	BHA0525	01/15/24	01/15/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/12/24 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.223</b>	0.0100	mmhos/cm	1	BHA0611	01/17/24	01/17/24	EPA 120.1	

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

Date Sampled: **01/12/24 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.83</b>		pH Units	1	BHA0610	01/17/24	01/17/24	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG03 3'**  
**2401249-13 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/12/24 13:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHA0598	01/16/24	01/18/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/12/24 13:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	5.92	0.200	mg/kg dry	1	BHA0558	01/15/24	01/19/24	EPA 6020B	
Barium	141	0.400	"	"	"	"	"	"	
Cadmium	0.478	0.200	"	"	"	"	"	"	
Copper	8.20	0.400	"	"	"	"	"	"	
Lead	13.7	0.200	"	"	"	"	"	"	
Nickel	6.82	0.400	"	"	"	"	"	"	
Silver	0.0948	0.0200	"	"	"	"	"	"	
Zinc	30.0	0.400	"	"	"	"	"	"	
Selenium	0.385	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/12/24 13:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0550	01/15/24	01/16/24	EPA 7196A	

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

Date Sampled: **01/12/24 13:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	86.2	0.0500	mg/L dry	1	BHA0582	01/16/24	01/18/24	EPA 6020B	
Magnesium	26.6	0.0500	"	"	"	"	"	"	
Sodium	16.6	0.0500	"	"	"	"	01/18/24	"	

**Calculated Analysis**

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE  
 Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/22/24 09:46

**BKG03 3'**  
**2401249-13 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/12/24 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	<b>0.401</b>	0.00100	units	1	BHA0684	01/19/24	01/19/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/12/24 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>81.9</b>		%	1	BHA0525	01/15/24	01/15/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/12/24 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.482</b>	0.0100	mmhos/cm	1	BHA0611	01/17/24	01/17/24	EPA 120.1	

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

Date Sampled: **01/12/24 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.27</b>		pH Units	1	BHA0610	01/17/24	01/17/24	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG04 0.5'**  
**2401249-14 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/12/24 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHA0598	01/16/24	01/18/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/12/24 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.48	0.200	mg/kg dry	1	BHA0558	01/15/24	01/19/24	EPA 6020B	
Barium	101	0.400	"	"	"	"	"	"	
Cadmium	0.370	0.200	"	"	"	"	"	"	
Copper	7.27	0.400	"	"	"	"	"	"	
Lead	10.9	0.200	"	"	"	"	"	"	
Nickel	5.97	0.400	"	"	"	"	"	"	
Silver	0.0662	0.0200	"	"	"	"	"	"	
Zinc	28.8	0.400	"	"	"	"	"	"	
Selenium	0.320	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/12/24 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0550	01/15/24	01/16/24	EPA 7196A	

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

Date Sampled: **01/12/24 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	37.2	0.0500	mg/L dry	1	BHA0582	01/16/24	01/18/24	EPA 6020B	
Magnesium	19.0	0.0500	"	"	"	"	01/18/24	"	
Sodium	8.99	0.0500	"	"	"	"	01/18/24	"	

**Calculated Analysis**

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE  
 Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/22/24 09:46

**BKG04 0.5'**  
**2401249-14 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/12/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	<b>0.299</b>	0.00100	units	1	BHA0684	01/19/24	01/19/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/12/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>80.4</b>		%	1	BHA0525	01/15/24	01/15/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/12/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.409</b>	0.0100	mmhos/cm	1	BHA0611	01/17/24	01/17/24	EPA 120.1	

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

Date Sampled: **01/12/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.23</b>		pH Units	1	BHA0610	01/17/24	01/17/24	EPA 9045D	

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Fremont Environmental  
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Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG04 2'**  
**2401249-15 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/12/24 13:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHA0598	01/16/24	01/18/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/12/24 13:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	<b>4.90</b>	0.200	mg/kg dry	1	BHA0558	01/15/24	01/19/24	EPA 6020B	
Barium	<b>116</b>	0.400	"	"	"	"	"	"	
Cadmium	<b>0.401</b>	0.200	"	"	"	"	"	"	
Copper	<b>7.54</b>	0.400	"	"	"	"	"	"	
Lead	<b>12.6</b>	0.200	"	"	"	"	"	"	
Nickel	<b>6.30</b>	0.400	"	"	"	"	"	"	
Silver	<b>0.0874</b>	0.0200	"	"	"	"	"	"	
Zinc	<b>27.3</b>	0.400	"	"	"	"	"	"	
Selenium	<b>0.314</b>	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/12/24 13:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0550	01/15/24	01/16/24	EPA 7196A	

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

Date Sampled: **01/12/24 13:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	<b>32.8</b>	0.0500	mg/L dry	1	BHA0582	01/16/24	01/18/24	EPA 6020B	
Magnesium	<b>32.9</b>	0.0500	"	"	"	"	01/18/24	"	
Sodium	<b>13.4</b>	0.0500	"	"	"	"	01/18/24	"	

**Calculated Analysis**

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE  
 Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/22/24 09:46

**BKG04 2'**  
**2401249-15 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/12/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.396	0.00100	units	1	BHA0684	01/19/24	01/19/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/12/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	80.6		%	1	BHA0525	01/15/24	01/15/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/12/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.401	0.0100	mmhos/cm	1	BHA0611	01/17/24	01/17/24	EPA 120.1	

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

Date Sampled: **01/12/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.31		pH Units	1	BHA0610	01/17/24	01/17/24	EPA 9045D	

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PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG04 3'**  
**2401249-16 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/12/24 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHA0598	01/16/24	01/18/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/12/24 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	7.29	0.200	mg/kg dry	1	BHA0558	01/15/24	01/19/24	EPA 6020B	
Barium	155	0.400	"	"	"	"	"	"	
Cadmium	0.587	0.200	"	"	"	"	"	"	
Copper	9.38	0.400	"	"	"	"	"	"	
Lead	16.8	0.200	"	"	"	"	"	"	
Nickel	7.71	0.400	"	"	"	"	"	"	
Silver	0.114	0.0200	"	"	"	"	"	"	
Zinc	33.3	0.400	"	"	"	"	"	"	
Selenium	0.457	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/12/24 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0550	01/15/24	01/16/24	EPA 7196A	

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

Date Sampled: **01/12/24 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	95.9	0.0500	mg/L dry	1	BHA0582	01/16/24	01/18/24	EPA 6020B	
Magnesium	30.1	0.0500	"	"	"	"	"	"	
Sodium	11.1	0.0500	"	"	"	"	01/18/24	"	

**Calculated Analysis**

Summit Scientific

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PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG04 3'**  
**2401249-16 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/12/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	<b>0.253</b>	0.00100	units	1	BHA0684	01/19/24	01/19/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/12/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>80.4</b>		%	1	BHA0525	01/15/24	01/15/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/12/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.352</b>	0.0100	mmhos/cm	1	BHA0611	01/17/24	01/17/24	EPA 120.1	

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

Date Sampled: **01/12/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.43</b>		pH Units	1	BHA0610	01/17/24	01/17/24	EPA 9045D	

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PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG05 0.5'**  
**2401249-17 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/12/24 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHA0598	01/16/24	01/18/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/12/24 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	4.20	0.200		mg/kg dry	1	BHA0558	01/15/24	01/19/24	EPA 6020B	
Barium	96.5	0.400		"	"	"	"	"	"	
Cadmium	0.403	0.200		"	"	"	"	"	"	
Copper	7.04	0.400		"	"	"	"	"	"	
Lead	11.0	0.200		"	"	"	"	"	"	
Nickel	5.75	0.400		"	"	"	"	"	"	
Silver	0.0762	0.0200		"	"	"	"	"	"	
Zinc	54.7	0.400		"	"	"	"	"	"	
Selenium	0.447	0.260		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/12/24 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHA0550	01/15/24	01/16/24	EPA 7196A	

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

Date Sampled: **01/12/24 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	70.9	0.0500		mg/L dry	1	BHA0582	01/16/24	01/18/24	EPA 6020B	
Magnesium	28.8	0.0500		"	"	"	"	01/18/24	"	
Sodium	16.2	0.0500		"	"	"	"	01/18/24	"	

**Calculated Analysis**

Summit Scientific

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PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG05 0.5'**  
**2401249-17 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/12/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	<b>0.410</b>	0.00100	units	1	BHA0684	01/19/24	01/19/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/12/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>87.7</b>		%	1	BHA0525	01/15/24	01/15/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/12/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.899</b>	0.0100	mmhos/cm	1	BHA0611	01/17/24	01/17/24	EPA 120.1	

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

Date Sampled: **01/12/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>7.52</b>		pH Units	1	BHA0610	01/17/24	01/17/24	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG05 2'**  
**2401249-18 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/12/24 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHA0598	01/16/24	01/19/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/12/24 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	8.26	0.200	mg/kg dry	1	BHA0558	01/15/24	01/19/24	EPA 6020B	
Barium	159	0.400	"	"	"	"	"	"	
Cadmium	0.488	0.200	"	"	"	"	"	"	
Copper	9.20	0.400	"	"	"	"	"	"	
Lead	15.7	0.200	"	"	"	"	"	"	
Nickel	7.60	0.400	"	"	"	"	"	"	
Silver	0.103	0.0200	"	"	"	"	"	"	
Zinc	29.7	0.400	"	"	"	"	"	"	
Selenium	0.286	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/12/24 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0550	01/15/24	01/16/24	EPA 7196A	

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

Date Sampled: **01/12/24 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	32.1	0.0500	mg/L dry	1	BHA0582	01/16/24	01/18/24	EPA 6020B	
Magnesium	31.4	0.0500	"	"	"	"	01/19/24	"	
Sodium	50.2	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

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Project: Noble - CDOT F-65N65W 1NWSE  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG05 2'**  
**2401249-18 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/12/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.51	0.00100	units	1	BHA0684	01/19/24	01/19/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/12/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	78.8		%	1	BHA0525	01/15/24	01/15/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/12/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.384	0.0100	mmhos/cm	1	BHA0611	01/17/24	01/17/24	EPA 120.1	

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

Date Sampled: **01/12/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.36		pH Units	1	BHA0610	01/17/24	01/17/24	EPA 9045D	

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Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG05 3'**  
**2401249-19 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/12/24 13:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHA0598	01/16/24	01/19/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/12/24 13:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.71	0.200	mg/kg dry	1	BHA0558	01/15/24	01/19/24	EPA 6020B	
Barium	115	0.400	"	"	"	"	"	"	
Cadmium	0.428	0.200	"	"	"	"	"	"	
Copper	7.73	0.400	"	"	"	"	"	"	
Lead	12.4	0.200	"	"	"	"	"	"	
Nickel	6.19	0.400	"	"	"	"	"	"	
Silver	0.0784	0.0200	"	"	"	"	"	"	
Zinc	32.2	0.400	"	"	"	"	"	"	
Selenium	0.401	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/12/24 13:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0550	01/15/24	01/16/24	EPA 7196A	

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

Date Sampled: **01/12/24 13:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	63.0	0.0500	mg/L dry	1	BHA0582	01/16/24	01/19/24	EPA 6020B	
Magnesium	9.21	0.0500	"	"	"	"	01/18/24	"	
Sodium	28.4	0.0500	"	"	"	"	01/19/24	"	

**Calculated Analysis**

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Project: Noble - CDOT F-65N65W 1NWSE  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**BKG05 3'**  
**2401249-19 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/12/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	<b>0.884</b>	0.00100	units	1	BHA0684	01/19/24	01/19/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/12/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>84.7</b>		%	1	BHA0525	01/15/24	01/15/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/12/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.404</b>	0.0100	mmhos/cm	1	BHA0611	01/17/24	01/17/24	EPA 120.1	

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

Date Sampled: **01/12/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.33</b>		pH Units	1	BHA0610	01/17/24	01/17/24	EPA 9045D	

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Project: Noble - CDOT F-65N65W INWSE

Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

### Volatile Organic Compounds by EPA Method 8260B - Quality Control

#### Summit Scientific

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

#### Batch BHA0591 - EPA 5030 Soil MS

##### Blank (BHA0591-BLK1)

Prepared & Analyzed: 01/16/24

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
Naphthalene	ND	0.0038	"								
Gasoline Range Hydrocarbons	ND	0.50	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0604		"	0.0400		151	50-150				S-07
<i>Surrogate: Toluene-d8</i>	0.0416		"	0.0400		104	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0413		"	0.0400		103	50-150				

##### LCS (BHA0591-BS1)

Prepared & Analyzed: 01/16/24

Benzene	0.115	0.0020	mg/kg	0.100		115	70-130				
Toluene	0.124	0.0050	"	0.100		124	70-130				
Ethylbenzene	0.114	0.0050	"	0.100		114	70-130				
m,p-Xylene	0.229	0.010	"	0.200		114	70-130				
o-Xylene	0.110	0.0050	"	0.100		110	70-130				
1,2,4-Trimethylbenzene	0.112	0.0050	"	0.100		112	70-130				
1,3,5-Trimethylbenzene	0.109	0.0050	"	0.100		109	70-130				
Naphthalene	0.0995	0.0038	"	0.100		99.5	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0570		"	0.0400		142	50-150				
<i>Surrogate: Toluene-d8</i>	0.0423		"	0.0400		106	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0419		"	0.0400		105	50-150				

##### Matrix Spike (BHA0591-MS1)

Source: 2401225-01

Prepared & Analyzed: 01/16/24

Benzene	0.0925	0.0020	mg/kg	0.100	ND	92.5	70-130				
Toluene	0.103	0.0050	"	0.100	ND	103	70-130				
Ethylbenzene	0.0933	0.0050	"	0.100	ND	93.3	70-130				
m,p-Xylene	0.190	0.010	"	0.200	ND	95.1	70-130				
o-Xylene	0.0860	0.0050	"	0.100	ND	86.0	70-130				
1,2,4-Trimethylbenzene	0.0878	0.0050	"	0.100	ND	87.8	70-130				
1,3,5-Trimethylbenzene	0.0912	0.0050	"	0.100	ND	91.2	70-130				
Naphthalene	0.0865	0.0038	"	0.100	ND	86.5	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0596		"	0.0400		149	50-150				
<i>Surrogate: Toluene-d8</i>	0.0426		"	0.0400		106	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0413		"	0.0400		103	50-150				

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 PO Box 1289  
 Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/22/24 09:46

**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 BHA0591 - EPA 5030 Soil MS**

Matrix Spike Dup (BHA0591-MSD1)	Source: 2401225-01			Prepared & Analyzed: 01/16/24						
Benzene	0.103	0.0020	mg/kg	0.100	ND	103	70-130	11.0	30	
Toluene	0.110	0.0050	"	0.100	ND	110	70-130	6.61	30	
Ethylbenzene	0.104	0.0050	"	0.100	ND	104	70-130	10.5	30	
m,p-Xylene	0.204	0.010	"	0.200	ND	102	70-130	6.93	30	
o-Xylene	0.0958	0.0050	"	0.100	ND	95.8	70-130	10.8	30	
1,2,4-Trimethylbenzene	0.0968	0.0050	"	0.100	ND	96.8	70-130	9.85	30	
1,3,5-Trimethylbenzene	0.0966	0.0050	"	0.100	ND	96.6	70-130	5.75	30	
Naphthalene	0.0949	0.0038	"	0.100	ND	94.9	70-130	9.33	30	
Surrogate: 1,2-Dichloroethane-d4	0.0615		"	0.0400		154	50-150			S-07
Surrogate: Toluene-d8	0.0431		"	0.0400		108	50-150			
Surrogate: 4-Bromofluorobenzene	0.0439		"	0.0400		110	50-150			

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Project: Noble - CDOT F-65N65W 1NWSE  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**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 BHA0593 - EPA 3550A**

**Blank (BHA0593-BLK1)**

Prepared: 01/16/24 Analyzed: 01/17/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	11.2		"	12.5		89.5	30-150				

**LCS (BHA0593-BS1)**

Prepared: 01/16/24 Analyzed: 01/17/24

C10-C28 (DRO)	422	50	mg/kg	500		84.3	70-130				
Surrogate: <i>o</i> -Terphenyl	10.2		"	12.5		81.4	30-150				

**Matrix Spike (BHA0593-MS1)**

Source: 2401225-01

Prepared: 01/16/24 Analyzed: 01/17/24

C10-C28 (DRO)	438	50	mg/kg	500	11.5	85.3	70-130				
Surrogate: <i>o</i> -Terphenyl	10.3		"	12.5		82.1	30-150				

**Matrix Spike Dup (BHA0593-MSD1)**

Source: 2401225-01

Prepared: 01/16/24 Analyzed: 01/17/24

C10-C28 (DRO)	414	50	mg/kg	500	11.5	80.4	70-130	5.72	20		
Surrogate: <i>o</i> -Terphenyl	10.9		"	12.5		87.2	30-150				

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Project: Noble - CDOT F-65N65W INWSE  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**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 BHA0571 - EPA 5030 Soil MS**

**Blank (BHA0571-BLK1)**

Prepared & Analyzed: 01/16/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0136</i>		"	<i>0.0333</i>		<i>40.9</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0270</i>		"	<i>0.0333</i>		<i>81.1</i>	<i>40-150</i>			

**LCS (BHA0571-BS1)**

Prepared & Analyzed: 01/16/24

Acenaphthene	0.0253	0.00500	mg/kg	0.0333		75.8	31-137			
Anthracene	0.0258	0.00500	"	0.0333		77.4	30-120			
Benzo (a) anthracene	0.0242	0.00500	"	0.0333		72.6	30-120			
Benzo (a) pyrene	0.0229	0.00500	"	0.0333		68.7	30-120			
Benzo (b) fluoranthene	0.0241	0.00500	"	0.0333		72.3	30-120			
Benzo (k) fluoranthene	0.0256	0.00500	"	0.0333		76.9	30-120			
Chrysene	0.0261	0.00500	"	0.0333		78.4	30-120			
Dibenz (a,h) anthracene	0.0200	0.00500	"	0.0333		60.0	30-120			
Fluoranthene	0.0262	0.00500	"	0.0333		78.7	30-120			
Fluorene	0.0258	0.00500	"	0.0333		77.5	30-120			
Indeno (1,2,3-cd) pyrene	0.0202	0.00500	"	0.0333		60.5	30-120			
Pyrene	0.0267	0.00500	"	0.0333		80.0	35-142			
1-Methylnaphthalene	0.0193	0.00500	"	0.0333		58.0	35-142			
2-Methylnaphthalene	0.0223	0.00500	"	0.0333		66.9	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0201</i>		"	<i>0.0333</i>		<i>60.2</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0266</i>		"	<i>0.0333</i>		<i>79.9</i>	<i>40-150</i>			

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Project: Noble - CDOT F-65N65W INWSE

Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**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 BHA0571 - EPA 5030 Soil MS**

<b>Matrix Spike (BHA0571-MS1)</b>	<b>Source: 2401225-01</b>			<b>Prepared &amp; Analyzed: 01/16/24</b>								
Acenaphthene	0.0145	0.00500	mg/kg	0.0333	ND	43.6	31-137					
Anthracene	0.0153	0.00500	"	0.0333	ND	45.8	30-120					
Benzo (a) anthracene	0.0162	0.00500	"	0.0333	ND	48.6	30-120					
Benzo (a) pyrene	0.0139	0.00500	"	0.0333	ND	41.8	30-120					
Benzo (b) fluoranthene	0.0142	0.00500	"	0.0333	ND	42.5	30-120					
Benzo (k) fluoranthene	0.0144	0.00500	"	0.0333	ND	43.2	30-120					
Chrysene	0.0149	0.00500	"	0.0333	ND	44.8	30-120					
Dibenz (a,h) anthracene	0.0161	0.00500	"	0.0333	ND	48.3	30-120					
Fluoranthene	0.0158	0.00500	"	0.0333	ND	47.4	30-120					
Fluorene	0.0166	0.00500	"	0.0333	ND	49.8	30-120					
Indeno (1,2,3-cd) pyrene	0.0160	0.00500	"	0.0333	ND	48.1	30-120					
Pyrene	0.0159	0.00500	"	0.0333	ND	47.7	35-142					
1-Methylnaphthalene	0.0144	0.00500	"	0.0333	ND	43.2	15-130					
2-Methylnaphthalene	0.0157	0.00500	"	0.0333	ND	47.1	15-130					
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0136</i>		<i>"</i>	<i>0.0333</i>		<i>40.8</i>	<i>40-150</i>					
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0162</i>		<i>"</i>	<i>0.0333</i>		<i>48.5</i>	<i>40-150</i>					

<b>Matrix Spike Dup (BHA0571-MSD1)</b>	<b>Source: 2401225-01</b>			<b>Prepared &amp; Analyzed: 01/16/24</b>								
Acenaphthene	0.0162	0.00500	mg/kg	0.0333	ND	48.5	31-137	10.7	30			
Anthracene	0.0168	0.00500	"	0.0333	ND	50.4	30-120	9.64	30			
Benzo (a) anthracene	0.0173	0.00500	"	0.0333	ND	51.9	30-120	6.47	30			
Benzo (a) pyrene	0.0150	0.00500	"	0.0333	ND	45.0	30-120	7.42	30			
Benzo (b) fluoranthene	0.0149	0.00500	"	0.0333	ND	44.7	30-120	5.01	30			
Benzo (k) fluoranthene	0.0153	0.00500	"	0.0333	ND	46.0	30-120	6.38	30			
Chrysene	0.0162	0.00500	"	0.0333	ND	48.7	30-120	8.39	30			
Dibenz (a,h) anthracene	0.0134	0.00500	"	0.0333	ND	40.2	30-120	18.4	30			
Fluoranthene	0.0171	0.00500	"	0.0333	ND	51.2	30-120	7.83	30			
Fluorene	0.0175	0.00500	"	0.0333	ND	52.4	30-120	5.04	30			
Indeno (1,2,3-cd) pyrene	0.0135	0.00500	"	0.0333	ND	40.5	30-120	17.2	30			
Pyrene	0.0179	0.00500	"	0.0333	ND	53.8	35-142	11.9	30			
1-Methylnaphthalene	0.0152	0.00500	"	0.0333	ND	45.6	15-130	5.26	50			
2-Methylnaphthalene	0.0156	0.00500	"	0.0333	ND	46.7	15-130	0.759	50			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0139</i>		<i>"</i>	<i>0.0333</i>		<i>41.6</i>	<i>40-150</i>					
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0177</i>		<i>"</i>	<i>0.0333</i>		<i>53.1</i>	<i>40-150</i>					

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/22/24 09:46

**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 BHA0598 - EPA 3050B**

**Blank (BHA0598-BLK1)**

Prepared: 01/16/24 Analyzed: 01/18/24

Boron ND 2.00 mg/L

**LCS (BHA0598-BS1)**

Prepared: 01/16/24 Analyzed: 01/18/24

Boron 4.73 2.00 mg/L 5.00 94.5 80-120

**Duplicate (BHA0598-DUP1)**

**Source: 2312142-01**

Prepared: 01/16/24 Analyzed: 01/18/24

Boron 0.0412 2.00 mg/L 0.0474 14.1 20

**Matrix Spike (BHA0598-MS1)**

**Source: 2312142-01**

Prepared: 01/16/24 Analyzed: 01/18/24

Boron 4.57 2.00 mg/L 5.00 0.0474 90.4 75-125

**Matrix Spike Dup (BHA0598-MSD1)**

**Source: 2312142-01**

Prepared: 01/16/24 Analyzed: 01/18/24

Boron 3.78 2.00 mg/L 5.00 0.0474 74.6 75-125 18.9 25 QM-07

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/22/24 09:46

**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 BHA0558 - EPA 3050B**

**Blank (BHA0558-BLK1)**

Prepared: 01/15/24 Analyzed: 01/19/24

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

**LCS (BHA0558-BS1)**

Prepared: 01/15/24 Analyzed: 01/19/24

Arsenic	40.5	0.200	mg/kg wet	40.0	101	80-120				
Barium	42.5	0.400	"	40.0	106	80-120				
Cadmium	2.11	0.200	"	2.00	105	80-120				
Copper	43.8	0.400	"	40.0	110	80-120				
Lead	21.4	0.200	"	20.0	107	80-120				
Nickel	43.3	0.400	"	40.0	108	80-120				
Silver	2.12	0.0200	"	2.00	106	80-120				
Zinc	43.0	0.400	"	40.0	107	80-120				
Selenium	4.52	0.260	"	4.00	113	80-120				

**Duplicate (BHA0558-DUP1)**

Source: 2401249-01

Prepared: 01/15/24 Analyzed: 01/19/24

Arsenic	4.96	0.200	mg/kg dry	4.57	8.23	20				
Barium	109	0.400	"	98.2	9.99	20				
Cadmium	0.461	0.200	"	0.439	4.81	20				
Copper	8.79	0.400	"	8.00	9.35	20				
Lead	14.0	0.200	"	12.8	9.47	20				
Nickel	6.73	0.400	"	6.33	6.09	20				
Silver	0.117	0.0200	"	0.0777	40.0	20				QR-01
Zinc	51.6	0.400	"	93.9	58.3	20				QR-04
Selenium	0.535	0.260	"	0.608	12.7	20				

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F-65N65W INWSE

Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

**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 BHA0558 - EPA 3050B**

**Matrix Spike (BHA0558-MS1)**

Source: 2401249-01

Prepared: 01/15/24 Analyzed: 01/19/24

Arsenic	37.7	0.200	mg/kg dry	49.2	4.57	67.4	75-125				QM-07
Barium	127	0.400	"	49.2	98.2	58.5	75-125				QM-07
Cadmium	2.16	0.200	"	2.46	0.439	70.1	75-125				QM-07
Copper	28.2	0.400	"	49.2	8.00	41.1	75-125				QM-07
Lead	28.7	0.200	"	24.6	12.8	64.7	75-125				QM-07
Nickel	26.5	0.400	"	49.2	6.33	41.0	75-125				QM-07
Silver	1.82	0.0200	"	2.46	0.0777	70.7	75-125				QM-07
Zinc	110	0.400	"	49.2	93.9	32.4	75-125				QM-07
Selenium	4.22	0.260	"	4.92	0.608	73.5	75-125				QM-07

**Matrix Spike Dup (BHA0558-MSD1)**

Source: 2401249-01

Prepared: 01/15/24 Analyzed: 01/19/24

Arsenic	38.1	0.200	mg/kg dry	49.2	4.57	68.2	75-125	1.04	25		QM-07
Barium	131	0.400	"	49.2	98.2	66.4	75-125	3.02	25		QM-07
Cadmium	2.25	0.200	"	2.46	0.439	73.6	75-125	3.86	25		QM-07
Copper	29.2	0.400	"	49.2	8.00	43.1	75-125	3.40	25		QM-07
Lead	29.6	0.200	"	24.6	12.8	68.6	75-125	3.30	25		QM-07
Nickel	27.5	0.400	"	49.2	6.33	43.0	75-125	3.49	25		QM-07
Silver	1.89	0.0200	"	2.46	0.0777	73.7	75-125	4.01	25		QM-07
Zinc	114	0.400	"	49.2	93.9	40.3	75-125	3.49	25		QM-07
Selenium	4.23	0.260	"	4.92	0.608	73.7	75-125	0.268	25		QM-07

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/22/24 09:46

**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 BHA0550 - 3060A Mod**

**Blank (BHA0550-BLK1)**

Prepared: 01/15/24 Analyzed: 01/16/24

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BHA0550-BS1)**

Prepared: 01/15/24 Analyzed: 01/16/24

Chromium, Hexavalent 21.6 0.30 mg/kg wet 25.0 86.4 80-120

**Duplicate (BHA0550-DUP1)**

**Source: 2401249-01**

Prepared: 01/15/24 Analyzed: 01/16/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BHA0550-MS1)**

**Source: 2401249-01**

Prepared: 01/15/24 Analyzed: 01/16/24

Chromium, Hexavalent 27.6 0.30 mg/kg dry 30.7 ND 89.8 75-125

**Matrix Spike Dup (BHA0550-MSD1)**

**Source: 2401249-01**

Prepared: 01/15/24 Analyzed: 01/16/24

Chromium, Hexavalent 27.1 0.30 mg/kg dry 30.7 ND 88.2 75-125 1.80 20

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/22/24 09:46

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

**Summit Scientific**

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

**Batch BHA0582 - General Preparation**

**Blank (BHA0582-BLK1)**

Prepared: 01/16/24 Analyzed: 01/18/24

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

**LCS (BHA0582-BS1)**

Prepared: 01/16/24 Analyzed: 01/18/24

Calcium	5.82	0.0500	mg/L wet	5.00		116	70-130			
Magnesium	5.56	0.0500	"	5.00		111	70-130			
Sodium	5.48	0.0500	"	5.00		110	70-130			

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/22/24 09:46

**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 BHA0525 - General Preparation**


**Duplicate (BHA0525-DUP1)**

**Source: 2401249-01**

**Prepared & Analyzed: 01/15/24**

% Solids	83.7		%		81.3			2.93	20	
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Summit Scientific



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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/22/24 09:46

**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 BHA0611 - General Preparation**

**Blank (BHA0611-BLK1)**

Prepared & Analyzed: 01/17/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BHA0611-BS1)**

Prepared & Analyzed: 01/17/24

Specific Conductance (EC) 0.150 0.0100 mmhos/cm 0.150 100 95-105

**Duplicate (BHA0611-DUP1)**

Source: 2401249-01

Prepared & Analyzed: 01/17/24

Specific Conductance (EC) 1.43 0.0100 mmhos/cm 1.46 1.52 20

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/22/24 09:46

**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 BHA0610 - General Preparation**

**LCS (BHA0610-BS1)**

Prepared & Analyzed: 01/17/24

pH 9.12 pH Units 9.18 99.3 95-105

**Duplicate (BHA0610-DUP1)**

Source: 2401249-01

Prepared & Analyzed: 01/17/24

pH 7.58 pH Units 7.61 0.395 20

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F-65N65W 1NWSE

Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/22/24 09:46

### Notes and Definitions

- S-07 The surrogate recovery was outside acceptance limits indicating a potential high bias. The sample did not exhibit concentrations above reporting level for analytes represented by this surrogate. Data quality is not affected.
- 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.
- 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

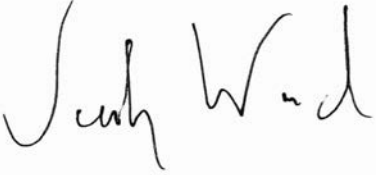
303.277.9310

January 24, 2024

Paul Henchan  
Fremont Environmental  
PO Box 1289  
Wellington, CO 80549  
RE: Noble - CDOT F01-10  
Work Order #2401250

Enclosed are the results of analyses for samples received by Summit Scientific on 01/12/24 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Jacob Wood". The signature is written in a cursive style with a blue background behind it.

Jacob Wood For Paul Shrewsbury  
President



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F01-10  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/24/24 09:08

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01 3'	2401250-01	Soil	01/12/24 13:50	01/12/24 16:30
FL02 3'	2401250-02	Soil	01/12/24 13:55	01/12/24 16:30
BKG 3'	2401250-03	Soil	01/12/24 14:00	01/12/24 16:30

Summit Scientific

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

Lab ID Page 1 of 1  
2401250

Client: Fremont Environmental	Send Data To: Project Manager: Paul Henchan	Send Invoice To: Company: Noble
Address:	E-Mail: Fremont Distribution List	Project Name/Location:
City/State/Zip:		AFE#:
Phone: 303-261-6246	Project Name: CDOT FOI-10	PO/Billing Codes: UWAWE-A3472-ABN
Sampler Name: Stanley Gilbert	Project Number:	Contact: Mike Montoya

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Air-Canister #	Analysis Requested							Special Instructions
					HCl	HNO3	None	Other	Water	Soil		Other	BTEX, TMBs, Naph.	TPH	PAH (915)	EC, SAR, Ph, Boron	Metals (915)	TDS, Chloride, Sulfate	
1	FLO1 3'	1/12/23	13:50	2			X			X		X	X	X	X				
2	FLO2 3'		13:55	2								X	X	X	X				
3	BHG 3'		14:00	2										X	X				
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by:	Date/Time: 1/12/23 15:30	Received by: Summit North	Date/Time: 1/12/23 15:30	TAT Business Days	Field DO	Notes:
Relinquished by:	Date/Time: 1/22/24 16:30	Received by:	Date/Time: 1/22/24 14:30	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 9.3	Corrected Temperature: 0	IR gun #: 1	HNO3 lot #:			

S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 2401250

Client: Fremont Client Project ID: C DOT FOI-10

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

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

Temp (°C)

Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> <b>NOTE:</b> If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , 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? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	no time stamps
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)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> 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):				

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

*AS*

Custodian Printed Name

1/12/24  
Date/Time



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F01-10  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/24/24 09:08

**FL01 3'**  
**2401250-01 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **01/12/24 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0591	01/16/24	01/17/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/12/24 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0607	152 %		50-150		"	"	"	"	S-07
Surrogate: Toluene-d8	0.0411	103 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0429	107 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/12/24 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0593	01/16/24	01/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/12/24 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.10	56.8 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F01-10  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/24/24 09:08

**FL01 3'**  
**2401250-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/12/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0541	01/15/24	01/16/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/12/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0193	58.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0215	64.5 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/12/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHA0625	01/17/24	01/19/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/12/24 13:50**

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

Project: Noble - CDOT F01-10  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/24/24 09:08

**FL01 3'**  
**2401250-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	0.632	0.200	mg/kg dry	1	BHA0557	01/15/24	01/19/24	EPA 6020B
Barium	14.7	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	ND	0.400	"	"	"	"	"	"
Lead	1.21	0.200	"	"	"	"	"	"
Nickel	0.583	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	1.88	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 01/12/24 13:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0549	01/15/24	01/23/24	EPA 7196A	

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

Date Sampled: 01/12/24 13:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	33.2	0.0500	mg/L dry	1	BHA0582	01/16/24	01/18/24	EPA 6020B	
Magnesium	4.90	0.0500	"	"	"	"	"	"	
Sodium	1.37	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 01/12/24 13:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0587	0.00100	units	1	BHA0684	01/19/24	01/19/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Project: Noble - CDOT F01-10  
 Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/24/24 09:08

**FL01 3'**  
**2401250-01 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/12/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	98.1		%	1	BHA0525	01/15/24	01/15/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/12/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.114	0.0100	mmhos/cm	1	BHA0611	01/17/24	01/17/24	EPA 120.1	

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

Date Sampled: **01/12/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.06		pH Units	1	BHA0610	01/17/24	01/17/24	EPA 9045D	

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Project: Noble - CDOT F01-10  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/24/24 09:08

**FL02 3'**  
**2401250-02 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **01/12/24 13:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA0591	01/16/24	01/17/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/12/24 13:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0617	154 %		50-150		"	"	"	"	S-07
Surrogate: Toluene-d8	0.0400	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/12/24 13:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA0593	01/16/24	01/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/12/24 13:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.44	59.5 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Noble - CDOT F01-10  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/24/24 09:08

**FL02 3'**  
**2401250-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/12/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0541	01/15/24	01/16/24	EPA 8270D SIM	
<b>Anthracene</b>	<b>0.00605</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (a) anthracene</b>	<b>0.0122</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (a) pyrene</b>	<b>0.0132</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>0.0160</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (k) fluoranthene</b>	<b>0.00675</b>	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.0120</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.0307</b>	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.0288</b>	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/12/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0136	40.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0157	47.1 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/12/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHA0625	01/17/24	01/19/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/12/24 13:55**

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

Project: Noble - CDOT F01-10  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/24/24 09:08

**FL02 3'**  
**2401250-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.50	0.200	mg/kg dry	1	BHA0557	01/15/24	01/19/24	EPA 6020B
Barium	131	0.400	"	"	"	"	"	"
Cadmium	0.287	0.200	"	"	"	"	"	"
Copper	2.93	0.400	"	"	"	"	"	"
Lead	11.4	0.200	"	"	"	"	"	"
Nickel	2.67	0.400	"	"	"	"	"	"
Silver	0.0734	0.0200	"	"	"	"	"	"
Zinc	11.8	0.400	"	"	"	"	"	"
Selenium	0.301	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/12/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0549	01/15/24	01/23/24	EPA 7196A	

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

Date Sampled: **01/12/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	34.9	0.0500	mg/L dry	1	BHA0582	01/16/24	01/18/24	EPA 6020B	
Magnesium	7.11	0.0500	"	"	"	"	"	"	
Sodium	11.3	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/12/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.456	0.00100	units	1	BHA0684	01/19/24	01/19/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/12/24 13:55**

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

Project: Noble - CDOT F01-10  
 Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/24/24 09:08

**FL02 3'**  
**2401250-02 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	77.3	%	1	BHA0525	01/15/24	01/15/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/12/24 13:55**

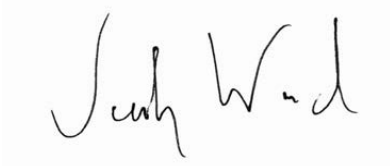
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.278</b>	0.0100	mmhos/cm	1	BHA0611	01/17/24	01/17/24	EPA 120.1	

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

Date Sampled: **01/12/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.13</b>		pH Units	1	BHA0610	01/17/24	01/17/24	EPA 9045D	

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Project: Noble - CDOT F01-10  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/24/24 09:08

**BKG 3'**  
**2401250-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/12/24 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHA0625	01/17/24	01/19/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/12/24 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Arsenic</b>	<b>1.19</b>	0.200	mg/kg dry	1	BHA0557	01/15/24	01/19/24	EPA 6020B	
<b>Barium</b>	<b>15.6</b>	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
<b>Copper</b>	<b>1.36</b>	0.400	"	"	"	"	"	"	
<b>Lead</b>	<b>1.76</b>	0.200	"	"	"	"	"	"	
<b>Nickel</b>	<b>0.875</b>	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
<b>Zinc</b>	<b>2.84</b>	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/12/24 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0549	01/15/24	01/23/24	EPA 7196A	

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

Date Sampled: **01/12/24 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Calcium</b>	<b>31.7</b>	0.0500	mg/L dry	1	BHA0582	01/16/24	01/18/24	EPA 6020B	
<b>Magnesium</b>	<b>5.45</b>	0.0500	"	"	"	"	"	"	
<b>Sodium</b>	<b>1.61</b>	0.0500	"	"	"	"	"	"	

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Project: Noble - CDOT F01-10  
 Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/24/24 09:08

**BKG 3'**  
**2401250-03 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/12/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0695	0.00100	units	1	BHA0684	01/19/24	01/19/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/12/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.5		%	1	BHA0525	01/15/24	01/15/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/12/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.109	0.0100	mmhos/cm	1	BHA0611	01/17/24	01/17/24	EPA 120.1	

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

Date Sampled: **01/12/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.09		pH Units	1	BHA0610	01/17/24	01/17/24	EPA 9045D	

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Project: Noble - CDOT F01-10  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/24/24 09:08

### 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 BHA0591 - EPA 5030 Soil MS

##### Blank (BHA0591-BLK1)

Prepared & Analyzed: 01/16/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0604		"	0.0400		151	50-150			S-07
Surrogate: Toluene-d8	0.0416		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0413		"	0.0400		103	50-150			

##### LCS (BHA0591-BS1)

Prepared & Analyzed: 01/16/24

Benzene	0.115	0.0020	mg/kg	0.100		115	70-130			
Toluene	0.124	0.0050	"	0.100		124	70-130			
Ethylbenzene	0.114	0.0050	"	0.100		114	70-130			
m,p-Xylene	0.229	0.010	"	0.200		114	70-130			
o-Xylene	0.110	0.0050	"	0.100		110	70-130			
1,2,4-Trimethylbenzene	0.112	0.0050	"	0.100		112	70-130			
1,3,5-Trimethylbenzene	0.109	0.0050	"	0.100		109	70-130			
Naphthalene	0.0995	0.0038	"	0.100		99.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0570		"	0.0400		142	50-150			
Surrogate: Toluene-d8	0.0423		"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene	0.0419		"	0.0400		105	50-150			

##### Matrix Spike (BHA0591-MS1)

Source: 2401225-01

Prepared & Analyzed: 01/16/24

Benzene	0.0925	0.0020	mg/kg	0.100	ND	92.5	70-130			
Toluene	0.103	0.0050	"	0.100	ND	103	70-130			
Ethylbenzene	0.0933	0.0050	"	0.100	ND	93.3	70-130			
m,p-Xylene	0.190	0.010	"	0.200	ND	95.1	70-130			
o-Xylene	0.0860	0.0050	"	0.100	ND	86.0	70-130			
1,2,4-Trimethylbenzene	0.0878	0.0050	"	0.100	ND	87.8	70-130			
1,3,5-Trimethylbenzene	0.0912	0.0050	"	0.100	ND	91.2	70-130			
Naphthalene	0.0865	0.0038	"	0.100	ND	86.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0596		"	0.0400		149	50-150			
Surrogate: Toluene-d8	0.0426		"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene	0.0413		"	0.0400		103	50-150			

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - CDOT F01-10  
 Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/24/24 09:08

**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 BHA0591 - EPA 5030 Soil MS**

Matrix Spike Dup (BHA0591-MSD1)	Source: 2401225-01			Prepared & Analyzed: 01/16/24						
Benzene	0.103	0.0020	mg/kg	0.100	ND	103	70-130	11.0	30	
Toluene	0.110	0.0050	"	0.100	ND	110	70-130	6.61	30	
Ethylbenzene	0.104	0.0050	"	0.100	ND	104	70-130	10.5	30	
m,p-Xylene	0.204	0.010	"	0.200	ND	102	70-130	6.93	30	
o-Xylene	0.0958	0.0050	"	0.100	ND	95.8	70-130	10.8	30	
1,2,4-Trimethylbenzene	0.0968	0.0050	"	0.100	ND	96.8	70-130	9.85	30	
1,3,5-Trimethylbenzene	0.0966	0.0050	"	0.100	ND	96.6	70-130	5.75	30	
Naphthalene	0.0949	0.0038	"	0.100	ND	94.9	70-130	9.33	30	
Surrogate: 1,2-Dichloroethane-d4	0.0615		"	0.0400		154	50-150			S-07
Surrogate: Toluene-d8	0.0431		"	0.0400		108	50-150			
Surrogate: 4-Bromofluorobenzene	0.0439		"	0.0400		110	50-150			

Summit Scientific

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 Wellington CO, 80549

Project: Noble - CDOT F01-10  
 Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/24/24 09:08

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch BHA0593 - EPA 3550A**

**Blank (BHA0593-BLK1)**

Prepared: 01/16/24 Analyzed: 01/17/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	11.2		"	12.5		89.5	30-150			

**LCS (BHA0593-BS1)**

Prepared: 01/16/24 Analyzed: 01/17/24

C10-C28 (DRO)	422	50	mg/kg	500		84.3	70-130			
Surrogate: <i>o</i> -Terphenyl	10.2		"	12.5		81.4	30-150			

**Matrix Spike (BHA0593-MS1)**

Source: 2401225-01

Prepared: 01/16/24 Analyzed: 01/17/24

C10-C28 (DRO)	438	50	mg/kg	500	11.5	85.3	70-130			
Surrogate: <i>o</i> -Terphenyl	10.3		"	12.5		82.1	30-150			

**Matrix Spike Dup (BHA0593-MSD1)**

Source: 2401225-01

Prepared: 01/16/24 Analyzed: 01/17/24

C10-C28 (DRO)	414	50	mg/kg	500	11.5	80.4	70-130	5.72	20	
Surrogate: <i>o</i> -Terphenyl	10.9		"	12.5		87.2	30-150			

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PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F01-10  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/24/24 09:08

**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 BHA0541 - EPA 5030 Soil MS**

**Blank (BHA0541-BLK1)**

Prepared & Analyzed: 01/15/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0262		"	0.0333		78.5	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0293		"	0.0333		88.0	40-150			

**LCS (BHA0541-BS1)**

Prepared & Analyzed: 01/15/24

Acenaphthene	0.0240	0.00500	mg/kg	0.0333		72.1	31-137			
Anthracene	0.0243	0.00500	"	0.0333		72.9	30-120			
Benzo (a) anthracene	0.0188	0.00500	"	0.0333		56.3	30-120			
Benzo (a) pyrene	0.0220	0.00500	"	0.0333		66.0	30-120			
Benzo (b) fluoranthene	0.0199	0.00500	"	0.0333		59.6	30-120			
Benzo (k) fluoranthene	0.0223	0.00500	"	0.0333		67.0	30-120			
Chrysene	0.0259	0.00500	"	0.0333		77.7	30-120			
Dibenz (a,h) anthracene	0.0194	0.00500	"	0.0333		58.2	30-120			
Fluoranthene	0.0238	0.00500	"	0.0333		71.4	30-120			
Fluorene	0.0241	0.00500	"	0.0333		72.3	30-120			
Indeno (1,2,3-cd) pyrene	0.0210	0.00500	"	0.0333		63.1	30-120			
Pyrene	0.0300	0.00500	"	0.0333		89.9	35-142			
1-Methylnaphthalene	0.0271	0.00500	"	0.0333		81.3	35-142			
2-Methylnaphthalene	0.0190	0.00500	"	0.0333		57.1	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0291		"	0.0333		87.4	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0235		"	0.0333		70.5	40-150			

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Project: Noble - CDOT F01-10  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/24/24 09:08

**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 BHA0541 - EPA 5030 Soil MS**

**Matrix Spike (BHA0541-MS1)**

Source: 2401215-02

Prepared & Analyzed: 01/15/24

Acenaphthene	0.0219	0.00500	mg/kg	0.0333	ND	65.7	31-137			
Anthracene	0.0219	0.00500	"	0.0333	ND	65.8	30-120			
Benzo (a) anthracene	0.0187	0.00500	"	0.0333	ND	56.2	30-120			
Benzo (a) pyrene	0.0183	0.00500	"	0.0333	ND	55.0	30-120			
Benzo (b) fluoranthene	0.0154	0.00500	"	0.0333	ND	46.1	30-120			
Benzo (k) fluoranthene	0.0182	0.00500	"	0.0333	ND	54.6	30-120			
Chrysene	0.0217	0.00500	"	0.0333	ND	65.0	30-120			
Dibenz (a,h) anthracene	0.0162	0.00500	"	0.0333	ND	48.5	30-120			
Fluoranthene	0.0222	0.00500	"	0.0333	ND	66.7	30-120			
Fluorene	0.0219	0.00500	"	0.0333	ND	65.6	30-120			
Indeno (1,2,3-cd) pyrene	0.0165	0.00500	"	0.0333	ND	49.4	30-120			
Pyrene	0.0256	0.00500	"	0.0333	ND	76.9	35-142			
1-Methylnaphthalene	0.0220	0.00500	"	0.0333	ND	65.9	15-130			
2-Methylnaphthalene	0.0158	0.00500	"	0.0333	ND	47.5	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0228		"	0.0333		68.5	40-150			
Surrogate: Fluoranthene-d10	0.0234		"	0.0333		70.2	40-150			

**Matrix Spike Dup (BHA0541-MSD1)**

Source: 2401215-02

Prepared & Analyzed: 01/15/24

Acenaphthene	0.0249	0.00500	mg/kg	0.0333	ND	74.6	31-137	12.7	30
Anthracene	0.0255	0.00500	"	0.0333	ND	76.4	30-120	15.0	30
Benzo (a) anthracene	0.0164	0.00500	"	0.0333	ND	49.2	30-120	13.3	30
Benzo (a) pyrene	0.0225	0.00500	"	0.0333	ND	67.6	30-120	20.5	30
Benzo (b) fluoranthene	0.0199	0.00500	"	0.0333	ND	59.6	30-120	25.5	30
Benzo (k) fluoranthene	0.0219	0.00500	"	0.0333	ND	65.6	30-120	18.3	30
Chrysene	0.0254	0.00500	"	0.0333	ND	76.1	30-120	15.7	30
Dibenz (a,h) anthracene	0.0188	0.00500	"	0.0333	ND	56.5	30-120	15.3	30
Fluoranthene	0.0251	0.00500	"	0.0333	ND	75.4	30-120	12.3	30
Fluorene	0.0245	0.00500	"	0.0333	ND	73.5	30-120	11.2	30
Indeno (1,2,3-cd) pyrene	0.0192	0.00500	"	0.0333	ND	57.7	30-120	15.4	30
Pyrene	0.0291	0.00500	"	0.0333	ND	87.2	35-142	12.6	30
1-Methylnaphthalene	0.0244	0.00500	"	0.0333	ND	73.1	15-130	10.4	50
2-Methylnaphthalene	0.0197	0.00500	"	0.0333	ND	59.2	15-130	22.0	50
Surrogate: 2-Methylnaphthalene-d10	0.0263		"	0.0333		78.8	40-150		
Surrogate: Fluoranthene-d10	0.0266		"	0.0333		79.7	40-150		

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - CDOT F01-10  
 Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/24/24 09:08

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

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

**Batch BHA0625 - EPA 3050B**

**Blank (BHA0625-BLK1)**

Prepared: 01/17/24 Analyzed: 01/19/24

Boron ND 2.00 mg/L

**LCS (BHA0625-BS1)**

Prepared: 01/17/24 Analyzed: 01/19/24

Boron 4.23 2.00 mg/L 5.00 84.6 80-120

**Duplicate (BHA0625-DUP1)**

Source: 2401059-02

Prepared: 01/17/24 Analyzed: 01/19/24

Boron 5.97 2.00 mg/L 5.35 11.0 20

**Matrix Spike (BHA0625-MS1)**

Source: 2401059-02

Prepared: 01/17/24 Analyzed: 01/19/24

Boron 9.33 2.00 mg/L 5.00 5.35 79.7 75-125

**Matrix Spike Dup (BHA0625-MSD1)**

Source: 2401059-02

Prepared: 01/17/24 Analyzed: 01/19/24

Boron 10.0 2.00 mg/L 5.00 5.35 93.1 75-125 6.93 25

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PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F01-10  
Project Number: UWRWE-A3472-ABN  
Project Manager: Paul Henchan

**Reported:**  
01/24/24 09:08

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BHA0557 - EPA 3050B**

**Blank (BHA0557-BLK1)**

Prepared: 01/15/24 Analyzed: 01/19/24

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

**LCS (BHA0557-BS1)**

Prepared: 01/15/24 Analyzed: 01/19/24

Arsenic	40.4	0.200	mg/kg wet	40.0		101	80-120
Barium	40.7	0.400	"	40.0		102	80-120
Cadmium	2.03	0.200	"	2.00		102	80-120
Copper	40.3	0.400	"	40.0		101	80-120
Lead	21.0	0.200	"	20.0		105	80-120
Nickel	40.6	0.400	"	40.0		101	80-120
Silver	1.99	0.0200	"	2.00		99.7	80-120
Zinc	39.6	0.400	"	40.0		99.0	80-120
Selenium	4.66	0.260	"	4.00		116	80-120

**Duplicate (BHA0557-DUP1)**

Source: 2401222-01

Prepared: 01/15/24 Analyzed: 01/19/24

Arsenic	1.32	0.200	mg/kg dry	1.34		0.872	20
Barium	129	0.400	"	113		13.2	20
Cadmium	0.291	0.200	"	0.323		10.3	20
Copper	3.88	0.400	"	3.97		2.40	20
Lead	12.7	0.200	"	13.9		8.72	20
Nickel	3.85	0.400	"	3.57		7.39	20
Silver	0.0543	0.0200	"	0.0497		8.93	20
Zinc	13.0	0.400	"	12.8		1.97	20
Selenium	0.382	0.260	"	0.331		14.4	20

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 Wellington CO, 80549

Project: Noble - CDOT F01-10

Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/24/24 09:08

**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 BHA0557 - EPA 3050B**

**Matrix Spike (BHA0557-MS1)**

Source: 2401222-01

Prepared: 01/15/24 Analyzed: 01/19/24

Arsenic	14.4	0.200	mg/kg dry	46.4	1.34	28.3	75-125				QM-07
Barium	186	0.400	"	46.4	113	157	75-125				QM-07
Cadmium	2.57	0.200	"	2.32	0.323	96.9	75-125				
Copper	17.1	0.400	"	46.4	3.97	28.2	75-125				QM-07
Lead	32.0	0.200	"	23.2	13.9	78.1	75-125				
Nickel	17.1	0.400	"	46.4	3.57	29.2	75-125				QM-07
Silver	2.24	0.0200	"	2.32	0.0497	94.5	75-125				
Zinc	25.7	0.400	"	46.4	12.8	27.9	75-125				QM-07
Selenium	5.25	0.260	"	4.64	0.331	106	75-125				

**Matrix Spike Dup (BHA0557-MSD1)**

Source: 2401222-01

Prepared: 01/15/24 Analyzed: 01/19/24

Arsenic	14.6	0.200	mg/kg dry	46.4	1.34	28.6	75-125	1.18	25		QM-07
Barium	182	0.400	"	46.4	113	148	75-125	2.30	25		QM-07
Cadmium	2.52	0.200	"	2.32	0.323	94.8	75-125	1.93	25		
Copper	16.9	0.400	"	46.4	3.97	27.9	75-125	0.984	25		QM-07
Lead	31.4	0.200	"	23.2	13.9	75.5	75-125	1.92	25		
Nickel	17.1	0.400	"	46.4	3.57	29.2	75-125	0.0406	25		QM-07
Silver	2.21	0.0200	"	2.32	0.0497	93.1	75-125	1.40	25		
Zinc	25.4	0.400	"	46.4	12.8	27.2	75-125	1.27	25		QM-07
Selenium	5.06	0.260	"	4.64	0.331	102	75-125	3.81	25		

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Project: Noble - CDOT F01-10  
 Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/24/24 09:08

**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 BHA0549 - 3060A Mod**

**Blank (BHA0549-BLK1)**

Prepared: 01/15/24 Analyzed: 01/23/24

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BHA0549-BS1)**

Prepared: 01/15/24 Analyzed: 01/23/24

Chromium, Hexavalent 23.6 0.30 mg/kg wet 25.0 94.2 80-120

**Duplicate (BHA0549-DUP1)**

**Source: 2312507-06**

Prepared: 01/15/24 Analyzed: 01/23/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BHA0549-MS1)**

**Source: 2312507-06**

Prepared: 01/15/24 Analyzed: 01/23/24

Chromium, Hexavalent 23.6 0.30 mg/kg dry 26.3 ND 89.6 75-125

**Matrix Spike Dup (BHA0549-MSD1)**

**Source: 2312507-06**

Prepared: 01/15/24 Analyzed: 01/23/24

Chromium, Hexavalent 23.4 0.30 mg/kg dry 26.3 ND 89.0 75-125 0.672 20

Summit Scientific

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Project: Noble - CDOT F01-10  
 Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/24/24 09:08

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

**Summit Scientific**

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

**Batch BHA0582 - General Preparation**

**Blank (BHA0582-BLK1)**

Prepared: 01/16/24 Analyzed: 01/18/24

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

**LCS (BHA0582-BS1)**

Prepared: 01/16/24 Analyzed: 01/18/24

Calcium	5.82	0.0500	mg/L wet	5.00		116	70-130			
Magnesium	5.56	0.0500	"	5.00		111	70-130			
Sodium	5.48	0.0500	"	5.00		110	70-130			

Summit Scientific

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Project: Noble - CDOT F01-10

Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/24/24 09:08

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

**Summit Scientific**

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

**Batch BHA0525 - General Preparation**

**Duplicate (BHA0525-DUP1)**

**Source: 2401249-01**

Prepared & Analyzed: 01/15/24

% Solids	83.7		%		81.3			2.93	20	
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Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - CDOT F01-10  
 Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/24/24 09:08

**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 BHA0611 - General Preparation**

**Blank (BHA0611-BLK1)**

Prepared & Analyzed: 01/17/24

Specific Conductance (EC)      ND      0.0100    mmhos/cm

**LCS (BHA0611-BS1)**

Prepared & Analyzed: 01/17/24

Specific Conductance (EC)      0.150      0.0100    mmhos/cm      0.150      100      95-105

**Duplicate (BHA0611-DUP1)**

**Source: 2401249-01**

Prepared & Analyzed: 01/17/24

Specific Conductance (EC)      1.43      0.0100    mmhos/cm      1.46      1.52      20

Summit Scientific

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 PO Box 1289  
 Wellington CO, 80549

Project: Noble - CDOT F01-10  
 Project Number: UWRWE-A3472-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 01/24/24 09:08

**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 BHA0610 - General Preparation**

**LCS (BHA0610-BS1)**

Prepared & Analyzed: 01/17/24

pH 9.12 pH Units 9.18 99.3 95-105

**Duplicate (BHA0610-DUP1)**

Source: 2401249-01

Prepared & Analyzed: 01/17/24

pH 7.58 pH Units 7.61 0.395 20

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - CDOT F01-10

Project Number: UWRWE-A3472-ABN

Project Manager: Paul Henchan

**Reported:**  
01/24/24 09:08

### Notes and Definitions

- S-07 The surrogate recovery was outside acceptance limits indicating a potential high bias. The sample did not exhibit concentrations above reporting level for analytes represented by this surrogate. Data quality is not affected.
- 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