

# **FREMONT ENVIRONMENTAL INC.**

December 19, 2022

Mr. Daniel Peterson  
Noble Energy Inc.  
2115 117<sup>th</sup> Avenue  
Greeley, CO 80634

Subject:           **Facility Closure Data Submittal**  
UPRC-65N64W 23SESW  
API # 05-123-18108  
SESW Sec. 23, T5N, R64W  
Weld County, Colorado  
Fremont Project No. C022-075  
Facility # 336600, Remediation #22296

Dear Mr. Peterson:

As you requested, Fremont Environmental Inc. (Fremont) personnel conducted Facility Closure activities for the Noble Energy Inc. (Noble) UPRC-65N64W 23SESW facility. Impacted soil was not encountered during abandonment activities. Details of the UPRC-65N64W 23SESW facility closure activities are documented in the attached Closure Report. Groundwater was not encountered during the facility abandonment activities.

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

Sincerely,

**FREMONT ENVIRONMENTAL INC.**



Paul V. Henehan, P.E.  
Senior Consultant

Attachments:

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

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

## Tank Battery Closure Checklist

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

Additional attachments (optional):		Pit Closure		Wellhead Closure		Flowline Closure	<b>X</b>	Partially Buried Vault Closure	
Site Name & COGCC Facility Number: UPRC-65N64W 23SESW Facility ID: 336600		Date: <b>06/20/2022</b>						Remediation Project #: <b>22296</b>	
Associated Wells: UPRC 23-11H4 Facility ID: 520305 API: 05-123-18108		Age of Site: <b>1994</b>						Number of Photos Attached: <b>9 Photos</b>	
Location: (GPS coordinates of southeaster berm) <b>40.378087,-104.520149</b>							Estimated Facility Size (acres): <b>~1 Acre</b>		

General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)  
**Good housekeeping. General condition for all the on-site equipment looked fine. No impacts noted throughout project site**

USCS Soil Type: **SW** Estimated Depth to Groundwater: **N/A**

Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)  
**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 BBLS	300 BBLS						
Age	1994	1994						
Construction Material	Steel	Steel						
Tank type (AST/DRV, etc.)	AST	AST						
Visual Integrity of Tank	No Damage	No Damage						
Condition of tank footprint	No Impacts	No Impacts						
PID Readings	High @ 0.1ppm	High @ 0.3ppm						
Soil impacts present at valves or hatches?	No Impacts	No Impacts						
PID Readings	N/A	N/A						
Sample taken? Location/ Sample ID#	40.378094, -104.519767 WAST01@6.0"	40.378094, -104.519704 EAST01@6.0"						
Photo Number(s)	Photo 1A	Photo 2A						

Other observations regarding tanks:  
 Tanks appeared to be in good condition with minimal corrosion. An exceedance in pH was discovered below the western above ground storage tank. Refer to the inorganic soil chemistry table (Table 3) and Figure 3 for reference.

#### Separators

Separator size	UNK						
Vertical or Horizontal	Horizontal						
Age	1994						
Soil impacts present at hatches?	No Impacts						
PID Readings	High @ 0.3ppm						
Sample taken? Location/ Sample ID#	40.378091, -104.520107 SEP01@6.0"						
Photo Number(s)	Photo 7A-7B						

Other observations regarding separators  
**Separator was in good condition with minimal corrosion**

#### Third Party Equipment

Type	Meter Shed	Meter Shed					
Age	UNK	UNK					

<i>Third Party Owner</i>	UNK	UNK							
<i>Removal Date</i>	Still On-site	Still On-site							
<i>Sample taken? Location/Depth</i>	MET01@6.0"	MET02@6.0"							
<i>PID Readings</i>	High @ 1.3ppm	High @ 0.2ppm							
<i>Photo Number(s)</i>	Photo 10A	Photo 11A							

### Other Facility Equipment

<i>Equipment type</i>	Combustion Unit	Combustion Unit		
<i>Equipment Condition</i>	No Damage	No Damage		
<i>Age</i>	1994	1994		
<i>Soil impacts</i>	No Impacts	No Impacts		
<i>PID Readings</i>	High @ 3.7ppm	High @ 2.1ppm		
<i>Sample taken? Location/Depth</i>	40.378146,-104.520208 ECD01@6.0"	40.378106,-104.520210 ECD02@6.0"		
<i>Photo Number(s)</i>	Photo 8A	Photo 9A		

*Other observations regarding other facility or third party equipment:*

Combustion units were removed prior to sampling event

### Summary

<i>Was impacted soil identified?</i>	
<b>No</b>	Yes - less than 10 cubic yards      Yes - more than 10 cubic yards
<i>Total number of samples field screened:</i> <b>4 Samples</b>	<i>Total number of samples collected:</i> <b>7 Samples</b>
<i>Highest PID Reading:</i> High at 3.7ppm (ECD01@6.0")	<i>Total number of samples submitted to lab for analysis:</i> <b>3 Samples</b>
<i>If more than 10 cubic yards of impacted soil were observed:</i>	
<i>Vertical extent:</i> <b>N/A</b>	<i>Estimated spill volume:</i> <b>N/A</b>
<i>Lateral extent:</i> <b>N/A</b>	<i>Volume of soil removed:</i> <b>N/A</b>
<i>Is additional investigation required?</i> <b>N/A</b>	
<i>Was groundwater encountered during the investigation?</i>	
<b>No</b>	Yes - not impacted or in contact with impacted soils      Yes - groundwater impacted and/or in contact with impacted soils
<i>Measured depth to groundwater:</i> <b>N/A</b>	<i>Was remedial groundwater removal conducted?</i> Yes      No
<i>Date Groundwater was encountered:</i> <b>N/A</b>	<i>Commencement date of removal:</i> <b>N/A</b>
<i>Sheen on groundwater?</i> Yes      No	<i>Volume of groundwater removed prior to sampling:</i> <b>N/A</b>
<i>Free product observed?</i> Yes      No	<i>Volume of groundwater removed post sampling:</i> <b>N/A</b>
<i>Total number of samples collected:</i> <b>N/A</b>	<i>Total Volume of groundwater removed:</i> <b>N/A</b>
<i>Total number of samples submitted to lab for analysis:</i> <b>N/A</b>	

## 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	X	Tank Battery Closure	
Site Name & COGCC Facility Number: <small>UPRC-65N64W 23SESW Facility ID: 336600</small>		Date: <b>06/20/2022</b>						Remediation Project #: <b>22296</b>	
Associated Wells: UPRC 23-11H4 <small>Facility ID: 520305 API: 05-123-18108</small>		Age of Site: <b>1994</b>						Number of Photos Attached: <b>11 Photos</b>	
Location: (GPS coordinates of vault or southeastern tank berm for multiple) <b>Eastern PWV - 40.378105, -104.519827    Western PWV - 40.378106, -104.519853</b>								Estimated Facility Size (acres): <b>~1 acre</b>	
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.) <b>Good housekeeping. The on-site dumplines and PWVs appeared to be in good condition with no corrosion</b>									
USCS Soil Type: <b>SW</b>					Estimated Depth to Groundwater: <b>N/A</b>				
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) <b>None observed</b>									
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) <b>None observed</b>									
Buried or Partially Buried Vessels									
Tank Contents	Produced Water	Produced Water							
Size (barrels)	<50 BBLS	<50 BBLS							
Age	1994	1994							
Construction Material	PBV Concrete	PBV Concrete							
Visual Integrity of Tank	No Damage	No Damage							
Condition of tank foundation	No Impacts	No Impacts							
PID Readings	High @ 9.7ppm	High @ 5.4ppm							
Condition of Access Lines	No Damage	No Damage							
PID Readings	High @ 1.0ppm DL01@3.0'	High @ 1.0ppm DL01@3.0'							
Sample taken? Location/Sample ID#	EPWVB01@7.0' EPWVN01@6.0'	WPWVB01@7.0' WPWVN01@6.0'							
Photo Number(s)	Photo 3A, 4A-4D & 6A-6B	Photo 3A, 5A-5D & 6A-6B							
Other observations regarding partially buried vessels: The southern sidewall of both PWV excavations was the tie-in points for the dumpline to the separator. Exceedances in pH were discovered at each base and northern sidewalls of each PWV excavations. Refer to the inorganic soil chemistry table (Table 3) and Figure 3 for reference.									
Summary									
Was impacted soil identified? <b>No</b> Yes - less than 10 cubic yards                      Yes - more than 10 cubic yards									
Total number of samples field screened: <b>6 samples</b>					Total number of samples collected: <b>10 samples</b>				
Highest PID Reading: <b>High @ 9.7ppm (EPWVB01@7.0')</b>					Total number of samples submitted to lab for analysis: <b>4 samples</b>				
If more than 10 cubic yards of impacted soil were observed:									
Vertical extent: <b>N/A</b>					Estimated spill volume: <b>N/A</b>				
Lateral extent: <b>N/A</b>					Volume of soil removed: <b>N/A</b>				
Is additional investigation required? <b>No</b>									
Was groundwater encountered during the investigation? <b>No</b> Yes - not impacted or in contact with impacted soils                      Yes - groundwater impacted and/or in contact with impacted soils									
Measured depth to groundwater: <b>N/A</b>					Was remedial groundwater removal conducted?    Yes    No				
Date Groundwater was encountered: <b>N/A</b>					Commencement date of removal: <b>N/A</b>				
Sheen on groundwater?                      Yes                      No					Volume of groundwater removed prior to sampling: <b>N/A</b>				
Free product observed?                      Yes                      No					Volume of groundwater removed post sampling: <b>N/A</b>				
Total number of samples collected: <b>N/A</b>					Total Volume of groundwater removed: <b>N/A</b>				
Total number of samples submitted to lab for analysis: <b>N/A</b>									

**TABLE 1**  
**SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA**  
**NOBLE ENERGY INC**  
**UPRC-65N64W 23SESW (UPRC 23-11H4), WELD COUNTY, COLORADO**  
**FREMONT PROJECT NO. C022-075**

Sample	Date Sampled	Depth (ft)	Location	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)
EAST01@6.0"	6/20/2022	0.5 Ft	Floor	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
WAST01@6.0'	6/20/2022	0.5 Ft	Floor	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
EPWVB01@7.0'	6/20/2022	7.0 Ft	Floor	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
EPWVN01@6.0'	6/20/2022	6.0 Ft	Sidewall	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
WPWVB01@7.0'	6/20/2022	7.0 Ft	Floor	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
WPWVN01@6.0'	6/20/2022	6.0 Ft	Sidewall	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SEP01@6.0"	6/20/2022	0.5 Ft	Floor	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
ECMC Table 915-1 Limits (Residential SSL)				1.2	490	5.8	58	30	27	2	500	500	500
ECMC Table 915-1 Limits (Protection of Groundwater SSL)				0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500	500	500

Bold faced values exceed the COGCC Table 915-1 concentrations

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

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

TABLE 2  
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA  
NOBLE ENERGY INC  
UPRC-65N64W 23SESW (UPRC 23-11H4), WELD COUNTY, COLORADO  
FREMONT PROJECT NO. C022-075

Sample	Date Sampled	Depth (ft)	Location	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)	Dibenz (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)
EAST01@6.0"	6/20/2022	0.5 Ft	Floor	<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
WAST01@6.0'	6/20/2022	0.5 Ft	Floor	<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
EPWVB01@7.0'	6/20/2022	7.0 Ft	Floor	<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
EPWVN01@6.0'	6/20/2022	6.0 Ft	Sidewall	<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
WPWVB01@7.0'	6/20/2022	7.0 Ft	Floor	<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
WPWVN01@6.0'	6/20/2022	6.0 Ft	Sidewall	<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@6.0"	6/20/2022	0.5 Ft	Floor	<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
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

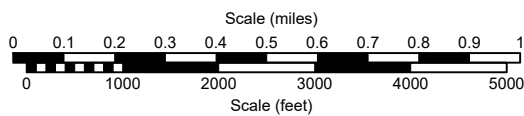
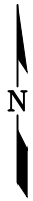
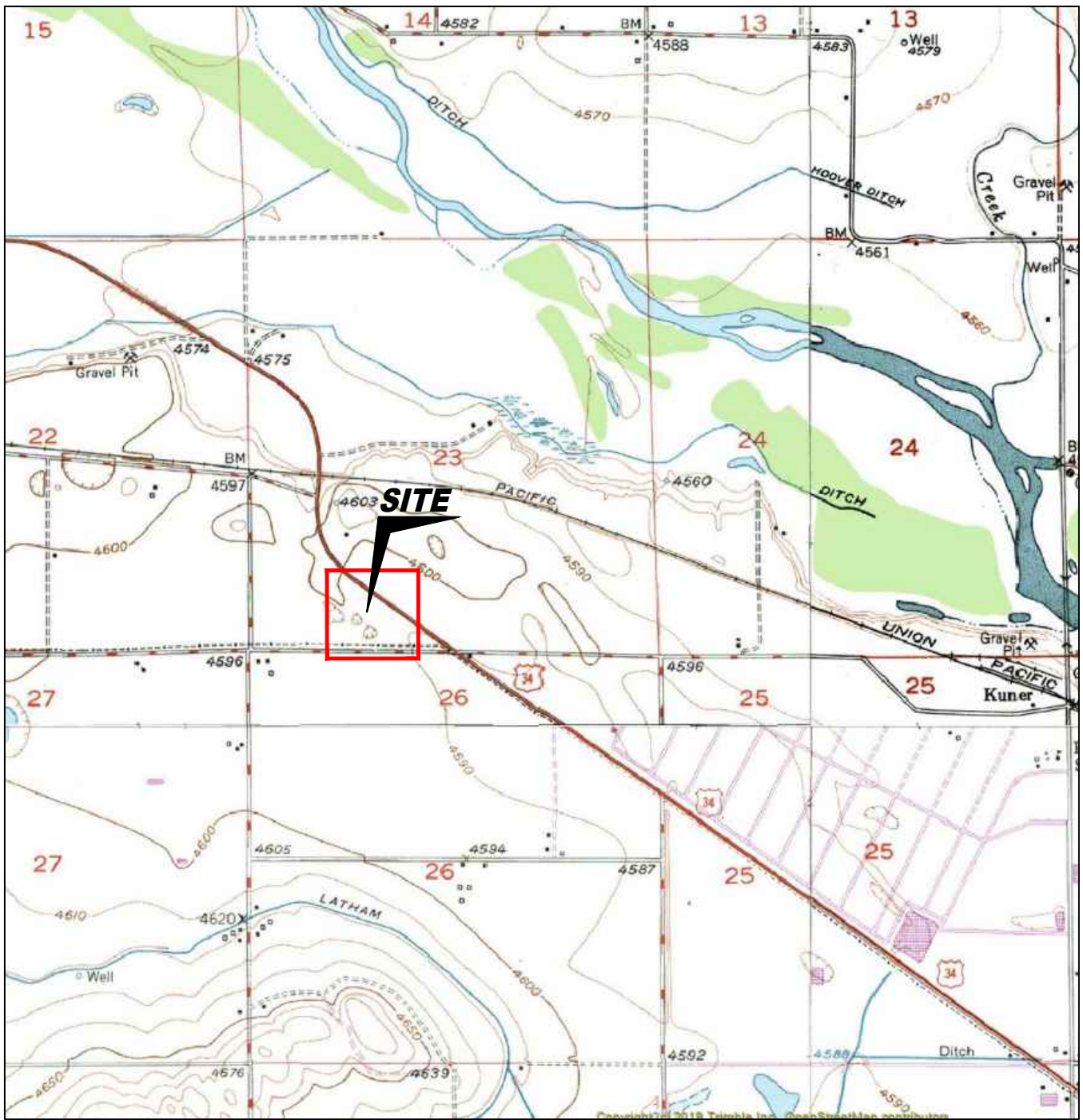
Bold faced values exceed the ECMC Table 915-1 concentrations

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

**TABLE 3**  
**SUMMARY OF INORGANIC SOIL CHEMISTRY DATA**  
**NOBLE ENERGY INC**  
**UPRC-65N64W 23SESW (UPRC 23-11H4), WELD COUNTY, COLORADO**  
**FREMONT PROJECT NO. C022-075**

<b>SAMPLE LOCATION</b>	<b>DATE SAMPLED</b>	<b>DEPTH ft</b>	<b>EC mmhos/cm</b>	<b>pH pH units</b>	<b>SAR units</b>	<b>BORON mg/L</b>
EAST01@6.0"	6/20/2022	0.5 Ft	0.4320	7.51	0.3150	0.0662
WAST01@6.0'	6/20/2022	0.5 Ft	0.2290	<b>5.36</b>	0.0691	0.0411
EPWVB01@7.0'	6/20/2022	7.0 Ft	0.2580	<b>8.89</b>	0.3120	0.0912
EPWVN01@6.0'	6/20/2022	6.0 Ft	0.1520	<b>8.33</b>	0.0680	0.0503
WPWVB01@7.0'	6/20/2022	7.0 Ft	0.1970	<b>8.63</b>	0.1570	0.0467
WPWVN01@6.0'	6/20/2022	6.0 Ft	0.1680	<b>8.46</b>	0.0684	0.0418
SEP01@6.0"	6/20/2022	0.5 Ft	0.0498	7.20	0.0979	0.0275
BKG01@6.0"	6/20/2022	0.5 Ft	0.3260	6.27	0.1100	0.1850
EPWVB01@7.0' (2)	01/09/2024	7	NA	<b>8.77</b>	NA	NA
EPWVN01@6.0' (2)	01/09/2024	6	NA	<b>9.05</b>	NA	NA
WAST01@0.5' (2)	01/09/2024	0.5	NA	<b>8.67</b>	NA	NA
WPWVB01@7.0' (2)	01/09/2024	7	NA	<b>8.63</b>	NA	NA
WPWVN01@6.0' (2)	01/09/2024	6	NA	<b>8.51</b>	NA	NA
Table 915-1 Limits			<4	6-8.3	<6	2

Bold face values exceed the EC/MC Limits



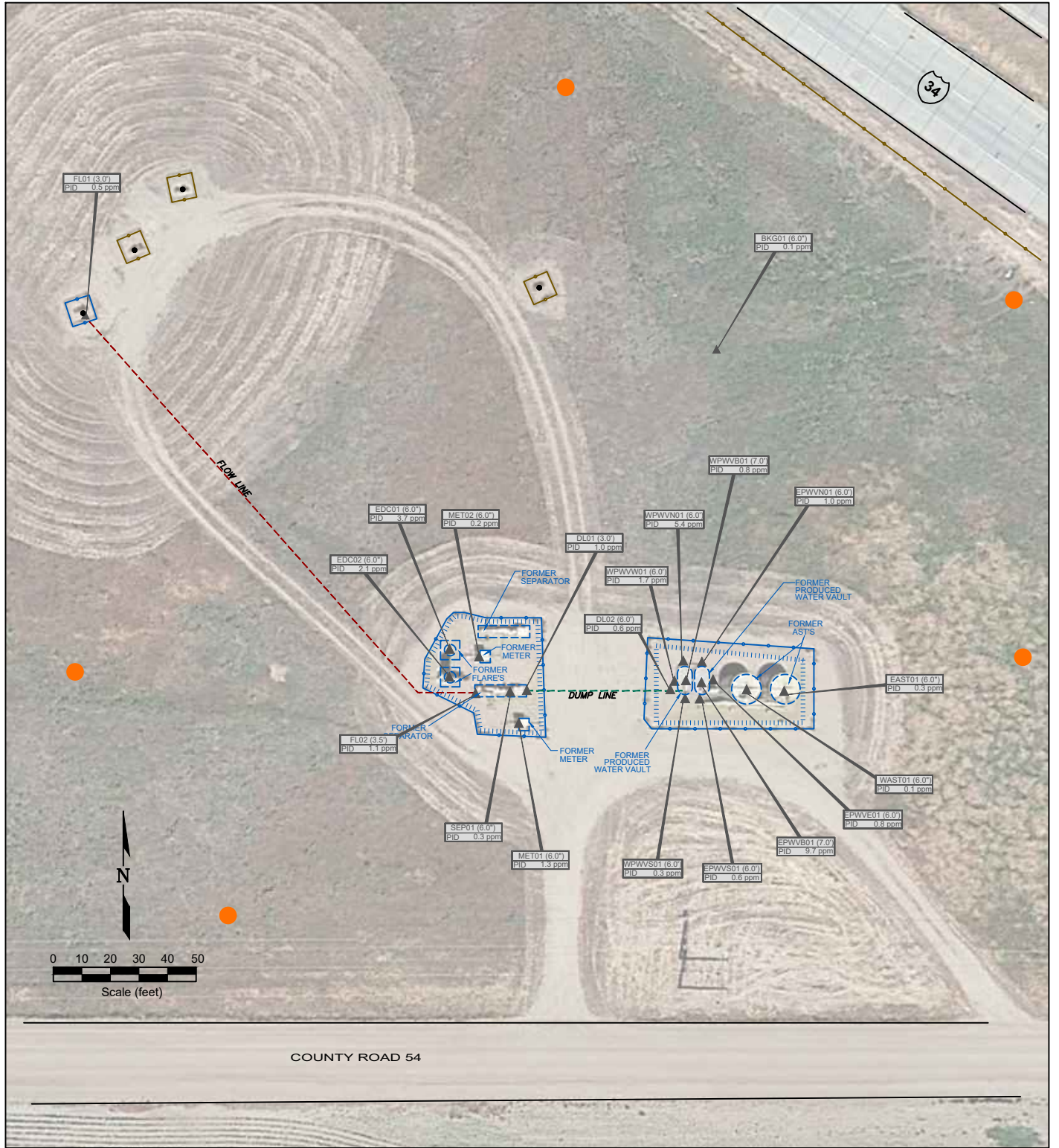
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1  
SITE LOCATION MAP

**NOBLE ENERGY, INC. ~ UPRC-65N64W 23SESW**  
 SESW Sec. 23, T5N, R64W, 6th PM  
 Weld County, Colorado  
 40.378094°, -104.519704°

Project # <b>C022-075</b>	API # <b>05-123-18108</b>	Facility ID <b>336600</b>
Date <b>08/01/2022</b>	Remediation # <b>22296</b>	Filename <b>22075T</b>





**LEGEND**

- RISER LOCATION
  - ▲ PID READING LOCATION
  - ABOVE GROUND STORAGE TANK
  - FORMER FACILITY
  - CONTAINMENT BERM
  - FENCE LINE
  - FLOW LINE
  - DUMP LINE
- EAST01 (6.0")  
 PID = 0.3 ppm  
 PHOTO IONIZATION DETECTION READING (ppm)  
 PID = photo ionization detection / PPM = parts per million

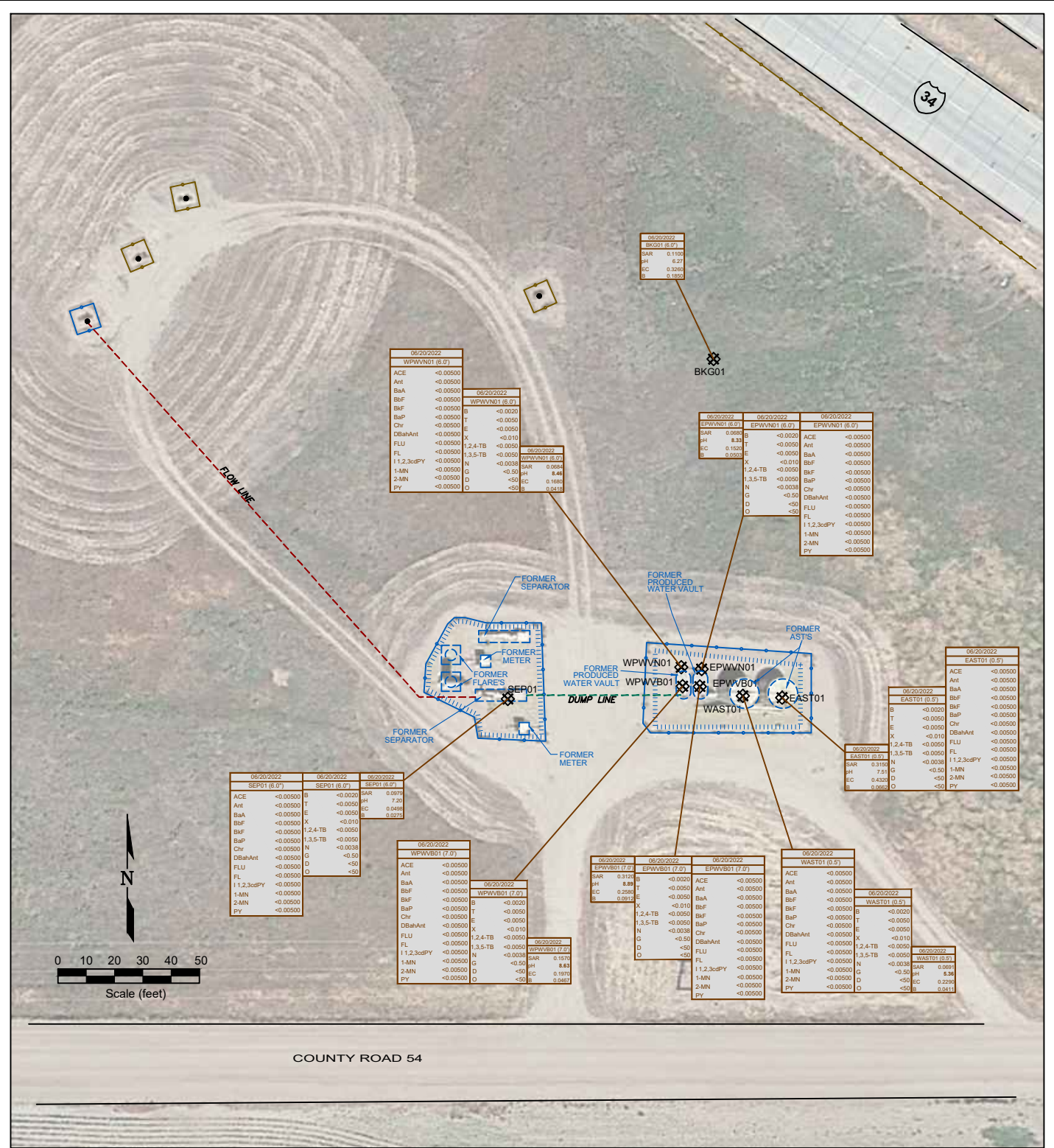
● Proposed Background Sample Locations

**Figure 2  
SITE MAP**

**NOBLE ENERGY, INC. ~ UPRC-65N64W 23SESW**  
 SESW Sec. 23, T5N, R64W, 6th PM  
 Weld County, Colorado  
 40.378094°, -104.519704°

Project No. <b>C022-075</b>	API # <b>05-123-18108</b>	Facility # <b>336600</b>
Date <b>08/01/2022</b>	Remediation # <b>22296</b>	Filename <b>22075Q</b>





**LEGEND**

- RISER LOCATION
- ⊗ SOIL SAMPLE LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- CONTAINMENT BERM
- FENCE LINE
- FLOW LINE
- DUMP LINE

06/20/2022	DATE SAMPLED	06/20/2022	DATE SAMPLED	06/20/2022	DATE SAMPLED
EAST01 (0.5')	SAMPLE ID and DEPTH (ft)	EAST01 (0.5')	SAMPLE ID and DEPTH (ft)	EAST01 (0.5')	SAMPLE ID & DEPTH (ft)
ACE	ACENAPHTHENE (mg/kg)	B	BENZENE (mg/kg)	SAR	SAR (mg/l)
Ant	ANTHRACENE (mg/kg)	T	TOLUENE (mg/kg)	pH	pH (pH units)
BaA	BENZO (A) ANTHRACENE (mg/kg)	E	ETHYLBENZENE (mg/kg)	EC	EC (meqhos/cm)
BbF	BENZO (B) FLUORANTHENE (mg/kg)	X	TOTAL XYLENES (mg/kg)	B	BORON (mg/L)
BkF	BENZO (K) FLUORANTHENE (mg/kg)	1,2,4-TB	1,2,4-TRIMETHYLBENZENE (mg/kg)		
BaP	BENZO (A) PYRENE (mg/kg)	1,3,5-TB	1,3,5-TRIMETHYLBENZENE (mg/kg)		
Chr	CHRYSENE (mg/kg)	N	NAPHTHALENE (mg/kg)		
DBahAnt	DIBENZ (A,H) ANTHRACENE (mg/kg)	FL	TPH-GRO (mg/kg)		
FLU	FLUORENE (mg/kg)	1,1,2,3cdPY	INDENO (1,2,3-CD) PYRENE (mg/kg)		
1,1,2,3cdPY	1,1,2,3,4cdPY (mg/kg)	1-MN	1-METHYLNAPHTHALENE (mg/kg)		
1-MN	1-METHYLNAPHTHALENE (mg/kg)	2-MN	2-METHYLNAPHTHALENE (mg/kg)		
2-MN	2-METHYLNAPHTHALENE (mg/kg)	PY	PYRENE (mg/kg)		
PY	PYRENE (mg/kg)				

**Figure 3**  
**SOIL CHEMISTRY MAP**  
**June 20, 2022**

**NOBLE ENERGY, INC. ~ UPRC-65N64W 23SESW**  
**SESW Sec. 23, T5N, R64W, 6th PM**  
**Weld County, Colorado**  
**40.378094, -104.519704°**

Project No. <b>C022-075</b>	API # <b>05-123-18108</b>	Facility # <b>336600</b>
Date <b>08/01/2022</b>	Remediation # <b>22296</b>	Filename <b>22075Q</b>





#1A - UPRC-65N64W 23SESW – Eastern Above Ground Storage Tank – EAST01@6.0” – No Impacts Noted – PID 0.3ppm – Sample Submitted for Lab Analysis – Facing West



#2A - UPRC-65N64W 23SESW – Western Above Ground Storage Tank – WAST01@6.0” – No Impacts Noted – PID 0.1ppm – Sample Submitted for Lab Analysis – Facing West



#3A - UPRC-65N64W 23SESW – Produced Water Vessels – Good Condition – Little to No Corrosion – Facing Northeast



#4A - UPRC-65N64W 23SESW – Base of Eastern Produced Water Vessel Excavation – EPWVB01@7.0' – No Impacts Noted – PID 9.7ppm – Sample Submitted for Lab Analysis – Facing North



#4B - UPRC-65N64W 23SESW – Northern Sidewall of Eastern Produced Water Vessel Excavation – EPWVN01@6.0’ – No Impacts Noted – PID 1.0ppm – Sample Submitted for Lab Analysis – Facing North



#4C - UPRC-65N64W 23SESW – Southern Sidewall of Eastern Produced Water Vessel Excavation – EPWVS01@6.0’ – No Impacts Noted – PID 0.6ppm – Facing South



#4D - UPRC-65N64W 23SESW – Eastern Sidewall of Eastern Produced Water Vessel Excavation – EPWVE01@6.0' – No Impacts Noted – PID 0.8ppm – Facing East



#5A - UPRC-65N64W 23SESW – Base of Western Produced Water Vessel Excavation – WPWVB01@7.0' – No Impacts Noted – PID 0.8ppm – Sample Submitted for Lab Analysis – Facing South



#5B - UPRC-65N64W 23SESW – Northern Sidewall of Western Produced Water Vessel Excavation – WPWVN01@6.0’– No Impacts Noted – PID 5.4ppm – Sample Submitted for Lab Analysis – Facing North



#5C - UPRC-65N64W 23SESW – Southern Sidewall of Western Produced Water Vessel Excavation – WPWVS01@6.0’– No Impacts Noted – PID 0.3ppm – Facing South



#5D - UPRC-65N64W 23SESW – Western Sidewall of Western Produced Water Vessel Excavation – WPWVW01@6.0’– No Impacts Noted – PID 1.7ppm – Facing West



#6A - UPRC-65N64W 23SESW – ASTs and PWVs Dumplines – Southwest Corner of PWVs Excavation – DL02@6.0’– No Impacts Noted – PID 0.6ppm – Facing West



#6B - UPRC-65N64W 23SESW – ASTs and PWVs Dumplines – Separator Tie-In – DL01@3.0' – No Impacts Noted – PID 1.0ppm – Facing East



#7A - UPRC-65N64W 23SESW – Separator – Good Condition – Little to No Corrosion – Facing North



#7B - UPRC-65N64W 23SESW – Separator – SEP01@6.0” – No Impacts Noted – PID 0.3ppm – Sample Submitted for Lab Analysis – Facing East



#8A - UPRC-65N64W 23SESW – Northern Combustion Unit – ECD01@6.0” – No Impacts Noted – PID 3.7ppm – Facing East



#9A - UPRC-65N64W 23SESW – Southern Combustion Unit – ECD02@6.0” – No Impacts Noted – PID 2.1ppm – Facing East



#10A - UPRC-65N64W 23SESW – Northern Third-Party Meter Shed – MET01@6.0” – No Impacts Noted – PID 1.3ppm – Facing East



#11A - UPRC-65N64W 23SESW – Northern Third-Party Meter Shed – MET02@6.0” – No Impacts Noted – PID 0.2ppm – Facing East



#12A - UPRC-65N64W 23SESW – Background Sample – BKG01@6.0” – No Impacts Noted – PID 0.1ppm – Sample Submitted for Lab Analysis – Facing South

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 28, 2022

Paul Henchan  
Fremont Environmental  
PO Box 1289  
Wellington, CO 80549  
RE: Noble - UPRC 23-11H4  
Work Order #2206303

Enclosed are the results of analyses for samples received by Summit Scientific on 06/20/22 16:39. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury  
President



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Wast01@6.0"	2206303-01	Soil	06/20/22 00:00	06/20/22 16:39
East01@6.0"	2206303-02	Soil	06/20/22 00:00	06/20/22 16:39
EPWVB01@7.0'	2206303-03	Soil	06/20/22 00:00	06/20/22 16:39
EPWVN01@6.0'	2206303-04	Soil	06/20/22 00:00	06/20/22 16:39
WPWVB01@7.0'	2206303-05	Soil	06/20/22 00:00	06/20/22 16:39
WPWVN01@6.0'	2206303-06	Soil	06/20/22 00:00	06/20/22 16:39
SEP01@6.0"	2206303-07	Soil	06/20/22 00:00	06/20/22 16:39
BKG01@6.0"	2206303-08	Soil	06/20/22 00:00	06/20/22 16:39

Summit Scientific

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

# Summit Scientific

2206303

S<sub>2</sub>

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

Page 1 of 1

Client: Fremont Env

Project Manager: Paul Henehan

Address:

E-Mail: Paulh@fremontenv.com

City/State/Zip:

Ethanb@fremontenv.com jeffg@fremontenv.com

Phone:

Project Name: UPRC 23-1144

Sampler Name: JG

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX+N	TMBS (915)	DRG, GRO, SMO	PAHs (915)	EC, PH, SAR, Barcan		
1	WASTO1@6.0"	06/20/22		3			X			X			X	X	X	X	X		
2	EASTO1@6.0"			3									X	X	X	X	X		
3	EPWV B01@7.0'			3									X	X	X	X	X		
4	EPWV N01@6.0'			3									X	X	X	X	X		
5	WPWV B01@7.0'			3									X	X	X	X	X		
6	WPWV N01@6.0'			3									X	X	X	X	X		
7	SEPO1@6.0"			3									X	X	X	X	X		
8	BKG01@6.0"			1													X		
9																			
10																			

Relinquished by: <u>[Signature]</u> Date/Time: <u>06/20/22 1636</u>	Received by: <u>[Signature]</u> Date/Time: <u>06/20/22 1659</u>	Turn Around Time (Check)	Notes: <u>Bill to Noble</u>
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____	Same Day _____ 72 hours _____	
Temperature Upon Receipt: <u>25.0</u>	Corrected Temperature _____	24 hours _____ Standard <u>X</u>	
IR gun correction: _____	IR gun #: _____	48 hours _____	
HNO3 lot # _____		Sample Integrity:	
		Samples Intact: <u>(Yes)</u> No	

S<sub>2</sub>

2206303

Sample Receipt Checklist

S2 Work Order#

Client: Freemont ENV Client Project ID: UPRC 23-11141

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

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

Temp (°C)  Thermometer #

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

Additional Comments (if any):

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

Robert Connolly  
Custodian Printed Name

6/20/22 1639  
Date/Time



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**Wast01@6.0"**  
**2206303-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BFF0621	06/23/22	06/26/22	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		99.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		107 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.9 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BFF0622	06/23/22	06/24/22	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl		92.3 %		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 - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**Wast01@6.0"**  
**2206303-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFF0603	06/23/22	06/25/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		105 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		71.0 %	40-150		"	"	"	"	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0411</b>	0.0100	mg/L	1	BFF0608	06/23/22	06/24/22	EPA 6020B	

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

Date Sampled: **06/20/22 00:00**

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

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**Wast01@6.0"**  
**2206303-01 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	204	0.0519	mg/L dry	1	BFF0584	06/22/22	06/23/22	EPA 6020B	
Magnesium	113	0.0519	"	"	"	"	"	"	
Sodium	4.95	0.0519	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0691	0.00100	units	1	BFF0616	06/23/22	06/23/22	Calculation	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.3		%	1	BFF0589	06/22/22	06/23/22	Calculation	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.229	0.0100	mmhos/cm	1	BFF0586	06/22/22	06/22/22	EPA 120.1	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	5.36		pH Units	1	BFF0585	06/22/22	06/22/22	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**East01@6.0"**  
**2206303-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFF0621	06/23/22	06/26/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		96.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFF0622	06/23/22	06/24/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		89.0 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**East01@6.0"**  
**2206303-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFF0603	06/23/22	06/25/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		112 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		66.1 %	40-150		"	"	"	"	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0662</b>	0.0100	mg/L	1	BFF0608	06/23/22	06/24/22	EPA 6020B	

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

Date Sampled: **06/20/22 00:00**

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

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**East01@6.0"**  
**2206303-02 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	308	0.0521	mg/L dry	1	BFF0584	06/22/22	06/23/22	EPA 6020B	
Magnesium	122	0.0521	"	"	"	"	"	"	
Sodium	25.8	0.0521	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.315	0.00100	units	1	BFF0616	06/23/22	06/23/22	Calculation	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.0		%	1	BFF0589	06/22/22	06/23/22	Calculation	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.432	0.0100	mmhos/cm	1	BFF0586	06/22/22	06/22/22	EPA 120.1	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.51		pH Units	1	BFF0585	06/22/22	06/22/22	EPA 9045D	

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**EPWVB01@7.0'**  
**2206303-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFF0621	06/23/22	06/26/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		95.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFF0622	06/23/22	06/24/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		82.2 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**EPWVB01@7.0'**  
**2206303-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFF0603	06/23/22	06/25/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		101 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		79.9 %	40-150		"	"	"	"	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0912</b>	0.0100	mg/L	1	BFF0608	06/23/22	06/24/22	EPA 6020B	

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

Date Sampled: **06/20/22 00:00**

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

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**EPWVB01@7.0'**  
**2206303-03 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	2270	0.0547	mg/L dry	1	BFF0584	06/22/22	06/23/22	EPA 6020B	
Magnesium	278	0.0547	"	"	"	"	"	"	
Sodium	59.1	0.0547	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.312	0.00100	units	1	BFF0616	06/23/22	06/23/22	Calculation	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.5		%	1	BFF0589	06/22/22	06/23/22	Calculation	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.258	0.0100	mmhos/cm	1	BFF0586	06/22/22	06/22/22	EPA 120.1	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.89		pH Units	1	BFF0585	06/22/22	06/22/22	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**EPWVN01@6.0'**  
**2206303-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFF0621	06/23/22	06/26/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		100 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFF0622	06/23/22	06/24/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		87.3 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**EPWVN01@6.0'**  
**2206303-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFF0603	06/23/22	06/25/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		107 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		72.5 %	40-150		"	"	"	"	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0503</b>	0.0100	mg/L	1	BFF0608	06/23/22	06/24/22	EPA 6020B	

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

Date Sampled: **06/20/22 00:00**

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

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**EPWVN01@6.0'**  
**2206303-04 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1330	0.0539	mg/L dry	1	BFF0584	06/22/22	06/23/22	EPA 6020B	
Magnesium	229	0.0539	"	"	"	"	"	"	
Sodium	10.2	0.0539	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0680	0.00100	units	1	BFF0616	06/23/22	06/23/22	Calculation	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.7		%	1	BFF0589	06/22/22	06/23/22	Calculation	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.152	0.0100	mmhos/cm	1	BFF0586	06/22/22	06/22/22	EPA 120.1	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.33		pH Units	1	BFF0585	06/22/22	06/22/22	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**WPWVB01@7.0'**  
**2206303-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFF0621	06/23/22	06/26/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		98.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFF0622	06/23/22	06/24/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		83.3 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**WPWVB01@7.0'**  
**2206303-05 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFF0603	06/23/22	06/25/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		128 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		73.7 %	40-150		"	"	"	"	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0467</b>	0.0100	mg/L	1	BFF0608	06/23/22	06/24/22	EPA 6020B	

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

Date Sampled: **06/20/22 00:00**

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

Project: Noble - UPRC 23-11H4

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 06/28/22 09:20

**WPWVB01@7.0'**  
**2206303-05 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	3230	0.0543	mg/L dry	1	BFF0584	06/22/22	06/23/22	EPA 6020B	
Magnesium	604	0.0543	"	"	"	"	"	"	
Sodium	37.0	0.0543	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.157	0.00100	units	1	BFF0616	06/23/22	06/23/22	Calculation	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.1		%	1	BFF0589	06/22/22	06/23/22	Calculation	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.197	0.0100	mmhos/cm	1	BFF0586	06/22/22	06/22/22	EPA 120.1	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.63		pH Units	1	BFF0585	06/22/22	06/22/22	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**WPWVN01@6.0'**  
**2206303-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFF0621	06/23/22	06/26/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		96.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		90.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		125 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFF0622	06/23/22	06/24/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		88.4 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**WPWVN01@6.0'**  
**2206303-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFF0603	06/23/22	06/25/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		116 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		76.0 %	40-150		"	"	"	"	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0418</b>	0.0100	mg/L	1	BFF0608	06/23/22	06/24/22	EPA 6020B	

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

Date Sampled: **06/20/22 00:00**

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

Project: Noble - UPRC 23-11H4

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 06/28/22 09:20

**WPWVN01@6.0'**  
**2206303-06 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1240	0.0552	mg/L dry	1	BFF0584	06/22/22	06/23/22	EPA 6020B	
Magnesium	224	0.0552	"	"	"	"	"	"	
Sodium	10.0	0.0552	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0684	0.00100	units	1	BFF0616	06/23/22	06/23/22	Calculation	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.5		%	1	BFF0589	06/22/22	06/23/22	Calculation	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.168	0.0100	mmhos/cm	1	BFF0586	06/22/22	06/22/22	EPA 120.1	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.46		pH Units	1	BFF0585	06/22/22	06/22/22	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**SEP01@6.0"**  
**2206303-07 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFF0621	06/23/22	06/27/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		94.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		79.8 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFF0622	06/23/22	06/24/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		79.1 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**SEP01@6.0"**  
**2206303-07 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFF0603	06/23/22	06/25/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		114 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		72.2 %	40-150		"	"	"	"	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0275</b>	0.0100	mg/L	1	BFF0608	06/23/22	06/24/22	EPA 6020B	

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

Date Sampled: **06/20/22 00:00**

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

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**SEP01@6.0"**  
**2206303-07 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	406	0.0528	mg/L dry	1	BFF0584	06/22/22	06/23/22	EPA 6020B	
Magnesium	193	0.0528	"	"	"	"	"	"	
Sodium	9.57	0.0528	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0979	0.00100	units	1	BFF0616	06/23/22	06/23/22	Calculation	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.6		%	1	BFF0589	06/22/22	06/23/22	Calculation	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0498	0.0100	mmhos/cm	1	BFF0586	06/22/22	06/22/22	EPA 120.1	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.20		pH Units	1	BFF0585	06/22/22	06/22/22	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**BKG01@6.0"**  
**2206303-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.185</b>	0.0100	mg/L	1	BFF0608	06/23/22	06/24/22	EPA 6020B	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>132</b>	0.0523	mg/L dry	1	BFF0584	06/22/22	06/23/22	EPA 6020B	
<b>Magnesium</b>	<b>73.1</b>	0.0523	"	"	"	"	"	"	
<b>Sodium</b>	<b>6.34</b>	0.0523	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Sodium Adsorption Ratio</b>	<b>0.110</b>	0.00100	units	1	BFF0616	06/23/22	06/23/22	Calculation	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>% Solids</b>	<b>95.6</b>		%	1	BFF0589	06/22/22	06/23/22	Calculation	

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Specific Conductance (EC)</b>	<b>0.326</b>	0.0100	mmhos/cm	1	BFF0586	06/22/22	06/22/22	EPA 120.1	

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

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 06/28/22 09:20

**BKG01@6.0"**  
**2206303-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/20/22 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>pH</b>	<b>6.27</b>		pH Units	1	BFF0585	06/22/22	06/22/22	EPA 9045D	

Summit Scientific



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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

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

#### Summit Scientific

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

#### Batch BFF0621 - EPA 5030 Soil MS

##### Blank (BFF0621-BLK1)

Prepared: 06/23/22 Analyzed: 06/26/22

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	0.0388		"	0.0400		97.0	50-150			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0403		"	0.0400		101	50-150			

##### LCS (BFF0621-BS1)

Prepared: 06/23/22 Analyzed: 06/26/22

Benzene	0.0755	0.0020	mg/kg	0.0750	ND	101	70-130			
Toluene	0.0773	0.0050	"	0.0750	ND	103	70-130			
Ethylbenzene	0.0771	0.0050	"	0.0750	ND	103	70-130			
m,p-Xylene	0.167	0.010	"	0.150	ND	112	70-130			
o-Xylene	0.0735	0.0050	"	0.0750	ND	98.0	70-130			
1,2,4-Trimethylbenzene	0.0781	0.0050	"	0.0750	ND	104	70-130			
1,3,5-Trimethylbenzene	0.0778	0.0050	"	0.0750	ND	104	70-130			
Naphthalene	0.0746	0.0038	"	0.0750	ND	99.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0380		"	0.0400		95.0	50-150			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0418		"	0.0400		105	50-150			

##### Matrix Spike (BFF0621-MS1)

Source: 2206300-01

Prepared: 06/23/22 Analyzed: 06/26/22

Benzene	0.0783	0.0020	mg/kg	0.0750	ND	104	70-130			
Toluene	0.0771	0.0050	"	0.0750	ND	103	70-130			
Ethylbenzene	0.0778	0.0050	"	0.0750	ND	104	70-130			
m,p-Xylene	0.156	0.010	"	0.150	ND	104	70-130			
o-Xylene	0.0741	0.0050	"	0.0750	ND	98.8	70-130			
1,2,4-Trimethylbenzene	0.0724	0.0050	"	0.0750	ND	96.5	70-130			
1,3,5-Trimethylbenzene	0.0758	0.0050	"	0.0750	ND	101	70-130			
Naphthalene	0.0770	0.0038	"	0.0750	ND	103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0345		"	0.0400		86.2	50-150			
Surrogate: Toluene-d8	0.0381		"	0.0400		95.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400		102	50-150			

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 06/28/22 09:20

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

**Summit Scientific**

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

**Batch BFF0621 - EPA 5030 Soil MS**

Matrix Spike Dup (BFF0621-MSD1)	Source: 2206300-01			Prepared: 06/23/22 Analyzed: 06/26/22						
Benzene	0.0806	0.0020	mg/kg	0.0750	ND	108	70-130	2.94	30	
Toluene	0.0841	0.0050	"	0.0750	ND	112	70-130	8.63	30	
Ethylbenzene	0.0800	0.0050	"	0.0750	ND	107	70-130	2.78	30	
m,p-Xylene	0.168	0.010	"	0.150	ND	112	70-130	7.24	30	
o-Xylene	0.0799	0.0050	"	0.0750	ND	106	70-130	7.52	30	
1,2,4-Trimethylbenzene	0.0849	0.0050	"	0.0750	ND	113	70-130	15.9	30	
1,3,5-Trimethylbenzene	0.0854	0.0050	"	0.0750	ND	114	70-130	12.0	30	
Naphthalene	0.0755	0.0038	"	0.0750	ND	101	70-130	2.05	30	
Surrogate: 1,2-Dichloroethane-d4	0.0419		"	0.0400		105	50-150			
Surrogate: Toluene-d8	0.0430		"	0.0400		107	50-150			
Surrogate: 4-Bromofluorobenzene	0.0418		"	0.0400		104	50-150			

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 06/28/22 09:20

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

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

**Batch BFF0622 - EPA 3550A**

**Blank (BFF0622-BLK1)**

Prepared & Analyzed: 06/23/22

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							

**LCS (BFF0622-BS1)**

Prepared & Analyzed: 06/23/22

C10-C28 (DRO)	405	50	mg/kg	500	80.9	70-130				
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**Matrix Spike (BFF0622-MS1)**

Source: 2206300-01

Prepared & Analyzed: 06/23/22

C10-C28 (DRO)	409	50	mg/kg	500	9.56	79.9	70-130			
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**Matrix Spike Dup (BFF0622-MSD1)**

Source: 2206300-01

Prepared & Analyzed: 06/23/22

C10-C28 (DRO)	439	50	mg/kg	500	9.56	85.8	70-130	6.96	20	
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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**PAH by EPA Method 8270D SIM - Quality Control**

**Summit Scientific**

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

**Batch BFF0603 - EPA 5030 Soil MS**

**Blank (BFF0603-BLK1)**

Prepared: 06/23/22 Analyzed: 06/24/22

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0262		"	0.0333		78.6	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0338		"	0.0333		101	40-150			

**LCS (BFF0603-BS1)**

Prepared: 06/23/22 Analyzed: 06/25/22

Acenaphthene	0.0332	0.00500	mg/kg	0.0333		99.6	31-137			
Anthracene	0.0399	0.00500	"	0.0333		120	30-120			
Benzo (a) anthracene	0.0351	0.00500	"	0.0333		105	30-120			
Benzo (a) pyrene	0.0342	0.00500	"	0.0333		102	30-120			
Benzo (b) fluoranthene	0.0343	0.00500	"	0.0333		103	30-120			
Benzo (k) fluoranthene	0.0362	0.00500	"	0.0333		109	30-120			
Chrysene	0.0331	0.00500	"	0.0333		99.2	30-120			
Dibenz (a,h) anthracene	0.0351	0.00500	"	0.0333		105	30-120			
Fluoranthene	0.0330	0.00500	"	0.0333		99.0	30-120			
Fluorene	0.0352	0.00500	"	0.0333		105	30-120			
Indeno (1,2,3-cd) pyrene	0.0332	0.00500	"	0.0333		99.6	30-120			
Pyrene	0.0319	0.00500	"	0.0333		95.8	35-142			
1-Methylnaphthalene	0.0187	0.00500	"	0.0333		56.2	35-142			
2-Methylnaphthalene	0.0283	0.00500	"	0.0333		85.0	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0333		"	0.0333		99.9	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0347		"	0.0333		104	40-150			

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

**PAH by EPA Method 8270D SIM - Quality Control**

**Summit Scientific**

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

**Batch BFF0603 - EPA 5030 Soil MS**

<b>Matrix Spike (BFF0603-MS1)</b>		<b>Source: 2206245-02</b>			<b>Prepared: 06/23/22 Analyzed: 06/25/22</b>						
Acenaphthene	0.0166	0.00500	mg/kg	0.0333	0.00253	42.1	31-137				
Anthracene	0.0146	0.00500	"	0.0333	ND	43.9	30-120				
Benzo (a) anthracene	0.0170	0.00500	"	0.0333	ND	51.0	30-120				
Benzo (a) pyrene	0.0123	0.00500	"	0.0333	ND	36.9	30-120				
Benzo (b) fluoranthene	0.0115	0.00500	"	0.0333	ND	34.4	30-120				
Benzo (k) fluoranthene	0.0108	0.00500	"	0.0333	ND	32.5	30-120				
Chrysene	0.0129	0.00500	"	0.0333	ND	38.6	30-120				
Dibenz (a,h) anthracene	0.0113	0.00500	"	0.0333	ND	34.0	30-120				
Fluoranthene	0.0131	0.00500	"	0.0333	ND	39.2	30-120				
Fluorene	0.0197	0.00500	"	0.0333	0.00345	48.6	30-120				
Indeno (1,2,3-cd) pyrene	0.0119	0.00500	"	0.0333	ND	35.8	30-120				
Pyrene	0.0139	0.00500	"	0.0333	ND	41.7	35-142				
1-Methylnaphthalene	0.0125	0.00500	"	0.0333	ND	37.4	15-130				
2-Methylnaphthalene	0.0173	0.00500	"	0.0333	0.00484	37.4	15-130				
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0145</i>		<i>"</i>	<i>0.0333</i>		<i>43.6</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0177</i>		<i>"</i>	<i>0.0333</i>		<i>53.1</i>	<i>40-150</i>				

<b>Matrix Spike Dup (BFF0603-MSD1)</b>		<b>Source: 2206245-02</b>			<b>Prepared: 06/23/22 Analyzed: 06/25/22</b>						
Acenaphthene	0.0152	0.00500	mg/kg	0.0333	0.00253	38.0	31-137	8.70	30		
Anthracene	0.0144	0.00500	"	0.0333	ND	43.3	30-120	1.22	30		
Benzo (a) anthracene	0.0175	0.00500	"	0.0333	ND	52.4	30-120	2.76	30		
Benzo (a) pyrene	0.0132	0.00500	"	0.0333	ND	39.5	30-120	6.90	30		
Benzo (b) fluoranthene	0.0121	0.00500	"	0.0333	ND	36.4	30-120	5.76	30		
Benzo (k) fluoranthene	0.0112	0.00500	"	0.0333	ND	33.7	30-120	3.61	30		
Chrysene	0.0132	0.00500	"	0.0333	ND	39.7	30-120	2.73	30		
Dibenz (a,h) anthracene	0.0124	0.00500	"	0.0333	ND	37.2	30-120	9.02	30		
Fluoranthene	0.0133	0.00500	"	0.0333	ND	39.9	30-120	1.65	30		
Fluorene	0.0182	0.00500	"	0.0333	0.00345	44.2	30-120	7.72	30		
Indeno (1,2,3-cd) pyrene	0.0146	0.00500	"	0.0333	ND	43.7	30-120	20.0	30		
Pyrene	0.0142	0.00500	"	0.0333	ND	42.5	35-142	1.71	30		
1-Methylnaphthalene	0.00945	0.00500	"	0.0333	ND	28.4	15-130	27.6	50		
2-Methylnaphthalene	0.0154	0.00500	"	0.0333	0.00484	31.6	15-130	11.8	50		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0163</i>		<i>"</i>	<i>0.0333</i>		<i>48.9</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0182</i>		<i>"</i>	<i>0.0333</i>		<i>54.7</i>	<i>40-150</i>				

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 06/28/22 09:20

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

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

**Batch BFF0608 - EPA 3050B**

**Blank (BFF0608-BLK1)**

Prepared: 06/23/22 Analyzed: 06/24/22

Boron ND 0.0100 mg/L

**LCS (BFF0608-BS1)**

Prepared: 06/23/22 Analyzed: 06/24/22

Boron 5.20 0.0100 mg/L 5.00 104 80-120

**Duplicate (BFF0608-DUP1)**

**Source: 2206303-01**

Prepared: 06/23/22 Analyzed: 06/24/22

Boron 0.0354 0.0100 mg/L 0.0411 15.1 20

**Matrix Spike (BFF0608-MS1)**

**Source: 2206303-01**

Prepared: 06/23/22 Analyzed: 06/24/22

Boron 5.16 0.0100 mg/L 5.00 0.0411 102 75-125

**Matrix Spike Dup (BFF0608-MSD1)**

**Source: 2206303-01**

Prepared: 06/23/22 Analyzed: 06/24/22

Boron 5.18 0.0100 mg/L 5.00 0.0411 103 75-125 0.325 25

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 06/28/22 09:20

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

**Summit Scientific**

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

**Batch BFF0584 - General Preparation**

**Blank (BFF0584-BLK1)**

Prepared: 06/22/22 Analyzed: 06/23/22

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

**LCS (BFF0584-BS1)**

Prepared: 06/22/22 Analyzed: 06/23/22

Calcium	589	0.0500	mg/L wet	500	118	70-130				
Magnesium	615	0.0500	"	500	123	70-130				
Sodium	561	0.0500	"	500	112	70-130				

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 06/28/22 09:20

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

**Summit Scientific**

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

**Batch BFF0589 - General Preparation**

**Duplicate (BFF0589-DUP1)**

**Source: 2206303-01**

Prepared: 06/22/22 Analyzed: 06/23/22

% Solids	96.2		%		96.3			0.120		20	
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Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 06/28/22 09:20

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

**Summit Scientific**

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

**Batch BFF0586 - General Preparation**

**Blank (BFF0586-BLK1)**

Prepared & Analyzed: 06/22/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BFF0586-BS1)**

Prepared & Analyzed: 06/22/22

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

**Duplicate (BFF0586-DUP1)**

Source: 2206285-01

Prepared & Analyzed: 06/22/22

Specific Conductance (EC) 0.772 0.0100 mmhos/cm 0.773 0.0647 20

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 06/28/22 09:20

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

**Summit Scientific**

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

**Batch BFF0585 - General Preparation**

**LCS (BFF0585-BS1)**

Prepared & Analyzed: 06/22/22

pH 9.11 pH Units 9.18 99.2 95-105

**Duplicate (BFF0585-DUP1)**

Source: 2206285-01

Prepared & Analyzed: 06/22/22

pH 8.06 pH Units 8.04 0.248 20

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - UPRC 23-11H4

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
06/28/22 09:20

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference