

FREMONT ENVIRONMENTAL INC.

May 24, 2024

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

Subject: **Facility Closure Data Submittal**
 Amigo-66N64W 17NWNE
 NWNE Sec. 17, T6N, R64W
 Weld County, Colorado
 Fremont Project No. C024-015
 Facility # 330135, Remediation # 29502

Dear Mr. Peterson:

As you requested, Fremont Environmental Inc. (Fremont) personnel conducted facility closure activities for the Noble Energy Inc. (Noble) Amigo-66N64W 17NWNE. Impacted soil was not encountered during abandonment activities. Details of the Amigo-66N64W 17NWNE facility closure activities are documented in the attached Closure Report. Groundwater was not encountered during facility decommissioning activities.

Please contact me at (303) 261-6246 if you require any additional information. Fremont appreciates the opportunity to provide this service.

Sincerely,

FREMONT ENVIRONMENTAL INC.



Stanley Gilbert
Environmental Scientist

Attachments:
 Facility Closure Checklist
 Tables
 Figures
 Photos
 Laboratory Report

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

Tank Battery Closure Checklist

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

Additional attachments (optional):		Pit Closure		Wellhead Closure		Flowline Closure	X	Partially Buried Vault Closure
Site Name & COGCC Facility Number: AMIGO-66N64W 17NWNE Facility #330135		Date: 01/19/2024						Remediation Project #: 29502
Associated Wells: Amigo 17-12 API:05-123-18484		Age of Site: 1994						Number of Photos Attached: 16
Location: (GPS coordinates of southeaster berm) 40.4924379, -104.5720466							Estimated Facility Size (acres): ~1 Acre	
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.) Good housekeeping. General condition for all the on-site equipment looked fine. Waste management well maintained.								
USCS Soil Type: SC					Estimated Depth to Groundwater: >4'			
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) None observed								
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) None observed								
Tanks								
Tank Contents	OIL	OIL						
Size (barrels)	300	300						
Age	1994	1994						
Construction Material	Steel	Steel						
Tank type (AST/DRU, etc.)	AST	AST						
Visual Integrity of Tank	Good	Good						
Condition of tank footprint	Good	Good						
PID Readings	Highest PID 0.0ppm	Highest PID 0.0ppm						
Soil impacts present at valves or hatches?	No	No						
PID Readings	See attached	See attached						
Sample taken? Location/ Sample ID#	Yes, see attached	Yes, see attached						
Photo Number(s)	See attached	See attached						
Other observations regarding tanks:								
Separators								
Separator size	Unknown	Unknown						
Vertical or Horizontal	Horizontal	Horizontal						
Age	1994	1994						
Soil impacts observed? If yes,	No	No						
PID Readings	Highest PID 0.0ppm	Highest PID 13.1ppm						
Sample taken? Location/ Sample ID#	Yes, see attached	Yes, see attached						
Photo Number(s)	See attached	See attached						
Other observations regarding separators								
Third Party Equipment								
Type								
Age								

Third Party									
Removal Date									
Sample taken?									
PID Readings									
Photo Number(s)									

Other Facility Equipment				
Equipment type	Flare	Flare		
Equipment Condition	Good	Good		
Age	1994	1994		
Soil impacts observed during	No	No		
PID Readings	Highest PID 0.2ppm	Highest PID 0.0ppm		
Sample taken?	Yes, see attached	Yes, see attached		
Photo Number(s)	See attached	See attached		

Other observations regarding other facility or third party equipment:

Meter house was removed prior to sampling activities

Summary	
Was impacted soil identified?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - less than 10 cubic yards <input type="checkbox"/> Yes - more than 10 cubic yards
Total number of samples field screened:	2
Highest PID Reading:	13.1ppm (SEP02 DL 3')
Total number of samples collected:	6
Total number of samples submitted to lab for analysis:	4
If more than 10 cubic yards of impacted soil were observed:	
Vertical extent:	N/A
Estimated spill volume:	N/A
Lateral extent:	N/A
Volume of soil removed:	N/A
Is additional investigation required? No	
Was groundwater encountered during the investigation?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - not impacted or in contact with impacted soils <input type="checkbox"/> Yes - groundwater impacted and/or in contact with impacted soils
Measured depth to groundwater:	Was remedial groundwater removal conducted? <input type="checkbox"/> Yes <input type="checkbox"/> No
Date Groundwater was encountered:	Commencement date of removal:
Sheen on groundwater?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Volume of groundwater removed prior to sampling:	
Free product observed?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Volume of groundwater removed post sampling:	
Total number of samples collected:	Total Volume of groundwater removed:
Total number of samples submitted to lab for analysis:	

Buried or Partially Buried Vessel Closure Checklist

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

Additional attachments (optional):		Pit Closure		Wellhead Closure		Flowline Closure		Tank Battery Closure
Site Name & COGCC Facility Number: AMIGO-66N64W 17NWNE Facility #:330135		Date: 01/19/2024						Remediation Project #: 29502
Associated Wells: <small>Amigo 17-12 API:05-123-18484</small>		Age of Site: 1994						Number of Photos Attached: 16
Location: (GPS coordinates of vault or southeastern tank berm for multiple)							40.4924379, -104.5720466	
							Estimated Facility Size (acres): ~1 Acre	

General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)

Good housekeeping. General condition for all the on-site equipment looked fine. Waste management well maintained.

USCS Soil Type: SC	Estimated Depth to Groundwater: >4'
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Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)

None observed

Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)

None observed

Buried or Partially Buried Vessels

Tank Contents	Produced water	Produced water							
Size (barrels)	100	100							
Age	1994	1994							
Construction Material	Concrete	Concrete							
Visual Integrity of Tank	Good	Good							
Condition of tank	Good	Good							
PID Readings	Highest PID 0.1ppm	Highest PID 0.6ppm							
Condition of dump line	Good	Good							
PID Readings	See attached	See attached							
Sample taken? Location/Sample ID#	Yes, see attached	Yes, see attached							
Photo Number(s)	See attached	See attached							

Other observations regarding partially buried vessels:

The eastern sidewall of PWV excavation was the tie-in point for the dumpline to the separator. Dumplines were pulled

Summary

Was impacted soil identified?	
<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes - less than 10 cubic yards
<input type="checkbox"/> Yes - more than 10 cubic yards	
Total number of samples field screened: 8	Total number of samples collected: 10
Highest PID Reading: 0.6ppm (PWV02 Floor 4')	Total number of samples submitted to lab for analysis: 2
If more than 10 cubic yards of impacted soil were observed:	
Vertical extent: N/A	Estimated spill volume: N/A
Lateral extent: N/A	Volume of soil removed: N/A
Is additional investigation required?	
No	
Was groundwater encountered during the investigation?	
<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes - not impacted or in contact with impacted soils
<input type="checkbox"/> Yes - groundwater impacted and/or in contact with impacted soils	
Measured depth to groundwater:	Was remedial groundwater removal conducted?
	<input type="checkbox"/> Yes <input type="checkbox"/> No
Date Groundwater was encountered:	Commencement date of removal:
Sheen on groundwater?	Volume of groundwater removed prior to sampling:
<input type="checkbox"/> Yes <input type="checkbox"/> No	Volume of groundwater removed post sampling:
Free product observed?	Total Volume of groundwater removed:
<input type="checkbox"/> Yes <input type="checkbox"/> No	
Total number of samples collected:	
Total number of samples submitted to lab for analysis:	

TABLE 1
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY, INC.
AMIGO-66N64W 17NWN, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C024-015

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**		
AST01 0.5'	01/22/2024	0.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST02 0.5'	01/22/2024	0.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
PWV01 FLOOR 4'	01/22/2024	4'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
PWV02 FLOOR 4'	01/22/2024	4'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SEP01 DL 3'	01/22/2024	3'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SEP02 DL 3'	01/22/2024	3'	<0.0020	0.13	0.032	0.26	<0.0050	<0.0050	<0.0038	6.4	<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.
AMIGO-66N64W 17NWN, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C024-015

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
AST01 0.5'	01/22/2024	0.5'	<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
AST02 0.5'	01/22/2024	0.5'	<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
PWV01 FLOOR 4'	01/22/2024	4'	<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
PWV02 FLOOR 4'	01/22/2024	4'	<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
SEP01 DL 3'	01/22/2024	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
SEP02 DL 3'	01/22/2024	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	0.0183

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.
AMIGO-66N64W 17NWN, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C024-015

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)			10.3	-	-	-
AST01 0.5'	01/22/2024	0.5'	9.97	0.634	1.64	<2.00
AST02 0.5'	01/22/2024	0.5'	8.08	0.241	0.102	<2.00
PWV01 FLOOR 4'	01/22/2024	4'	8.23	0.361	0.606	<2.00
PWV02 FLOOR 4'	01/22/2024	4'	8.26	0.186	0.0281	<2.00
SEP01 DL 3'	01/22/2024	3'	8.36	0.404	0.158	<2.00
SEP02 DL 3'	01/22/2024	3'	8.05	0.462	1.01	<2.00

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
BKG01 0.5'	01/22/2024	0.5'	8.00	0.273	0.151	<2.00
BKG01 3'	01/22/2024	3'	8.48	0.216	0.203	<2.00
BKG01 4'	01/22/2024	4'	8.26	0.182	0.0258	<2.00
BKG02 0.5'	01/22/2024	0.5'	8.33	0.190	0.0675	<2.00
BKG02 3'	01/22/2024	3'	8.40	0.333	0.133	<2.00
BKG02 4'	01/22/2024	4'	8.31	0.328	0.504	<2.00
BKG03 0.5'	01/22/2024	0.5'	10.3	0.843	2.57	<2.00
BKG03 3'	01/22/2024	3'	8.22	0.232	0.144	<2.00
BKG03 4'	01/22/2024	4'	8.30	0.244	0.156	<2.00
BKG04 0.5'	01/22/2024	0.5'	8.23	0.231	0.101	<2.00
BKG04 3'	01/22/2024	3'	8.44	0.164	0.0768	<2.00
BKG04 4'	01/22/2024	4'	8.20	0.266	0.167	<2.00
BKG05 0.5'	01/22/2024	0.5'	8.29	0.216	0.0831	<2.00
BKG05 3'	01/22/2024	3'	8.23	0.249	0.149	<2.00
BKG05 4'	01/22/2024	4'	8.38	0.164	0.0255	<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.
AMIGO-66N64W 17NWN, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C024-015

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			4.58	125	0.469	-	8.21	8.11	5.86	-	0.0443	28.4
AST01 0.5'	01/22/2024	0.5'	2.28	51.0	<0.200	<0.30	5.62	4.36	3.52	<0.260	<0.0200	15.6
AST02 0.5'	01/22/2024	0.5'	2.76	48.8	0.210	<0.30	4.98	6.13	4.13	<0.260	0.0269	18.8
PWV01 FLOOR 4'	01/22/2024	4'	1.71	96.9	<0.200	<0.30	4.39	5.35	4.05	<0.260	<0.0200	21.3
PWV02 FLOOR 4'	01/22/2024	4'	2.68	78.3	<0.200	<0.30	4.39	5.70	4.29	<0.260	<0.0200	19.1
SEP01 DL 3'	01/22/2024	3'	2.29	139	0.254	<0.30	3.60	5.56	4.70	<0.260	<0.0200	14.7
SEP02 DL 3'	01/22/2024	3'	2.77	73.8	0.232	<0.30	4.38	5.95	4.69	<0.260	<0.0200	20.9
BKG01 0.5'	01/22/2024	0.5'	1.97	41.0	<0.200	<0.30	6.57	4.79	3.22	<0.260	0.0310	20.5
BKG01 3'	01/22/2024	3'	2.24	62.0	0.219	<0.30	3.36	5.51	4.41	<0.260	<0.0200	15.9
BKG01 4'	01/22/2024	4'	3.66	93.4	<0.200	<0.30	4.90	6.49	5.33	<0.260	<0.0200	22.2
BKG02 0.5'	01/22/2024	0.5'	2.14	41.8	<0.200	<0.30	4.58	4.96	3.39	<0.260	0.0225	17.5
BKG02 3'	01/22/2024	3'	1.97	94.5	0.375	<0.30	2.52	4.69	3.25	<0.260	0.0203	11.0
BKG02 4'	01/22/2024	4'	2.04	61.3	<0.200	<0.30	4.34	5.99	4.13	<0.260	<0.0200	22.7
BKG03 0.5'	01/22/2024	0.5'	2.65	61.7	<0.200	<0.30	5.66	4.21	4.48	<0.260	<0.0200	15.8
BKG03 3'	01/22/2024	3'	2.72	73.9	<0.200	<0.30	3.65	4.98	4.69	<0.260	<0.0200	18.8
BKG03 4'	01/22/2024	4'	2.51	99.9	<0.200	<0.30	3.54	5.00	4.46	<0.260	<0.0200	18.6
BKG04 0.5'	01/22/2024	0.5'	2.15	46.5	<0.200	<0.30	6.43	5.26	3.94	<0.260	0.0354	21.1
BKG04 3'	01/22/2024	3'	2.75	81.2	<0.200	<0.30	3.84	5.13	4.40	<0.260	<0.0200	18.8
BKG04 4'	01/22/2024	4'	2.28	95.1	<0.200	<0.30	3.56	5.05	4.40	<0.260	<0.0200	18.0
BKG05 0.5'	01/22/2024	0.5'	1.88	39.8	<0.200	<0.30	4.74	4.62	3.18	<0.260	0.0295	16.9
BKG05 3'	01/22/2024	3'	2.61	82.7	<0.200	<0.30	3.83	5.40	4.64	<0.260	<0.0200	19.1
BKG05 4'	01/22/2024	4'	3.41	87.4	0.206	<0.30	4.78	6.41	5.13	<0.260	<0.0200	21.8

Bold faced values exceed the ECMC Table 915-1 concentrations

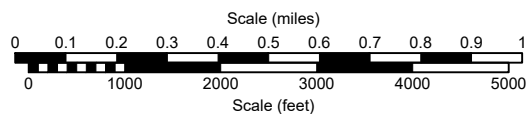
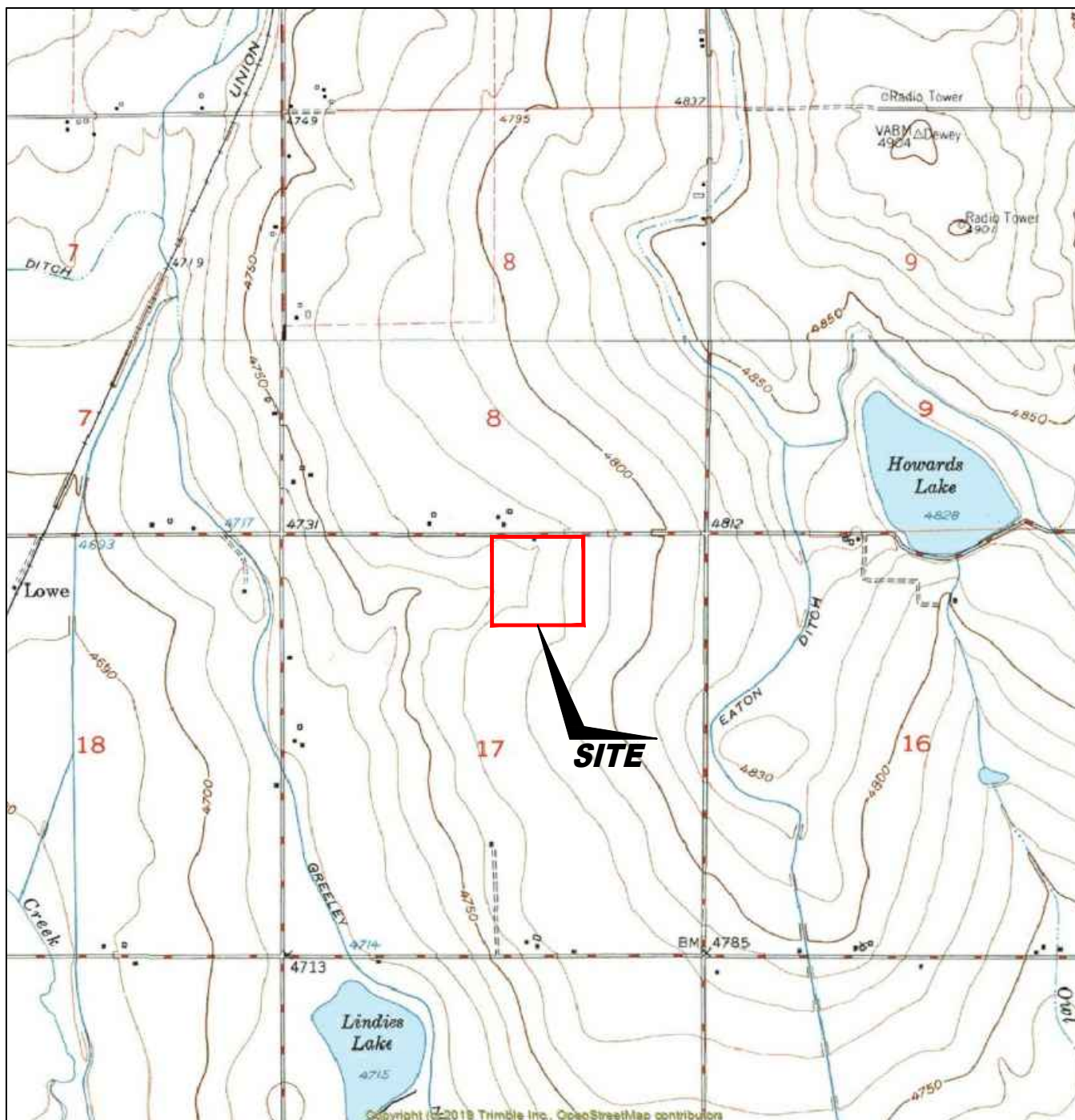
Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

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



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP
NOBLE ENERGY INC ~ AMIGO-66N64W 17 NWNE

NWNE Sec. 17, T6N, R64W, 6th PM
 Weld County, Colorado
 40.292015°, -104.572405°

Project # C024-015	API #	Facility # 330135
Date 5/22/24	Remediation # 29502	Filename 24015TT





LEGEND

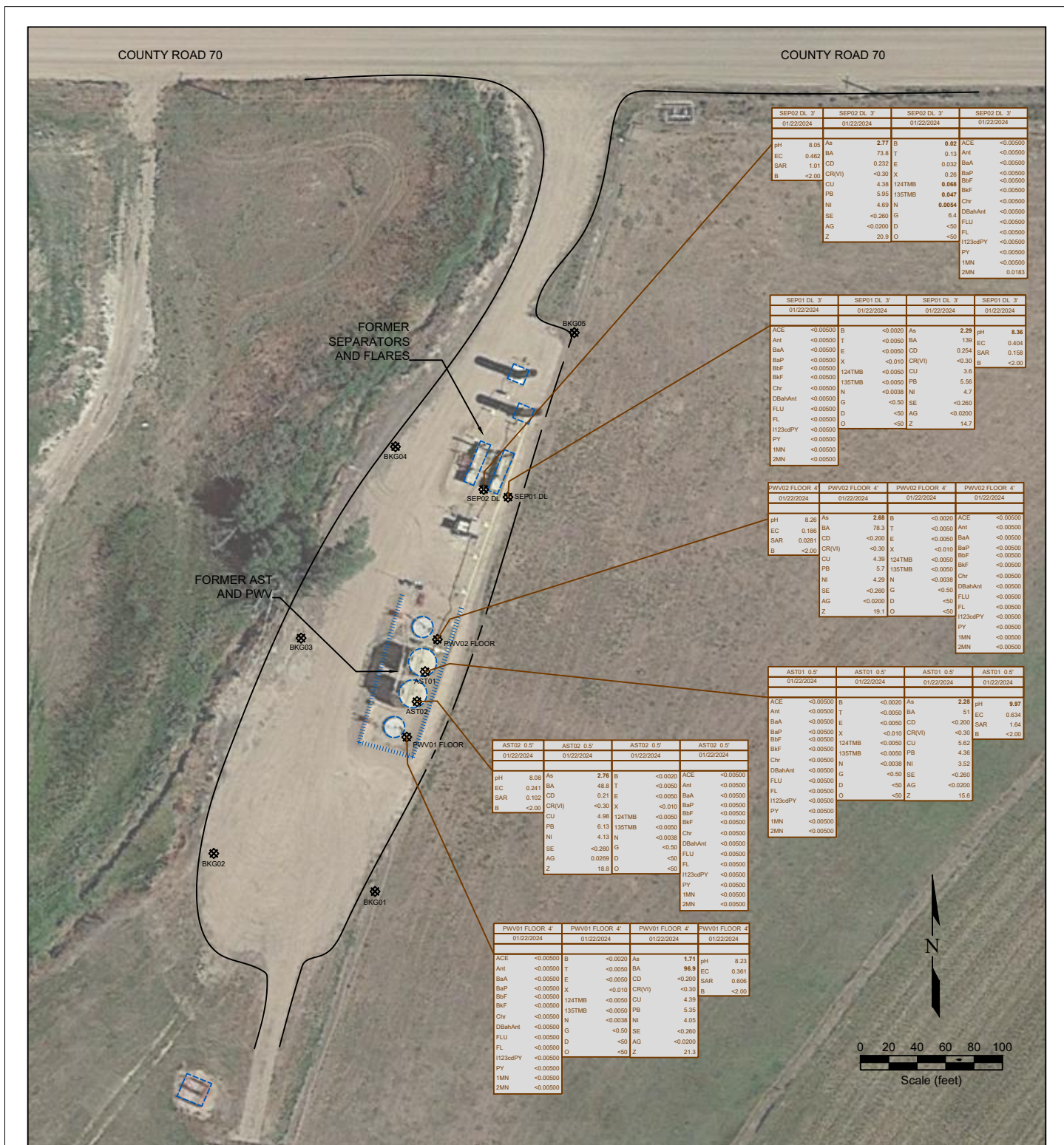
▲ PID READING LOCATION *ALL SAMPLE READINGS ARE 0.0 UNLESS SPECIFIED ON FIGURE	▲ AST ABOVE GROUND STORAGE TANK	FORMER FLOWLINE	FORMER FLOWLINE
		FORMER FACILITY	FORMER FACILITY
		FENCE LINE	FENCE LINE
		CONTAINMENT BERM	CONTAINMENT BERM
		CONTAINMENT WALL	CONTAINMENT WALL

Figure 2
SITE MAP

NOBLE ENERGY INC ~ AMIGO-66N64W 17 NWNE

NWNE Sec. 17, T6N, R64W, 6th PM
Weld County, Colorado
40.292015°, -104.572405°

Project No. C024-015	API #	Facility # 330135	
Date 5/22/24	Remediation # 29502	Filename 24015QQ	



LEGEND

SOIL SAMPLE LOCATION (AST) ABOVE GROUND STORAGE TANK
 FORMER FACILITY
 FORMER FLOWLINE
 FENCE LINE
 CONTAINMENT BERM
 CONTAINMENT WALL
 NOT ANALYZED

SAMPLE ID	DATE	DEPTH	SAMPLE ID	DATE	DEPTH
ACE	<0.0050		As	<0.01	
Ant	<0.0050		BA	<0.01	
BaA	<0.0050		CD	<0.01	
BaP	<0.0050		CU	<0.01	
BbF	<0.0050		NI	<0.01	
BkF	<0.0050		SE	<0.01	
Chr	<0.0050		AG	<0.01	
DBahAnt	<0.0050		Z	<0.01	
FLU	<0.0050				
FL	<0.0050				
1123cdPY	<0.0050				
1MN	<0.0050				
2MN	<0.0050				

SAMPLE ID	DATE	DEPTH	SAMPLE ID	DATE	DEPTH
As	<0.01		As	<0.01	
BA	<0.01		BA	<0.01	
CD	<0.01		CD	<0.01	
CU	<0.01		CU	<0.01	
NI	<0.01		NI	<0.01	
SE	<0.01		SE	<0.01	
AG	<0.01		AG	<0.01	
Z	<0.01		Z	<0.01	

SAMPLE ID	DATE	DEPTH	SAMPLE ID	DATE	DEPTH
As	<0.01		As	<0.01	
BA	<0.01		BA	<0.01	
CD	<0.01		CD	<0.01	
CU	<0.01		CU	<0.01	
NI	<0.01		NI	<0.01	
SE	<0.01		SE	<0.01	
AG	<0.01		AG	<0.01	
Z	<0.01		Z	<0.01	

Figure 3
SOIL CHEMISTRY MAP
NOBLE ENERGY INC ~ AMIGO-66N64W 17 NWNE

NWNE Sec. 17, T6N, R64W, 6th PM
 Weld County, Colorado
 40.292015°, -104.572405°

Project No. C024-015	API #	Facility # 330135	
Date 5/22/24	Remediation # 29502	Filename 24015QQ	

Photo Log



Description:

Photo Log



Description:

Photo Log



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Photo Log



Description:

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Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 24, 2024

Paul Henchan

Fremont Environmental

PO Box 1289

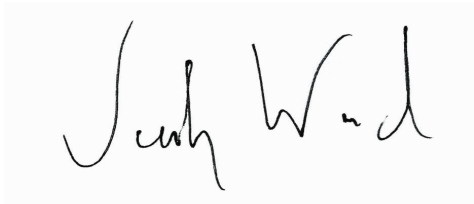
Wellington, CO 80549

RE: Noble - Amigo 66N64W 17NWNE

Work Order #2401369

Enclosed are the results of analyses for samples received by Summit Scientific on 01/22/24 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Jacob Wood For Paul Shrewsbury

President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

ANALYTICAL REPORT FOR SAMPLES

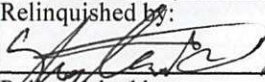
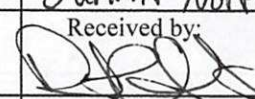
Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01 0.5'	2401369-01	Soil	01/22/24 13:20	01/22/24 16:30
AST02 0.5'	2401369-02	Soil	01/22/24 13:25	01/22/24 16:30
PWV01 FLOOR 4'	2401369-03	Soil	01/22/24 13:30	01/22/24 16:30
PWV02 FLOOR 4'	2401369-04	Soil	01/22/24 13:35	01/22/24 16:30
SEP01 DL 3'	2401369-05	Soil	01/22/24 13:40	01/22/24 16:30
SEP02 DL 3'	2401369-06	Soil	01/22/24 13:45	01/22/24 16:30
BKG01 0.5'	2401369-07	Soil	01/22/24 13:50	01/22/24 16:30
BKG01 3'	2401369-08	Soil	01/22/24 13:55	01/22/24 16:30
BKG01 4'	2401369-09	Soil	01/22/24 14:00	01/22/24 16:30
BKG02 0.5'	2401369-10	Soil	01/22/24 14:05	01/22/24 16:30
BKG02 3'	2401369-11	Soil	01/22/24 14:10	01/22/24 16:30
BKG02 4'	2401369-12	Soil	01/22/24 14:15	01/22/24 16:30
BKG03 0.5'	2401369-13	Soil	01/22/24 14:20	01/22/24 16:30
BKG03 3'	2401369-14	Soil	01/22/24 14:25	01/22/24 16:30
BKG03 4'	2401369-15	Soil	01/22/24 14:30	01/22/24 16:30
BKG04 0.5'	2401369-16	Soil	01/22/24 14:35	01/22/24 16:30
BKG04 3'	2401369-17	Soil	01/22/24 14:40	01/22/24 16:30
BKG04 4'	2401369-18	Soil	01/22/24 14:45	01/22/24 16:30
BKG05 0.5'	2401369-19	Soil	01/22/24 14:50	01/22/24 16:30
BKG05 3'	2401369-20	Soil	01/22/24 14:55	01/22/24 16:30
BKG05 4'	2401369-21	Soil	01/22/24 15:00	01/22/24 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.

Client: Fremont Environmental		Project Manager: Paul Henehan		Company: Noble	
Address:		E-Mail: Fremont Distribution List		Project Name/Location:	
City/State/Zip:		Project Name: Amigo 66N64W 17NWNE		AFE#:	
Phone: 303-261-6246		Project Number:		PO/Billing Codes: WWRWE-A3528-ABN	
Sampler Name: Stanley Gilbert				Contact: Mike Montoya	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested							Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX, TMBs, Naph.	TPH	PAH (915)	EC, SAR, Ph, Boron	Metals (915)	
1	AST01 0.5'	1/22/24	13:20	2			X			X			X	X	X			
2	AST02 0.5'		13:25				X						X	X	X			
3	PWV01 FLOOR 4'		13:30															
4	PWV02 FLOOR 4'		13:35															
5	SEP01 DL 3'		13:40															
6	SEP02 DL 3'		13:45															
7	BKG01 0.5'		13:50	1			X			X					X	X		
8	BKG01 3'		13:55															
9	BKG01 4'		14:00															
10	BKG02 0.5'		14:05															
11	BKG02 3'		14:10															
12	BKG02 4'		14:15															
13	BKG03 0.5'		14:20															
14	BKG03 3'		14:25															
15	BKG03 4'		14:30															

Relinquished by: 	Date/Time: 1/22/24 16:30	Received by: Summit North	Date/Time: 1/22/24 16:30	TAT Business Days	Field DO	Notes:
Relinquished by: SL	Date/Time: 1/22/24 1630	Received by: 	Date/Time: 1/22/24 1630	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 0.1	Corrected Temperature: 0	IR gun #: 1	HNO3 lot #:			

Client: Fremont Enviornmental		Project Manager: Paul Henehan		Company: <u>Noble</u>	
Address:		E-Mail: Fremont Distribution List		Project Name/Location:	
City/State/Zip:				AFE#:	
Phone: 303-261-6246		Project Name: <u>Amigo 66N64W 17NWNE</u>		PO/Billing Codes: <u>UWRWE-A3528-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	HOLD	
1	BK604 0.5'	1/22/24	14:35	1			X			X						X	X			
2	BK604 3'		14:40	1			X			X						X	X			
3	BK604 4'		14:45	1			X			X						X	X			
4	BK605 0.5'		14:50	1			X			X						X	X			
5	BK605 3'		14:55	1			X			X						X	X			
6	BK605 4'		15:00	1			X			X						X	X			
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by: <u>[Signature]</u>	Date/Time: <u>1/22/24 16:30</u>	Received by: <u>Summit North</u>	Date/Time: <u>1/22/24 16:30</u>	TAT Business Days	Field DO	Notes:
Relinquished by: <u>[Signature]</u>	Date/Time: <u>1/22/24 16:30</u>	Received by: <u>[Signature]</u>	Date/Time: <u>1/22/24 16:30</u>	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
Relinquished by:	Date/Time:	Received by:	Date/Time:	2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	<input checked="" type="checkbox"/> Field Turb.	
Temperature Upon Receipt: <u>10-1</u>		Corrected Temperature <u>8</u>		IR gun #: <u>1</u>	HNO3 lot #: <u></u>	

S₂2/2
Sample Receipt Checklist

S2 Work Order# 2401369

Client: Fremont

Client Project ID:

Airigo WEN W4W 17NUNE

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

Airbill #:

☐ ☒ ☐ ☐ ☐

Matrix (Check all that apply)

Air

☐

Soil/Solid

☒

Water

☐

Other

☐

Temp (°C)

10.1

Thermometer #

1

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

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.AS
Custodian Printed Name1/22/24
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

AST01 0.5'
2401369-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/22/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA0799	01/23/24	01/25/24	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: **01/22/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0411	103 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0415	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0420	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/22/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0797	01/23/24	01/24/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/22/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	6.10	48.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

AST01 0.5'
2401369-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/22/24 13:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHA0890	01/25/24	01/26/24	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: **01/22/24 13:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0191	57.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0255	76.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 13:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/24/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 13:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

AST01 0.5'
2401369-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.28	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B
Barium	51.0	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	5.62	0.400	"	"	"	"	"	"
Lead	4.36	0.200	"	"	"	"	"	"
Nickel	3.52	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	15.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	108	0.0500	mg/L dry	1	BHA0818	01/24/24	01/25/24	EPA 6020B	
Magnesium	87.6	0.0500	"	"	"	"	"	"	
Sodium	94.5	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/22/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.64	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

AST01 0.5'
2401369-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.8		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.634	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.97		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

AST02 0.5'
2401369-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/22/24 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHA0799	01/23/24	01/25/24	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: **01/22/24 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0419	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0414	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0424	106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/22/24 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0797	01/23/24	01/24/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/22/24 13:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.23	49.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

AST02 0.5'
2401369-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/22/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0890	01/25/24	01/26/24	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: **01/22/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0223	66.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0289	86.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/24/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 13:25**

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

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

AST02 0.5'
2401369-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.76	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B
Barium	48.8	0.400	"	"	"	"	"	"
Cadmium	0.210	0.200	"	"	"	"	"	"
Copper	4.98	0.400	"	"	"	"	"	"
Lead	6.13	0.200	"	"	"	"	"	"
Nickel	4.13	0.400	"	"	"	"	"	"
Silver	0.0269	0.0200	"	"	"	"	"	"
Zinc	18.8	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	146	0.0500	mg/L dry	1	BHA0818	01/24/24	01/25/24	EPA 6020B	
Magnesium	20.6	0.0500	"	"	"	"	"	"	
Sodium	4.96	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/22/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.102	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 13:25**

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 - Amigo 66N64W 17NWN
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

AST02 0.5'
2401369-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	86.3	%	1	BHA0801	01/23/24	01/23/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.241	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.08		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

PWV01 FLOOR 4'
2401369-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/22/24 13:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHA0799	01/23/24	01/25/24	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: **01/22/24 13:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0413	103 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0407	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0417	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/22/24 13:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0797	01/23/24	01/24/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/22/24 13:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.48	51.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

PWV01 FLOOR 4'
2401369-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/22/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0890	01/25/24	01/26/24	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: **01/22/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0177	53.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0239	71.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/24/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 13:30**

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 - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

PWV01 FLOOR 4'
2401369-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.71	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B
Barium	96.9	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.39	0.400	"	"	"	"	"	"
Lead	5.35	0.200	"	"	"	"	"	"
Nickel	4.05	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	21.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	26.7	0.0500	mg/L dry	1	BHA0818	01/24/24	01/25/24	EPA 6020B	
Magnesium	13.5	0.0500	"	"	"	"	"	"	
Sodium	15.4	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/22/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.606	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

PWV01 FLOOR 4'
2401369-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.6		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.361	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.23		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

PWV02 FLOOR 4'
2401369-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/22/24 13:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHA0799	01/23/24	01/25/24	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: **01/22/24 13:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0411	103 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0403	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0428	107 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/22/24 13:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0797	01/23/24	01/24/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/22/24 13:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.30	58.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

PWV02 FLOOR 4'
2401369-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/22/24 13:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHA0890	01/25/24	01/26/24	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: **01/22/24 13:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0212	63.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0280	83.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 13:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/24/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 13:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

PWV02 FLOOR 4'
2401369-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.68	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B
Barium	78.3	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.39	0.400	"	"	"	"	"	"
Lead	5.70	0.200	"	"	"	"	"	"
Nickel	4.29	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	19.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	111	0.0500	mg/L dry	1	BHA0818	01/24/24	01/26/24	EPA 6020B	
Magnesium	8.18	0.0500	"	"	"	"	"	"	
Sodium	1.14	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/22/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0281	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

PWV02 FLOOR 4'
2401369-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.7		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.186	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.26		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

SEP01 DL 3'
2401369-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/22/24 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHA0799	01/23/24	01/25/24	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: **01/22/24 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0418	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0406	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0421	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/22/24 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0797	01/23/24	01/24/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/22/24 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.33	66.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

SEP01 DL 3'
2401369-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/22/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0890	01/25/24	01/26/24	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: **01/22/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0180	54.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0250	74.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/24/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 13:40**

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 - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

SEP01 DL 3'
2401369-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.29	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B
Barium	139	0.400	"	"	"	"	"	"
Cadmium	0.254	0.200	"	"	"	"	"	"
Copper	3.60	0.400	"	"	"	"	"	"
Lead	5.56	0.200	"	"	"	"	"	"
Nickel	4.70	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	14.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	30.8	0.0500	mg/L dry	1	BHA0818	01/24/24	01/26/24	EPA 6020B	
Magnesium	15.0	0.0500	"	"	"	"	"	"	
Sodium	4.27	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/22/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.158	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

SEP01 DL 3'
2401369-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.5		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.404	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.36		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWN
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

SEP02 DL 3'
2401369-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/22/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Toluene	0.13	0.0050	mg/kg	1	BHA0799	01/23/24	01/25/24	EPA 8260B	
Ethylbenzene	0.032	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.26	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	6.4	0.50	"	"	"	"	"	"	

Date Sampled: **01/22/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0435	109 %	50-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>	0.0412	103 %	50-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0446	111 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/22/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA0797	01/23/24	01/24/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/22/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>	7.95	63.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **01/22/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0890	01/25/24	01/26/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

SEP02 DL 3'
2401369-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Benzo (a) pyrene	ND	0.00500	mg/kg	1	BHA0890	01/25/24	01/26/24	EPA 8270D SIM
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	0.0183	0.00500	"	"	"	"	"	"

Date Sampled: **01/22/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0215	64.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0264	79.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/24/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.77	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B	
Barium	73.8	0.400	"	"	"	"	"	"	
Cadmium	0.232	0.200	"	"	"	"	"	"	
Copper	4.38	0.400	"	"	"	"	"	"	
Lead	5.95	0.200	"	"	"	"	"	"	
Nickel	4.69	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

SEP02 DL 3'
2401369-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Zinc	20.9	0.400	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	37.2	0.0500	mg/L dry	1	BHA0818	01/24/24	01/26/24	EPA 6020B	
Magnesium	14.2	0.0500	"	"	"	"	"	"	
Sodium	28.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/22/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.01	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.3		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Summit Scientific

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Fremont Environmental
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Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

SEP02 DL 3'
2401369-06 (Soil)

Summit Scientific

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 13:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.462	0.0100		mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 13:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.05			pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

Summit Scientific

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Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

SEP02 DL 3'
2401369-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

I-04

Date Sampled: **01/22/24 13:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0548	02/16/24	02/17/24	EPA 8260B	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	

Date Sampled: **01/22/24 13:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0382	95.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0405	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0393	98.2 %	50-150		"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG01 0.5'
2401369-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 13:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/24/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 13:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.97	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B	
Barium	41.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	6.57	0.400	"	"	"	"	"	"	
Lead	4.79	0.200	"	"	"	"	"	"	
Nickel	3.22	0.400	"	"	"	"	"	"	
Silver	0.0310	0.0200	"	"	"	"	"	"	
Zinc	20.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 13:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 13:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	44.2	0.0500	mg/L dry	1	BHA0818	01/24/24	01/26/24	EPA 6020B	
Magnesium	7.55	0.0500	"	"	"	"	"	"	
Sodium	4.13	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG01 0.5'
2401369-07 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **01/22/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.151	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.0		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.273	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.00		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG01 3'
2401369-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 13:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 13:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.24	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B	
Barium	62.0	0.400	"	"	"	"	"	"	
Cadmium	0.219	0.200	"	"	"	"	"	"	
Copper	3.36	0.400	"	"	"	"	"	"	
Lead	5.51	0.200	"	"	"	"	"	"	
Nickel	4.41	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	15.9	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 13:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 13:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	48.0	0.0500	mg/L dry	1	BHA0818	01/24/24	01/26/24	EPA 6020B	
Magnesium	7.14	0.0500	"	"	"	"	"	"	
Sodium	5.71	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG01 3'
2401369-08 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **01/22/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.203	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.2		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.216	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.48		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG01 4'
2401369-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 14:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 14:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	3.66	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B	
Barium	93.4	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.90	0.400	"	"	"	"	"	"	
Lead	6.49	0.200	"	"	"	"	"	"	
Nickel	5.33	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	22.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 14:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 14:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	105	0.0500	mg/L dry	1	BHA0818	01/24/24	01/26/24	EPA 6020B	
Magnesium	8.27	0.0500	"	"	"	"	"	"	
Sodium	1.02	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG01 4'
2401369-09 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **01/22/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0258	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.3		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.182	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.26		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG02 0.5'
2401369-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 14:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 14:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.14	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B	
Barium	41.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.58	0.400	"	"	"	"	"	"	
Lead	4.96	0.200	"	"	"	"	"	"	
Nickel	3.39	0.400	"	"	"	"	"	"	
Silver	0.0225	0.0200	"	"	"	"	"	"	
Zinc	17.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 14:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 14:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	136	0.0500	mg/L dry	1	BHA0818	01/24/24	01/26/24	EPA 6020B	
Magnesium	21.6	0.0500	"	"	"	"	"	"	
Sodium	3.21	0.0500	"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG02 0.5'
2401369-10 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **01/22/24 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0675	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.2		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.190	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.33		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG02 3'
2401369-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.97	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B	
Barium	94.5	0.400	"	"	"	"	"	"	
Cadmium	0.375	0.200	"	"	"	"	"	"	
Copper	2.52	0.400	"	"	"	"	"	"	
Lead	4.69	0.200	"	"	"	"	"	"	
Nickel	3.25	0.400	"	"	"	"	"	"	
Silver	0.0203	0.0200	"	"	"	"	"	"	
Zinc	11.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	28.1	0.0500	mg/L dry	1	BHA0818	01/24/24	01/26/24	EPA 6020B	
Magnesium	11.4	0.0500	"	"	"	"	"	"	
Sodium	3.30	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
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Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG02 3'
2401369-11 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **01/22/24 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.133	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.8		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.333	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.40		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG02 4'
2401369-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 14:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 14:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.04	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B	
Barium	61.3	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.34	0.400	"	"	"	"	"	"	
Lead	5.99	0.200	"	"	"	"	"	"	
Nickel	4.13	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	22.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 14:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 14:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	25.2	0.0500	mg/L dry	1	BHA0818	01/24/24	01/26/24	EPA 6020B	
Magnesium	12.6	0.0500	"	"	"	"	"	"	
Sodium	12.4	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG02 4'
2401369-12 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **01/22/24 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.504	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.6		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.328	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.31		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG03 0.5'
2401369-13 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 14:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 14:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.65	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B	
Barium	61.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	5.66	0.400	"	"	"	"	"	"	
Lead	4.21	0.200	"	"	"	"	"	"	
Nickel	4.48	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	15.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 14:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 14:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	34.5	0.0500	mg/L dry	1	BHA0818	01/24/24	01/26/24	EPA 6020B	
Magnesium	36.9	0.0500	"	"	"	"	"	"	
Sodium	91.0	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG03 0.5'
2401369-13 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **01/22/24 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.57	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.2		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.843	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	10.3		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG03 3'
2401369-14 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 14:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 14:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.72	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B	
Barium	73.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.65	0.400	"	"	"	"	"	"	
Lead	4.98	0.200	"	"	"	"	"	"	
Nickel	4.69	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	18.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 14:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 14:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	36.9	0.0500	mg/L dry	1	BHA0818	01/24/24	01/26/24	EPA 6020B	
Magnesium	10.2	0.0500	"	"	"	"	"	"	
Sodium	3.83	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG03 3'
2401369-14 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **01/22/24 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.144	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.4		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.232	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.22		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG03 4'
2401369-15 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 14:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 14:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.51	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B	
Barium	99.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.54	0.400	"	"	"	"	"	"	
Lead	5.00	0.200	"	"	"	"	"	"	
Nickel	4.46	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	18.6	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 14:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 14:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	28.7	0.0500	mg/L dry	1	BHA0818	01/24/24	01/26/24	EPA 6020B	
Magnesium	11.5	0.0500	"	"	"	"	"	"	
Sodium	3.91	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG03 4'
2401369-15 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **01/22/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.156	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.0		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.244	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.30		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG04 0.5'
2401369-16 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 14:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 14:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.15	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B	
Barium	46.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	6.43	0.400	"	"	"	"	"	"	
Lead	5.26	0.200	"	"	"	"	"	"	
Nickel	3.94	0.400	"	"	"	"	"	"	
Silver	0.0354	0.0200	"	"	"	"	"	"	
Zinc	21.1	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 14:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 14:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	67.3	0.0500	mg/L dry	1	BHA0818	01/24/24	01/26/24	EPA 6020B	
Magnesium	11.8	0.0500	"	"	"	"	"	"	
Sodium	3.43	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG04 0.5'
2401369-16 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **01/22/24 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.101	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.8		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.231	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.23		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG04 3'
2401369-17 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.75	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B	
Barium	81.2	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.84	0.400	"	"	"	"	"	"	
Lead	5.13	0.200	"	"	"	"	"	"	
Nickel	4.40	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	18.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	44.9	0.0500	mg/L dry	1	BHA0818	01/24/24	01/26/24	EPA 6020B	
Magnesium	6.82	0.0500	"	"	"	"	"	"	
Sodium	2.09	0.0500	"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG04 3'
2401369-17 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **01/22/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0768	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.1		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.164	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.44		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG04 4'
2401369-18 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 14:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 14:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.28	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B	
Barium	95.1	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.56	0.400	"	"	"	"	"	"	
Lead	5.05	0.200	"	"	"	"	"	"	
Nickel	4.40	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	18.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 14:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 14:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	26.1	0.0500	mg/L dry	1	BHA0818	01/24/24	01/26/24	EPA 6020B	
Magnesium	12.7	0.0500	"	"	"	"	"	"	
Sodium	4.15	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG04 4'
2401369-18 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **01/22/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.167	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.9		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.266	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.20		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG05 0.5'
2401369-19 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.88	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B	
Barium	39.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.74	0.400	"	"	"	"	"	"	
Lead	4.62	0.200	"	"	"	"	"	"	
Nickel	3.18	0.400	"	"	"	"	"	"	
Silver	0.0295	0.0200	"	"	"	"	"	"	
Zinc	16.9	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	85.0	0.0500	mg/L dry	1	BHA0818	01/24/24	01/26/24	EPA 6020B	
Magnesium	12.1	0.0500	"	"	"	"	"	"	
Sodium	3.09	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG05 0.5'
2401369-19 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **01/22/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0831	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.4		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.216	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.29		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG05 3'
2401369-20 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 14:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 14:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.61	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B	
Barium	82.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.83	0.400	"	"	"	"	"	"	
Lead	5.40	0.200	"	"	"	"	"	"	
Nickel	4.64	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	19.1	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 14:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 14:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	28.3	0.0500	mg/L dry	1	BHA0818	01/24/24	01/26/24	EPA 6020B	
Magnesium	11.2	0.0500	"	"	"	"	"	"	
Sodium	3.70	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG05 3'
2401369-20 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **01/22/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.149	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.3		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.249	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.23		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG05 4'
2401369-21 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/22/24 15:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHA0819	01/24/24	01/25/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/22/24 15:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	3.41	0.200	mg/kg dry	1	BHA0930	01/26/24	01/27/24	EPA 6020B	
Barium	87.4	0.400	"	"	"	"	"	"	
Cadmium	0.206	0.200	"	"	"	"	"	"	
Copper	4.78	0.400	"	"	"	"	"	"	
Lead	6.41	0.200	"	"	"	"	"	"	
Nickel	5.13	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	21.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/22/24 15:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA0847	01/24/24	01/24/24	EPA 7196A	

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

Date Sampled: **01/22/24 15:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	116	0.0500	mg/L dry	1	BHA0818	01/24/24	01/26/24	EPA 6020B	
Magnesium	9.33	0.0500	"	"	"	"	"	"	
Sodium	1.06	0.0500	"	"	"	"	"	"	

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Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

BKG05 4'
2401369-21 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **01/22/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0255	0.00100	units	1	BHA0949	01/26/24	01/26/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.0		%	1	BHA0801	01/23/24	01/23/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/22/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.164	0.0100	mmhos/cm	1	BHA0875	01/25/24	01/25/24	EPA 120.1	

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

Date Sampled: **01/22/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.38		pH Units	1	BHA0874	01/25/24	01/25/24	EPA 9045D	

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Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BHA0799 - EPA 5030 Soil MS

Blank (BHA0799-BLK1)

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

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	0.0404		"	0.0400		101	50-150			
Surrogate: Toluene-d8	0.0399		"	0.0400		99.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0417		"	0.0400		104	50-150			

LCS (BHA0799-BS1)

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

Benzene	0.107	0.0020	mg/kg	0.100		107	70-130			
Toluene	0.104	0.0050	"	0.100		104	70-130			
Ethylbenzene	0.0986	0.0050	"	0.100		98.6	70-130			
m,p-Xylene	0.197	0.010	"	0.200		98.4	70-130			
o-Xylene	0.0957	0.0050	"	0.100		95.7	70-130			
1,2,4-Trimethylbenzene	0.0970	0.0050	"	0.100		97.0	70-130			
1,3,5-Trimethylbenzene	0.0956	0.0050	"	0.100		95.6	70-130			
Naphthalene	0.0916	0.0038	"	0.100		91.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0403		"	0.0400		101	50-150			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400		102	50-150			

Matrix Spike (BHA0799-MS1)

Source: 2401362-01

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

Benzene	0.107	0.0020	mg/kg	0.100	ND	107	70-130			
Toluene	0.103	0.0050	"	0.100	ND	103	70-130			
Ethylbenzene	0.0986	0.0050	"	0.100	ND	98.6	70-130			
m,p-Xylene	0.197	0.010	"	0.200	ND	98.6	70-130			
o-Xylene	0.0945	0.0050	"	0.100	ND	94.5	70-130			
1,2,4-Trimethylbenzene	0.0944	0.0050	"	0.100	ND	94.4	70-130			
1,3,5-Trimethylbenzene	0.0954	0.0050	"	0.100	ND	95.4	70-130			
Naphthalene	0.0972	0.0038	"	0.100	ND	97.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0421		"	0.0400		105	50-150			
Surrogate: Toluene-d8	0.0414		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0410		"	0.0400		102	50-150			

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Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BHA0799 - EPA 5030 Soil MS

Matrix Spike Dup (BHA0799-MSD1)

Source: 2401362-01

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

Benzene	0.106	0.0020	mg/kg	0.100	ND	106	70-130	0.590	30
Toluene	0.103	0.0050	"	0.100	ND	103	70-130	0.0292	30
Ethylbenzene	0.0998	0.0050	"	0.100	ND	99.8	70-130	1.27	30
m,p-Xylene	0.200	0.010	"	0.200	ND	99.8	70-130	1.21	30
o-Xylene	0.0960	0.0050	"	0.100	ND	96.0	70-130	1.61	30
1,2,4-Trimethylbenzene	0.0959	0.0050	"	0.100	ND	95.9	70-130	1.58	30
1,3,5-Trimethylbenzene	0.0957	0.0050	"	0.100	ND	95.7	70-130	0.251	30
Naphthalene	0.0903	0.0038	"	0.100	ND	90.3	70-130	7.42	30
Surrogate: 1,2-Dichloroethane-d4	0.0422		"	0.0400		105	50-150		
Surrogate: Toluene-d8	0.0399		"	0.0400		99.8	50-150		
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0400		102	50-150		

Batch BHB0548 - EPA 5030 Soil MS

Blank (BHB0548-BLK1)

Prepared: 02/16/24 Analyzed: 02/17/24

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	0.0372		"	0.0400		93.1	50-150		
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	50-150		
Surrogate: 4-Bromofluorobenzene	0.0362		"	0.0400		90.4	50-150		

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Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch BHB0548 - EPA 5030 Soil MS

LCS (BHB0548-BS1)

Prepared: 02/16/24 Analyzed: 02/17/24

Benzene	0.105	0.0020	mg/kg	0.100		105	70-130			
Toluene	0.103	0.0050	"	0.100		103	70-130			
Ethylbenzene	0.103	0.0050	"	0.100		103	70-130			
m,p-Xylene	0.213	0.010	"	0.200		106	70-130			
o-Xylene	0.0916	0.0050	"	0.100		91.6	70-130			
1,2,4-Trimethylbenzene	0.0944	0.0050	"	0.100		94.4	70-130			
1,3,5-Trimethylbenzene	0.0951	0.0050	"	0.100		95.1	70-130			
Naphthalene	0.0749	0.0038	"	0.100		74.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0392		"	0.0400		98.0	50-150			
Surrogate: Toluene-d8	0.0406		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0361		"	0.0400		90.2	50-150			

Matrix Spike (BHB0548-MS1)

Source: 2402226-01

Prepared: 02/16/24 Analyzed: 02/17/24

Benzene	0.0740	0.0020	mg/kg	0.100	ND	74.0	70-130			
Toluene	0.0639	0.0050	"	0.100	ND	63.9	70-130			QM-05
Ethylbenzene	0.0584	0.0050	"	0.100	ND	58.4	70-130			QM-05
m,p-Xylene	0.0991	0.010	"	0.200	ND	49.5	70-130			QM-05
o-Xylene	0.0452	0.0050	"	0.100	ND	45.2	70-130			QM-05
1,2,4-Trimethylbenzene	0.0268	0.0050	"	0.100	ND	26.8	70-130			QM-05
1,3,5-Trimethylbenzene	0.0409	0.0050	"	0.100	ND	40.9	70-130			QM-05
Naphthalene	0.00303	0.0038	"	0.100	ND	3.03	70-130			QM-05
Surrogate: 1,2-Dichloroethane-d4	0.0408		"	0.0400		102	50-150			
Surrogate: Toluene-d8	0.0403		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0364		"	0.0400		91.0	50-150			

Matrix Spike Dup (BHB0548-MSD1)

Source: 2402226-01

Prepared: 02/16/24 Analyzed: 02/17/24

Benzene	0.0810	0.0020	mg/kg	0.100	ND	81.0	70-130	9.14	30	
Toluene	0.0699	0.0050	"	0.100	ND	69.9	70-130	8.92	30	QM-05
Ethylbenzene	0.0585	0.0050	"	0.100	ND	58.5	70-130	0.0513	30	QM-05
m,p-Xylene	0.0959	0.010	"	0.200	ND	48.0	70-130	3.26	30	QM-05
o-Xylene	0.0456	0.0050	"	0.100	ND	45.6	70-130	0.727	30	QM-05
1,2,4-Trimethylbenzene	0.0266	0.0050	"	0.100	ND	26.6	70-130	0.899	30	QM-05
1,3,5-Trimethylbenzene	0.0382	0.0050	"	0.100	ND	38.2	70-130	6.90	30	QM-05
Naphthalene	ND	0.0038	"	0.100	ND		70-130	200	30	QM-05
Surrogate: 1,2-Dichloroethane-d4	0.0453		"	0.0400		113	50-150			
Surrogate: Toluene-d8	0.0411		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0390		"	0.0400		97.5	50-150			

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Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BHA0797 - EPA 3550A

Blank (BHA0797-BLK1)

Prepared & Analyzed: 01/23/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	9.85		"	12.5		78.8	30-150			

LCS (BHA0797-BS1)

Prepared & Analyzed: 01/23/24

C10-C28 (DRO)	417	50	mg/kg	500		83.3	70-130			
Surrogate: o-Terphenyl	11.1		"	12.5		88.8	30-150			

Matrix Spike (BHA0797-MS1)

Source: 2401362-01

Prepared & Analyzed: 01/23/24

C10-C28 (DRO)	412	50	mg/kg	500	13.3	79.8	70-130			
Surrogate: o-Terphenyl	9.96		"	12.5		79.7	30-150			

Matrix Spike Dup (BHA0797-MSD1)

Source: 2401362-01

Prepared & Analyzed: 01/23/24

C10-C28 (DRO)	366	50	mg/kg	500	13.3	70.5	70-130	11.9	20	
Surrogate: o-Terphenyl	9.92		"	12.5		79.4	30-150			

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Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHA0890 - EPA 5030 Soil MS

Blank (BHA0890-BLK1)

Prepared: 01/25/24 Analyzed: 01/26/24

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	"							
Surrogate: 2-Methylnaphthalene-d10	0.0286		"	0.0333		85.8	40-150			
Surrogate: Fluoranthene-d10	0.0388		"	0.0333		117	40-150			

LCS (BHA0890-BS1)

Prepared: 01/25/24 Analyzed: 01/26/24

Acenaphthene	0.0367	0.00500	mg/kg	0.0333	110	31-137
Anthracene	0.0355	0.00500	"	0.0333	106	30-120
Benzo (a) anthracene	0.0349	0.00500	"	0.0333	105	30-120
Benzo (a) pyrene	0.0345	0.00500	"	0.0333	104	30-120
Benzo (b) fluoranthene	0.0356	0.00500	"	0.0333	107	30-120
Benzo (k) fluoranthene	0.0358	0.00500	"	0.0333	107	30-120
Chrysene	0.0400	0.00500	"	0.0333	120	30-120
Dibenz (a,h) anthracene	0.0385	0.00500	"	0.0333	116	30-120
Fluoranthene	0.0333	0.00500	"	0.0333	99.8	30-120
Fluorene	0.0363	0.00500	"	0.0333	109	30-120
Indeno (1,2,3-cd) pyrene	0.0331	0.00500	"	0.0333	99.2	30-120
Pyrene	0.0365	0.00500	"	0.0333	109	35-142
1-Methylnaphthalene	0.0201	0.00500	"	0.0333	60.4	35-142
2-Methylnaphthalene	0.0188	0.00500	"	0.0333	56.3	35-142
Surrogate: 2-Methylnaphthalene-d10	0.0311		"	0.0333	93.4	40-150
Surrogate: Fluoranthene-d10	0.0343		"	0.0333	103	40-150

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Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHA0890 - EPA 5030 Soil MS

Matrix Spike (BHA0890-MS1)

Source: 2401305-01

Prepared: 01/25/24 Analyzed: 01/26/24

Acenaphthene	0.0260	0.00500	mg/kg	0.0333	ND	78.1	31-137		
Anthracene	0.0253	0.00500	"	0.0333	ND	75.8	30-120		
Benzo (a) anthracene	0.0213	0.00500	"	0.0333	ND	64.0	30-120		
Benzo (a) pyrene	0.0254	0.00500	"	0.0333	ND	76.3	30-120		
Benzo (b) fluoranthene	0.0278	0.00500	"	0.0333	ND	83.5	30-120		
Benzo (k) fluoranthene	0.0281	0.00500	"	0.0333	ND	84.3	30-120		
Chrysene	0.0268	0.00500	"	0.0333	ND	80.3	30-120		
Dibenz (a,h) anthracene	0.0271	0.00500	"	0.0333	ND	81.4	30-120		
Fluoranthene	0.0285	0.00500	"	0.0333	ND	85.5	30-120		
Fluorene	0.0274	0.00500	"	0.0333	ND	82.3	30-120		
Indeno (1,2,3-cd) pyrene	0.0188	0.00500	"	0.0333	ND	56.4	30-120		
Pyrene	0.0270	0.00500	"	0.0333	ND	81.0	35-142		
1-Methylnaphthalene	0.0278	0.00500	"	0.0333	ND	83.4	15-130		
2-Methylnaphthalene	0.0311	0.00500	"	0.0333	ND	93.3	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0207		"	0.0333		62.2	40-150		
Surrogate: Fluoranthene-d10	0.0281		"	0.0333		84.4	40-150		

Matrix Spike Dup (BHA0890-MSD1)

Source: 2401305-01

Prepared: 01/25/24 Analyzed: 01/26/24

Acenaphthene	0.0274	0.00500	mg/kg	0.0333	ND	82.3	31-137	5.20	30
Anthracene	0.0278	0.00500	"	0.0333	ND	83.5	30-120	9.72	30
Benzo (a) anthracene	0.0233	0.00500	"	0.0333	ND	69.8	30-120	8.65	30
Benzo (a) pyrene	0.0277	0.00500	"	0.0333	ND	83.2	30-120	8.69	30
Benzo (b) fluoranthene	0.0303	0.00500	"	0.0333	ND	90.9	30-120	8.43	30
Benzo (k) fluoranthene	0.0305	0.00500	"	0.0333	ND	91.5	30-120	8.26	30
Chrysene	0.0279	0.00500	"	0.0333	ND	83.7	30-120	4.12	30
Dibenz (a,h) anthracene	0.0298	0.00500	"	0.0333	ND	89.5	30-120	9.54	30
Fluoranthene	0.0311	0.00500	"	0.0333	ND	93.2	30-120	8.65	30
Fluorene	0.0301	0.00500	"	0.0333	ND	90.3	30-120	9.26	30
Indeno (1,2,3-cd) pyrene	0.0216	0.00500	"	0.0333	ND	64.8	30-120	13.9	30
Pyrene	0.0285	0.00500	"	0.0333	ND	85.6	35-142	5.62	30
1-Methylnaphthalene	0.0303	0.00500	"	0.0333	ND	90.8	15-130	8.51	50
2-Methylnaphthalene	0.0326	0.00500	"	0.0333	ND	97.8	15-130	4.80	50
Surrogate: 2-Methylnaphthalene-d10	0.0240		"	0.0333		71.9	40-150		
Surrogate: Fluoranthene-d10	0.0318		"	0.0333		95.4	40-150		

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

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

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

Batch BHA0819 - EPA 3050B

Blank (BHA0819-BLK1)

Prepared & Analyzed: 01/24/24

Boron ND 2.00 mg/L

LCS (BHA0819-BS1)

Prepared & Analyzed: 01/24/24

Boron 4.63 2.00 mg/L 5.00 92.6 80-120

Duplicate (BHA0819-DUP1)

Source: 2401369-01

Prepared & Analyzed: 01/24/24

Boron ND 2.00 mg/L ND 20

Matrix Spike (BHA0819-MS1)

Source: 2401369-01

Prepared & Analyzed: 01/24/24

Boron 4.57 2.00 mg/L 5.00 ND 91.4 75-125

Matrix Spike Dup (BHA0819-MSD1)

Source: 2401369-01

Prepared & Analyzed: 01/24/24

Boron 4.74 2.00 mg/L 5.00 ND 94.7 75-125 3.55 25

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PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHA0930 - EPA 3050B

Blank (BHA0930-BLK1)

Prepared: 01/26/24 Analyzed: 01/27/24

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 (BHA0930-BS1)

Prepared: 01/26/24 Analyzed: 01/27/24

Arsenic	36.1	0.200	mg/kg wet	40.0	90.2	80-120
Barium	36.1	0.400	"	40.0	90.1	80-120
Cadmium	1.89	0.200	"	2.00	94.5	80-120
Copper	38.6	0.400	"	40.0	96.6	80-120
Lead	18.5	0.200	"	20.0	92.3	80-120
Nickel	38.1	0.400	"	40.0	95.3	80-120
Silver	1.88	0.0200	"	2.00	93.9	80-120
Zinc	39.6	0.400	"	40.0	98.9	80-120
Selenium	3.70	0.260	"	4.00	92.4	80-120

Duplicate (BHA0930-DUP1)

Source: 2401369-01

Prepared: 01/26/24 Analyzed: 01/27/24

Arsenic	2.41	0.200	mg/kg dry	2.28	5.60	20
Barium	54.4	0.400	"	51.0	6.46	20
Cadmium	0.158	0.200	"	0.144	9.24	20
Copper	5.94	0.400	"	5.62	5.50	20
Lead	4.71	0.200	"	4.36	7.54	20
Nickel	3.55	0.400	"	3.52	0.893	20
Silver	0.0203	0.0200	"	0.0198	2.25	20
Zinc	16.9	0.400	"	15.6	7.67	20
Selenium	ND	0.260	"	ND		20

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHA0930 - EPA 3050B

Matrix Spike (BHA0930-MS1)		Source: 2401369-01			Prepared: 01/26/24 Analyzed: 01/27/24					
Arsenic	44.3	0.200	mg/kg dry	45.1	2.28	93.3	75-125			
Barium	104	0.400	"	45.1	51.0	118	75-125			
Cadmium	2.36	0.200	"	2.25	0.144	98.4	75-125			
Copper	37.4	0.400	"	45.1	5.62	70.5	75-125			QM-07
Lead	27.5	0.200	"	22.5	4.36	103	75-125			
Nickel	35.3	0.400	"	45.1	3.52	70.5	75-125			QM-07
Silver	2.15	0.0200	"	2.25	0.0198	94.6	75-125			
Zinc	51.8	0.400	"	45.1	15.6	80.3	75-125			
Selenium	3.17	0.260	"	4.51	ND	70.4	75-125			QM-07

Matrix Spike Dup (BHA0930-MSD1)		Source: 2401369-01			Prepared: 01/26/24 Analyzed: 01/27/24					
Arsenic	44.0	0.200	mg/kg dry	45.1	2.28	92.5	75-125	0.747	25	
Barium	105	0.400	"	45.1	51.0	119	75-125	0.204	25	
Cadmium	2.40	0.200	"	2.25	0.144	100	75-125	1.74	25	
Copper	36.8	0.400	"	45.1	5.62	69.3	75-125	1.55	25	QM-07
Lead	27.6	0.200	"	22.5	4.36	103	75-125	0.443	25	
Nickel	34.7	0.400	"	45.1	3.52	69.2	75-125	1.71	25	QM-07
Silver	2.18	0.0200	"	2.25	0.0198	96.0	75-125	1.54	25	
Zinc	51.1	0.400	"	45.1	15.6	78.7	75-125	1.39	25	
Selenium	3.20	0.260	"	4.51	ND	71.1	75-125	1.07	25	QM-07

Post Spike (BHA0930-PS1)		Source: 2401369-01			Prepared: 01/26/24 Analyzed: 01/27/24					
Arsenic	116		ug/l	100	5.06	111	75-125			
Barium	214		"	100	113	101	75-125			
Cadmium	6.00		"	5.00	0.320	114	75-125			
Copper	98.9		"	100	12.5	86.5	75-125			
Lead	64.7		"	50.0	9.68	110	75-125			
Nickel	93.9		"	100	7.80	86.1	75-125			
Silver	5.74		"	5.00	0.0440	114	75-125			
Zinc	124		"	100	34.6	89.6	75-125			
Selenium	10.7		"	10.0	0.180	106	75-125			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHB0624 - EPA 3050B

Blank (BHB0624-BLK1)

Prepared: 02/20/24 Analyzed: 02/22/24

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 (BHB0624-BS1)

Prepared: 02/20/24 Analyzed: 02/22/24

Arsenic	37.1	0.200	mg/kg wet	40.0	92.9	80-120
Barium	39.3	0.400	"	40.0	98.1	80-120
Cadmium	2.01	0.200	"	2.00	100	80-120
Copper	47.0	0.400	"	40.0	118	80-120
Lead	20.1	0.200	"	20.0	100	80-120
Nickel	45.3	0.400	"	40.0	113	80-120
Silver	2.01	0.0200	"	2.00	101	80-120
Zinc	45.5	0.400	"	40.0	114	80-120
Selenium	4.25	0.260	"	4.00	106	80-120

Duplicate (BHB0624-DUP1)

Source: 2401369-05RE1

Prepared: 02/20/24 Analyzed: 02/22/24

Arsenic	2.84	0.200	mg/kg dry	2.64	7.53	20
Barium	160	0.400	"	178	10.4	20
Cadmium	0.209	0.200	"	0.191	9.13	20
Copper	5.04	0.400	"	4.47	11.9	20
Lead	7.47	0.200	"	6.14	19.6	20
Nickel	6.40	0.400	"	5.01	24.3	20
Silver	0.0119	0.0200	"	0.0101	16.7	20
Zinc	17.5	0.400	"	17.1	2.33	20
Selenium	ND	0.260	"	ND		20

QR-03

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHB0624 - EPA 3050B

Matrix Spike (BHB0624-MS1)

Source: 2401369-05RE1 Prepared: 02/20/24 Analyzed: 02/22/24

Arsenic	45.0	0.200	mg/kg dry	45.7	2.64	92.7	75-125			
Barium	168	0.400	"	45.7	178	NR	75-125			QM-05
Cadmium	2.60	0.200	"	2.29	0.191	105	75-125			
Copper	35.2	0.400	"	45.7	4.47	67.1	75-125			QM-05
Lead	29.7	0.200	"	22.9	6.14	103	75-125			
Nickel	35.4	0.400	"	45.7	5.01	66.6	75-125			QM-05
Silver	2.31	0.0200	"	2.29	0.0101	100	75-125			
Zinc	48.1	0.400	"	45.7	17.1	67.8	75-125			QM-05
Selenium	4.15	0.260	"	4.57	ND	90.7	75-125			

Matrix Spike Dup (BHB0624-MSD1)

Source: 2401369-05RE1 Prepared: 02/20/24 Analyzed: 02/22/24

Arsenic	44.7	0.200	mg/kg dry	45.7	2.64	92.0	75-125	0.716	25	
Barium	163	0.400	"	45.7	178	NR	75-125	2.60	25	QM-05
Cadmium	2.55	0.200	"	2.29	0.191	103	75-125	1.90	25	
Copper	35.1	0.400	"	45.7	4.47	66.9	75-125	0.259	25	QM-05
Lead	29.3	0.200	"	22.9	6.14	101	75-125	1.51	25	
Nickel	35.3	0.400	"	45.7	5.01	66.1	75-125	0.519	25	QM-05
Silver	2.28	0.0200	"	2.29	0.0101	99.3	75-125	1.10	25	
Zinc	47.9	0.400	"	45.7	17.1	67.3	75-125	0.525	25	QM-05
Selenium	4.17	0.260	"	4.57	ND	91.2	75-125	0.649	25	

Post Spike (BHB0624-PS1)

Source: 2401369-05RE1 Prepared: 02/20/24 Analyzed: 02/22/24

Arsenic	108		ug/l	100	5.76	102	75-125			
Barium	486		"	100	389	97.1	75-125			
Cadmium	5.87		"	5.00	0.418	109	75-125			
Copper	86.8		"	100	9.78	77.0	75-125			
Lead	65.8		"	50.0	13.4	105	75-125			
Nickel	86.5		"	100	11.0	75.5	75-125			
Silver	5.46		"	5.00	0.0220	109	75-125			
Zinc	114		"	100	37.4	77.1	75-125			
Selenium	11.6		"	10.0	0.152	115	75-125			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BHA0847 - 3060A Mod

Blank (BHA0847-BLK1)

Prepared & Analyzed: 01/24/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHA0847-BS1)

Prepared & Analyzed: 01/24/24

Chromium, Hexavalent 22.6 0.30 mg/kg wet 25.0 90.2 80-120

Duplicate (BHA0847-DUP1)

Source: 2401369-01

Prepared & Analyzed: 01/24/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHA0847-MS1)

Source: 2401369-01

Prepared & Analyzed: 01/24/24

Chromium, Hexavalent 23.1 0.30 mg/kg dry 28.2 ND 82.2 75-125

Matrix Spike Dup (BHA0847-MSD1)

Source: 2401369-01

Prepared & Analyzed: 01/24/24

Chromium, Hexavalent 23.3 0.30 mg/kg dry 28.2 ND 82.6 75-125 0.485 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

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

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

Batch BHA0818 - General Preparation

Blank (BHA0818-BLK1)

Prepared: 01/24/24 Analyzed: 01/25/24

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

LCS (BHA0818-BS1)

Prepared: 01/24/24 Analyzed: 01/25/24

Calcium	5.56	0.0500	mg/L wet	5.00	111	70-130
Magnesium	5.44	0.0500	"	5.00	109	70-130
Sodium	5.49	0.0500	"	5.00	110	70-130

Summit Scientific

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Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - Amigo 66N64W 17NWNE Project Number: UWRWE-A3528-ABN Project Manager: Paul Henchan	Reported: 05/24/24 14:13
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Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

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

Batch BHA0801 - General Preparation

Duplicate (BHA0801-DUP1)	Source: 2401369-01			Prepared & Analyzed: 01/23/24						
% Solids	89.6		%		88.8			0.950	20	

Summit Scientific

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Fremont Environmental
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Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

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

Batch BHA0875 - General Preparation

Blank (BHA0875-BLK1)

Prepared & Analyzed: 01/25/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHA0875-BS1)

Prepared & Analyzed: 01/25/24

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

Duplicate (BHA0875-DUP1)

Source: 2401365-01

Prepared & Analyzed: 01/25/24

Specific Conductance (EC) 0.423 0.0100 mmhos/cm 0.423 0.00 20

Summit Scientific

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Fremont Environmental	Project: Noble - Amigo 66N64W 17NWNE	
PO Box 1289	Project Number: UWRWE-A3528-ABN	Reported:
Wellington CO, 80549	Project Manager: Paul Henchan	05/24/24 14:13

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

Summit Scientific

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

Batch BHA0874 - General Preparation

LCS (BHA0874-BS1)				Prepared & Analyzed: 01/25/24						
pH	9.29		pH Units	9.18	101	95-105				
Duplicate (BHA0874-DUP1)				Source: 2401365-01 Prepared & Analyzed: 01/25/24						
pH	8.20		pH Units	8.20		0.00		20		

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Amigo 66N64W 17NWNE
Project Number: UWRWE-A3528-ABN
Project Manager: Paul Henchan

Reported:
05/24/24 14:13

Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
I-04	Sample was analyzed out of recommended holding time per clients request.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference