

FREMONT ENVIRONMENTAL INC.

November 4, 2022

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

Subject: **Flowline Closure Data Submittal**
STATE 36-9I4
API # 05-123-17799
NESE Sec. 36, T4N, R64W
Weld County, Colorado
Fremont Project No. C022-099
Facility #249996, Remediation #22374

Dear Mr. Peterson:

As you requested, Fremont Environmental Inc. (Fremont) personnel conducted Flowline Closure activities for the Noble Energy Inc. (Noble) State 36-9I4. Impacted soil was encountered at two different bore holes (9FL03@3.0' and 9FL09@3.0') during removal activities. These soil impacts remain in place as 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

Flowline Closure Checklist

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

Additional Attachments:		Tank Battery Closure		Wellhead Closure		Pit Closure		Partially Buried Vault Closure	
Site Name & COGCC Facility Number: <small>State-64N64W 36NESE Facility ID: 329760</small>		Date: 08/08/2022-08/09/2022				Remediation Project #: 22374			
Associated Wells: <small>State 36-1614 State 36-914 API: 05-123-17805 API: 05-123-17799</small>		Age of Site: 1995				Number of Photos Attached: 10 Photos			
Starting point: (GPS coordinates and descriptions)		40.266607, -104.493007							
End point: (GPS coordinates and descriptions)		40.262056, -104.493065							
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) Impacts of an unknown depth, length and width were discovered at the flowline bore holes of 9FL03@3.0' and 9FL09@3.0'. Additional, investigation is required. Refer to the volatile organic soil table for reference. (Table 1)									
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) None observed									
Flowlines									
Flowline type	2" Steel								
Depth	3ft								
Age	1995								
Length	1680ft								
Construction Material	Non ACM / 2" Steel								
Were flowlines pulled?	Yes								
Visual Integrity of lines	No Damage								
Visual impacts if trenched	N/A								
PID Readings if trenched	High @ 2628ppm								
Sample taken? Location/Sample ID#	9FL09@3.0' 9FL01@3.0' 9FL03@3.0' 9FL07@3.0'								
Photo Number(s)	Photos 1A-1J								
Other observations regarding on location flowlines: 16/9FL03/10@4.0' is the separator tie-in point for State 36-914 flowline.									
Summary									
Was impacted soil identified? No Yes - less than 10 cubic yards Yes - more than 10 cubic yards									
Total number of samples field screened: 6 Samples				Total number of samples collected: 10 Samples					
Highest PID Reading: High @ 2628ppm (9FL09@3.0')				Total number of samples submitted to lab for analysis: 4 Sample					
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? N/A									
Was groundwater encountered during the investigation? No Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils									
Measured depth to groundwater: N/A				Was remedial groundwater removal conducted? Yes No					
Date Groundwater was encountered: N/A				Commencement date of removal: N/A					
Sheen on groundwater? Yes No				Volume of groundwater removed prior to sampling: N/A					
Free product observed? Yes No				Volume of groundwater removed post sampling: N/A					
Total number of samples collected: N/A				Total Volume of groundwater removed: N/A					
Total number of samples submitted to lab for analysis: N/A									

TABLE 1
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
STATE 36-914, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-099

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)
9FL01@3.0'	8/9/2022	3.0 Ft	Floor	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
9FL03@3.0'	8/9/2022	3.0 Ft	Floor	<0.0020	0.11	0.28	1.7	1.3	0.48	0.17	42	82	<50
9FL07@3.0'	8/9/2022	3.0 Ft	Floor	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
9FL09@3.0'	8/9/2022	3.0 Ft	Floor	0.063	0.87	0.45	6.1	0.093	0.24	0.041	77	520	<50
COGCC Table 915-1 Limits (Residential SSL)				1.2	490	5.8	58	30	27	2	500	500	500
COGCC 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.
STATE 36-914, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-099

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)
9FL01@3.0'	8/9/2022	3.0 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	0.00837
9FL03@3.0'	8/9/2022	3.0 Ft	Floor	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00686	<0.00500	<0.00500	0.0369	<0.00500	<0.00500	0.0914	0.147
9FL07@3.0'	8/9/2022	3.0 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
9FL09@3.0'	8/9/2022	3.0 Ft	Floor	0.0493	0.110	<0.0500	0.00529	<0.0500	<0.0500	0.0188	<0.0500	<0.0500	0.0676	<0.0500	0.00848	0.343	0.65
COGCC 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
COGCC 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 COGCC 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.
STATE 36-914, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-099

SAMPLE LOCATION	DATE SAMPLED	DEPTH ft	EC mmhos/cm	pH pH units	SAR units	BORON mg/L
9FL01@3.0'	8/9/2022	3.0 Ft	0.0759	6.47	0.245	0.0456
9FL03@3.0'	8/9/2022	3.0 Ft	0.251	6.71	0.767	0.0578
9FL07@3.0'	8/9/2022	3.0 Ft	0.135	7.12	0.139	0.0636
9FL09@3.0'	8/9/2022	3.0 Ft	0.634	7.77	0.272	0.0595
BKG01@6.0"	8/8/2022	0.5 Ft	0.142	6.56	0.170	0.0617
Table 915-1 Limits			<4	6-8.3	<6	2

Bold face values exceed the COGCC Limits

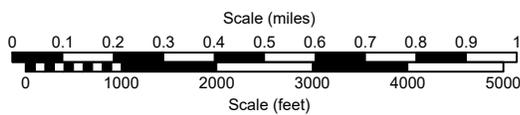
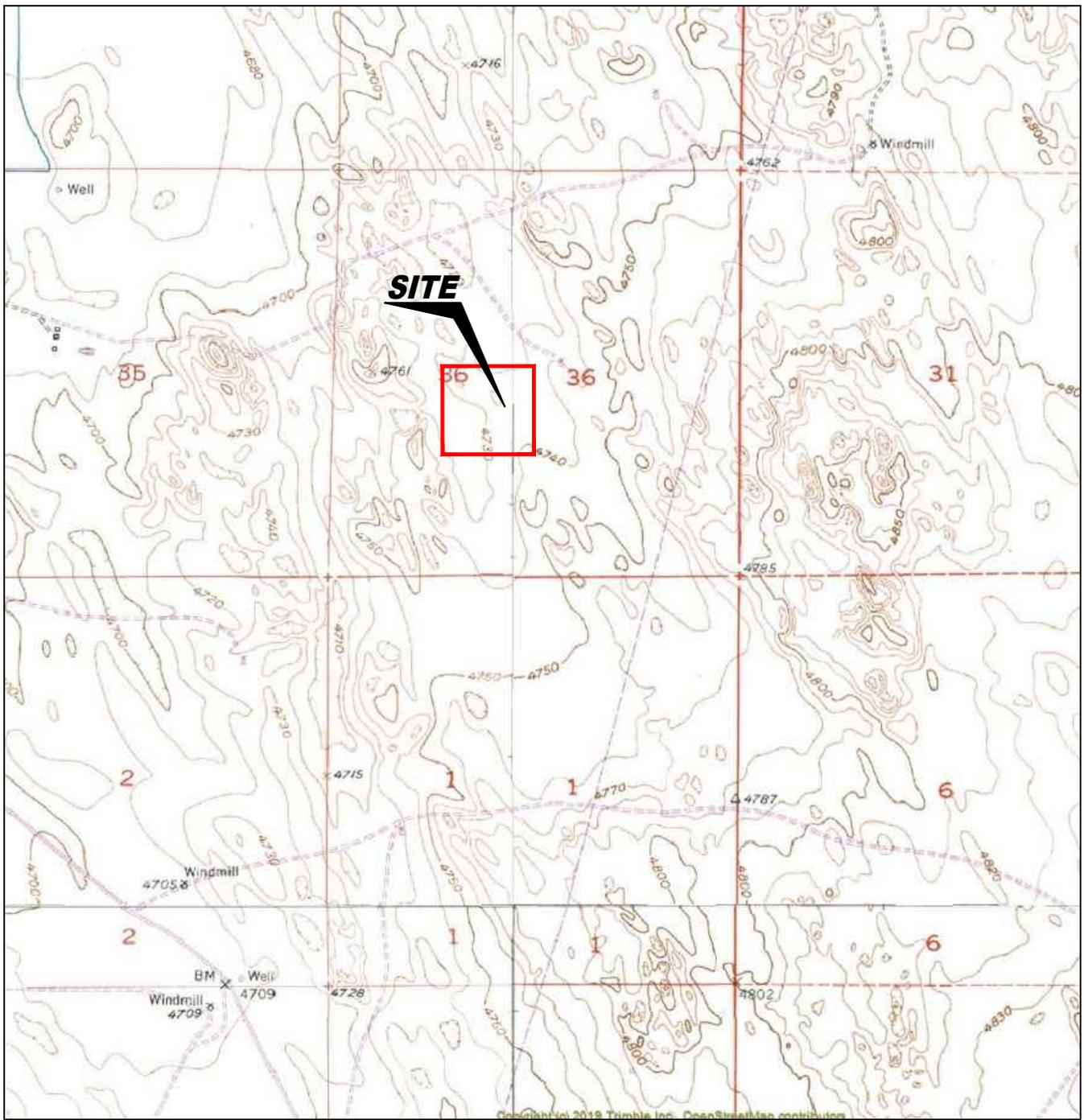
TABLE 4
SUMMARY OF POTHOLE FIELD OBSERVATIONS
NOBLE ENERGY INC.
STATE 36-914, WELD COUNTY, COLORADO
FREMONT PROJECT C022-099

Location	Latitude	Longitude	PID Reading	Field Observations
9FL01@3.0'	40.266607	-104.493007	274.0ppm	Odor Present
9FL02@3.0'	40.266087	-104.492563	24.2ppm	No Impacts Noted
9FL03@3.0'	40.265867	-104.492377	284.7ppm	Odor Present
9FL04@3.0'	40.265316	-104.492580	8.8ppm	No Impacts Noted
9FL05@3.0'	40.264705	-104.492817	12.0ppm	No Impacts Noted
9FL06@3.0'	40.263949	-104.493115	44.1ppm	No Impacts Noted
9FL07@3.0'	40.263469	-104.493180	51.7ppm	No Impacts Noted
9FL08@3.0'	40.263044	-104.493176	9.7ppm	No Impacts Noted
9FL09@3.0'	40.262778	-104.493200	2628ppm	Odor Present
16/9FL03/10@4.0'	40.262056	-104.493065	0.9ppm	No Impacts Noted

TABLE 5
SUMMARY OF FLOW LINE CONDITION
NOBLE ENERGY INC.
STATE 36-914, WELD COUNTY, COLORADO
FREMONT PROJECT C022-099

START	STOP	FOOTAGE	PIPE TYPE AND CONDITION
9FL01@3.0'	9FL02@3.0'	205	2" Sch 80 welded steel pipe wrapped in black non-ACM Tape
9FL02@3.0'	9FL03@3.0'	105	2" Sch 80 welded steel pipe wrapped in black non-ACM Tape
9FL03@3.0'	9FL04@3.0'	190	2" Sch 80 welded steel pipe wrapped in black non-ACM Tape
9FL04@3.0'	9FL05@3.0'	230	2" Sch 80 welded steel pipe wrapped in black non-ACM Tape
9FL05@3.0'	9FL06@3.0'	300	2" Sch 80 welded steel pipe wrapped in black non-ACM Tape
9FL06@3.0'	9FL07@3.0'	155	2" Sch 80 welded steel pipe wrapped in black non-ACM Tape
9FL07@3.0'	9FL08@3.0'	125	2" Sch 80 welded steel pipe wrapped in black non-ACM Tape
9FL08@3.0'	9FL09@3.0'	120	2" Sch 80 welded steel pipe wrapped in black non-ACM Tape
9FL09@3.0'	16/9FL03/10@4.0'	250	2" Sch 80 welded steel pipe wrapped in black non-ACM Tape

1680 Total linear feet of flow line removed



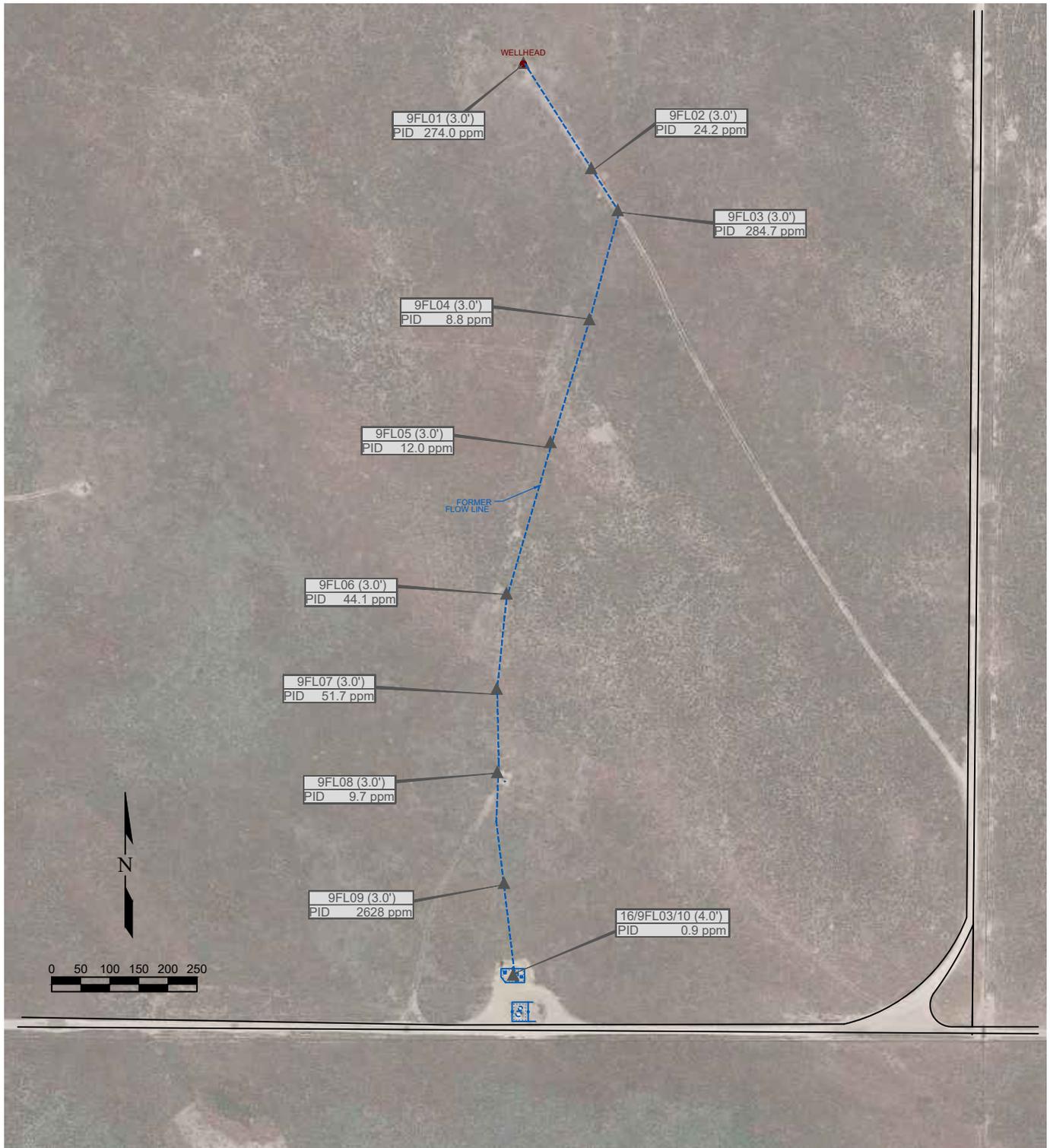
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

Noble Energy, Inc. ~ State 36-914
 NESE Sec. 36, T4N, R64W, 6th PM
 Weld County, Colorado
 40.266601°, -104.493002°

Project # C022-099	API # 05-123-17799	Facility # 249996
Date 11/4/22	Remediation # 22374	Filename 22099T2





LEGEND

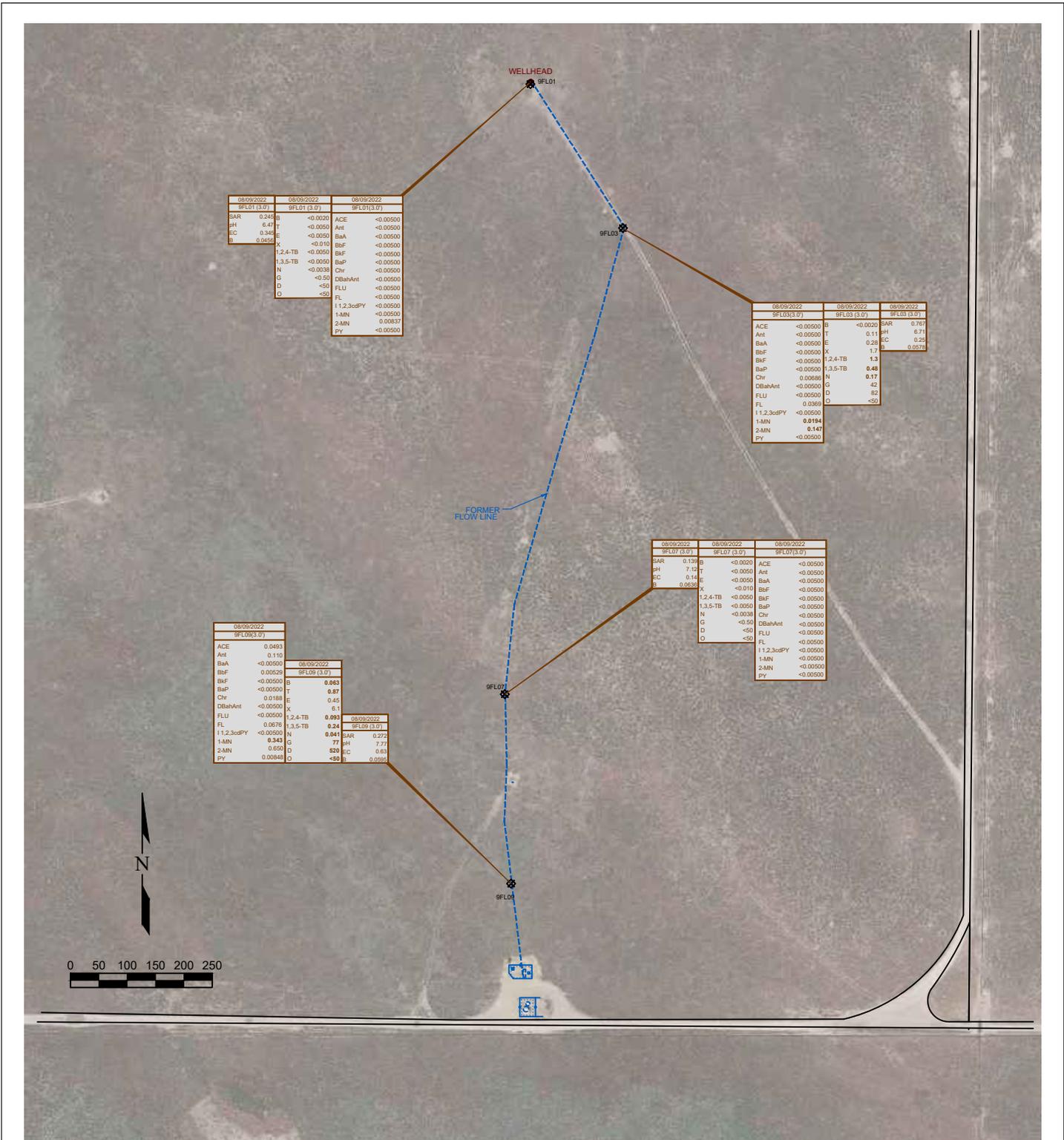
- ▲ WELL HEAD LOCATION
 - ABOVE GROUND STORAGE TANK
 - FORMER FORMER FACILITY
 - CONTAINMENT WALL
 - FENCE LINE
 - FLOW LINE
- PID = photo ionization detection
ppm = parts per million

**Figure 2
SITE MAP**

Noble Energy, Inc. ~ State 36-914
 NESE Sec. 36, T4N, R64W, 6th PM
 Weld County, Colorado
 40.266601°, -104.493002°

Project No. C022-099	API # 05-123-17799	Facility # 249996
Date 11/4/22	Remediation # 22374	Filename 22099Q





08/09/2022 SFL01 (3.0')		08/09/2022 SFL01 (3.0')		08/09/2022 SFL01 (3.0')	
SAR	0.245	B	<0.0020	ACE	<0.00500
BH	0.47	T	<0.0050	Ant	<0.00500
EC	0.345	E	<0.0050	BaA	<0.00500
B	0.0450	X	<0.010	BbF	<0.00500
		1,2,4-TB	<0.0050	BbP	<0.00500
		1,3,5-TB	<0.0050	BaP	<0.00500
		N	<0.0038	Chr	<0.00500
		G	<0.50	DBahAnt	<0.00500
		D	<50	FLU	<0.00500
		O	<50	FL	<0.00500
		1,1,2,3cdPY	<0.00500		
		1-MN	<0.00500		
		2-MN	0.00537		
		PY	<0.00500		

08/09/2022 SFL05 (3.0')		08/09/2022 SFL05 (3.0')		08/09/2022 SFL05 (3.0')	
ACE	<0.0050	B	<0.0020	SAR	0.787
Ant	<0.0050	T	0.11	BH	0.71
BaA	<0.0050	E	0.28	EC	0.26
BbF	<0.0050	X	1.7	B	0.0578
BbP	<0.0050	1,2,4-TB	1.3		
BaP	<0.0050	1,3,5-TB	0.48		
Chr	0.0089	N	0.17		
DBahAnt	<0.0050	G	42		
FLU	<0.0050	D	83		
FL	0.0389	O	<50		
1,1,2,3cdPY	<0.0050				
1-MN	0.0194				
2-MN	0.147				
PY	<0.0050				

08/09/2022 SFL07 (3.0')		08/09/2022 SFL07 (3.0')		08/09/2022 SFL07 (3.0')	
SAR	0.199	B	<0.0020	ACE	<0.00500
BH	7.02	T	<0.0050	Ant	<0.00500
EC	0.14	E	<0.0050	BaA	<0.00500
B	0.0636	X	<0.010	BbF	<0.00500
		1,2,4-TB	<0.0050	BbP	<0.00500
		1,3,5-TB	<0.0050	BaP	<0.00500
		N	<0.0038	Chr	<0.00500
		G	<0.50	DBahAnt	<0.00500
		D	<50	FLU	<0.00500
		O	<50	FL	<0.00500
		1,1,2,3cdPY	<0.00500		
		1-MN	<0.00500		
		2-MN	<0.00500		
		PY	<0.00500		

08/09/2022 SFL09 (3.0')		08/09/2022 SFL09 (3.0')		08/09/2022 SFL09 (3.0')	
ACE	0.0493	B	0.063		
Ant	0.110	T	0.87		
BaA	<0.00500	E	0.45		
BbF	0.00529	X	6.1		
BbP	<0.00500	1,2,4-TB	0.093		
BaP	<0.00500	1,3,5-TB	0.24		
Chr	0.0188	N	0.041		
DBahAnt	<0.00500	G	77		
FLU	<0.00500	D	520		
FL	0.0676	O	<50		
1,1,2,3cdPY	<0.00500	1,1,2,3cdPY	0.272		
1-MN	0.343	1-MN	7.77		
2-MN	0.650	2-MN	0.83		
PY	0.00848	PY	0.0505		

LEGEND

- WELL HEAD LOCATION
- ⊗ SOIL SAMPLE LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FORMER FACILITY
- CONTAINMENT WALL
- FENCE LINE
- FLOW LINE

08/09/2022 SFL07 (3.0')	DATE SAMPLED SAMPLE ID and DEPTH (ft)	08/09/2022 SFL07 (3.0')	DATE SAMPLED SAMPLE ID and DEPTH (ft)	08/09/2022 SFL07 (3.0')	DATE SAMPLED SAMPLE ID & DEPTH (ft)
ACE	<0.00500	ANTHRACENE (mg/kg)	B	0.245	SAR (umts)
Ant	<0.00500	ACENAPHTHENE (mg/kg)	T	0.47	BH (ppm)
BaA	<0.00500	ANTHRACENE (mg/kg)	E	0.345	EC (mmhos/cm)
BbF	<0.00500	BENZO (A) ANTHRACENE (mg/kg)	X	0.0450	B
BbP	<0.00500	BENZO (B) FLUORANTHENE (mg/kg)	1,2,4-TB		
BaP	<0.00500	BENZO (K) FLUORANTHENE (mg/kg)	1,3,5-TB		
Chr	<0.00500	BENZO (A) PYRENE (mg/kg)	N		
DBahAnt	<0.00500	CHRYSENE (mg/kg)	G		
FLU	<0.00500	CHRYSENE (mg/kg)	D		
FL	<0.00500	DIBENZ (A,H) ANTHRACENE (mg/kg)	O		
1,1,2,3cdPY	<0.00500	FLUORANTHENE (mg/kg)	1,1,2,3cdPY		
1-MN	<0.00500	FLUORENE (mg/kg)	1-MN		
2-MN	<0.00500	INDENO (1,2,3-CD) PYRENE (mg/kg)	2-MN		
PY	<0.00500	1-METHYLNAPHTHALENE (mg/kg)	PY		
		2-METHYLNAPHTHALENE (mg/kg)			
		PYRENE (mg/kg)			

**Figure 3
SOIL CHEMISTRY MAP**

Noble Energy, Inc. ~ State 36-914
NESE Sec. 36, T4N, R64W, 6th PM
Weld County, Colorado
40.266601° , -104.493002°

Project No. C022-099	API # 05-123-17799	Facility # 249996	
Date 11/4/22	Remediation # 22374	Filename 22099Q	



#1A – State 36-9i4 Flowline – 9FL01@3.0' – No Impacts Noted – PID 274.0ppm – Sample Submitted for Lab Analysis



#1B – State 36-9i4 Flowline – 9FL02@3.0' – No Impacts Noted – PID 24.2ppm



#1C – State 36-9i4 Flowline – 9FL03@3.0' – Odor Present – PID 284.7ppm – Sample Submitted for Lab Analysis



#1D – State 36-9i4 Flowline – 9FL04@3.0' – No Impacts Noted – PID 8.8ppm



#1E – State 36-9i4 Flowline – 9FL05@3.0' – No Impacts Noted – PID 12.0ppm



#1F – State 36-9i4 Flowline – 9FL06@3.0' – No Impacts Noted – PID 44.1ppm



#1G – State 36-9i4 Flowline – 9FL07@3.0' – No Impacts Noted – PID 51.7ppm – Sample Submitted for Lab Analysis



#1H – State 36-9i4 Flowline – 9FL08@3.0' – No Impacts Noted – PID 9.7ppm



#1I – State 36-9i4 Flowline – 9FL09@3.0' – Odor Present – PID 2628ppm – Sample Submitted for Lab Analysis



#1J – State 36-9i4 Flowline Separator Tie-in – 16/9FL03/10@4.0' – No Impacts Noted – PID 0.9ppm

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 23, 2022

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549

RE: Noble - State 64N64W 36NESE

Work Order #2208191

Enclosed are the results of analyses for samples received by Summit Scientific on 08/12/22 16:00. 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 - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01@6.0"	2208191-01	Soil	08/08/22 00:00	08/12/22 16:00
SEP01@4.0'	2208191-02	Soil	08/08/22 00:00	08/12/22 16:00
PWVB01@5.0'	2208191-03	Soil	08/08/22 00:00	08/12/22 16:00
PWVN01@4.0'	2208191-04	Soil	08/08/22 00:00	08/12/22 16:00
PWVW01@4.0'	2208191-05	Soil	08/08/22 00:00	08/12/22 16:00
BKG01@6.0"	2208191-06	Soil	08/08/22 00:00	08/12/22 16:00
9FL09@3.0'	2208191-07	Soil	08/09/22 00:00	08/12/22 16:00
9FL07@3.0'	2208191-08	Soil	08/09/22 00:00	08/12/22 16:00
9FL03@3.0'	2208191-09	Soil	08/09/22 00:00	08/12/22 16:00
9FL01@3.0'	2208191-10	Soil	08/09/22 00:00	08/12/22 16:00

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

2208191

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Page 1 of 1

Client: Fremont Env

Project Manager: Paul Henchan

Address:

E-Mail: Paulh@fremontenv.com ethanb@fremontenv.com

City/State/Zip:

jeffg@fremontenv.com

Phone:

Project Name: State-64N64W 36NESE

Sampler Name: J6

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	TMGs (915)	GR0, PRO, DEO	PAHs (915)	EC, PH, SAR				
1	AST01@6.0'	8/8/22		1			X			X				X	X	X	X	X			
2	SEP01@4.0'			1																	
3	PWVBot@5.0'			1																	
4	PWVNoi@4.0'			1																	
5	PWVoi@4.0'			3										X	X	X	X	X			
6	BKG01@6.0''	08/08/22		1														X			
7	9FLO9@3.0'	08/09/22		3										X	X	X	X	X			
8	9FLO7@3.0'			1																	
9	9FLO3@3.0'			1																	
10	9FLO1@3.0'			3										X	X	X	X	X			
Relinquished by: <u>[Signature]</u>		Date/Time: <u>08/10/22/1722</u>		Received by: <u>[Signature]</u>		Date/Time: <u>8/22/22 1600</u>		Turn Around Time (Check)		Same Day <u>---</u>		72 hours <u>---</u>		24 hours <u>---</u>		Standard <u>X</u>		48 hours <u>---</u>		Notes: <u>Bill to Noble</u>	
Temperature Upon Receipt: <u>21</u>		Corrected Temperature: <u>0</u>		HNO3 lot #		Sample Integrity:		Samples Intact: <u>Yes</u>		No											
IR gun correction: <u>0</u>		IR gun #:																			

S₂

Sample Receipt Checklist

S2 Work Order# 2208191

Client: Fremont Client Project ID: State-(64N(64W) 36NESE

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 ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	-			on ICE
Were all samples received intact ⁽¹⁾ ?	-			
Was adequate sample volume provided ⁽¹⁾ ?	✓			
If custody seals are present, are they intact ⁽¹⁾ ?	-			
Are samples due within 48 hours present?		-		
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			✓	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	-			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	-			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	-			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			-	
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.			✓	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.			-	
If dissolved metals are requested, were samples field filtered?			✓	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

[Signature]
Custodian Printed Name

81222
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

AST01@6.0"
2208191-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFH0333	08/16/22	08/17/22	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: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		92.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		90.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		82.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFH0335	08/16/22	08/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		88.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

AST01@6.0"
2208191-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFH0309	08/16/22	08/19/22	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: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		83.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		70.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0467	0.0100	mg/L	1	BFH0282	08/15/22	08/16/22	EPA 6020B	

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

Date Sampled: **08/08/22 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 - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

AST01@6.0"
2208191-01 (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	10.1	0.0582	mg/L dry	1	BFH0400	08/18/22	08/22/22	EPA 6020B	
Magnesium	3.41	0.0582	"	"	"	"	"	"	
Sodium	4.62	0.0582	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.321	0.00100	units	1	BFH0452	08/22/22	08/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.8		%	1	BFH0331	08/16/22	08/16/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.123	0.0100	mmhos/cm	1	BFH0428	08/19/22	08/19/22	EPA 120.1	

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

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.47		pH Units	1	BFH0429	08/19/22	08/19/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

SEP01@4.0'
2208191-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFH0333	08/16/22	08/17/22	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: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		96.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		90.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		83.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFH0335	08/16/22	08/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		97.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

SEP01@4.0'
2208191-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFH0309	08/16/22	08/19/22	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: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		85.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		65.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0694	0.0100	mg/L	1	BFH0282	08/15/22	08/16/22	EPA 6020B	

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

Date Sampled: **08/08/22 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 - State 64N64W 36NESE

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/23/22 09:22

SEP01@4.0'
2208191-02 (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	35.7	0.0595	mg/L dry	1	BFH0400	08/18/22	08/22/22	EPA 6020B	
Magnesium	9.13	0.0595	"	"	"	"	"	"	
Sodium	10.9	0.0595	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.421	0.00100	units	1	BFH0452	08/22/22	08/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.0		%	1	BFH0331	08/16/22	08/16/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.395	0.0100	mmhos/cm	1	BFH0428	08/19/22	08/19/22	EPA 120.1	

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

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.54		pH Units	1	BFH0429	08/19/22	08/19/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

PWVB01@5.0'
2208191-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFH0333	08/16/22	08/17/22	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: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		90.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFH0335	08/16/22	08/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		94.7 %	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 - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

PWVB01@5.0'
2208191-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFH0309	08/16/22	08/19/22	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: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		94.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		72.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0494	0.0100	mg/L	1	BFH0282	08/15/22	08/16/22	EPA 6020B	

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

Date Sampled: **08/08/22 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 - State 64N64W 36NESE

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/23/22 09:22

PWVB01@5.0'
2208191-03 (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	26.0	0.0532	mg/L dry	1	BFH0400	08/18/22	08/22/22	EPA 6020B	
Magnesium	4.49	0.0532	"	"	"	"	"	"	
Sodium	3.62	0.0532	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.172	0.00100	units	1	BFH0452	08/22/22	08/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.0		%	1	BFH0331	08/16/22	08/16/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.201	0.0100	mmhos/cm	1	BFH0428	08/19/22	08/19/22	EPA 120.1	

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

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.62		pH Units	1	BFH0429	08/19/22	08/19/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

PWVN01@4.0'
2208191-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFH0333	08/16/22	08/17/22	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: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		87.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		91.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFH0335	08/16/22	08/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		94.3 %	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 - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

PWVN01@4.0'
2208191-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFH0309	08/16/22	08/19/22	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: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		91.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		80.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0733	0.0100	mg/L	1	BFH0282	08/15/22	08/16/22	EPA 6020B	

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

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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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 - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

PWVN01@4.0'
2208191-04 (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	32.2	0.0562	mg/L dry	1	BFH0400	08/18/22	08/22/22	EPA 6020B	
Magnesium	8.40	0.0562	"	"	"	"	"	"	
Sodium	2.90	0.0562	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.118	0.00100	units	1	BFH0452	08/22/22	08/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.0		%	1	BFH0331	08/16/22	08/16/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.290	0.0100	mmhos/cm	1	BFH0428	08/19/22	08/19/22	EPA 120.1	

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

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.58		pH Units	1	BFH0429	08/19/22	08/19/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

PWVW01@4.0'
2208191-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFH0333	08/16/22	08/17/22	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: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		94.3 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		93.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		88.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFH0335	08/16/22	08/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		101 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

PWVW01@4.0'
2208191-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFH0309	08/16/22	08/19/22	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	0.00887	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.0191	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0754	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.128	0.00500	"	"	"	"	"	"	

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		73.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		96.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0733	0.0100	mg/L	1	BFH0282	08/15/22	08/16/22	EPA 6020B	

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

Date Sampled: **08/08/22 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 - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

PWVW01@4.0'
2208191-05 (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	37.0	0.0556	mg/L dry	1	BFH0400	08/18/22	08/22/22	EPA 6020B	
Magnesium	6.40	0.0556	"	"	"	"	"	"	
Sodium	3.23	0.0556	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.129	0.00100	units	1	BFH0452	08/22/22	08/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.9		%	1	BFH0331	08/16/22	08/16/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.319	0.0100	mmhos/cm	1	BFH0428	08/19/22	08/19/22	EPA 120.1	

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

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.65		pH Units	1	BFH0429	08/19/22	08/19/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

BKG01@6.0"
2208191-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0617	0.0100	mg/L	1	BFH0282	08/15/22	08/16/22	EPA 6020B	

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

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	6.80	0.0528	mg/L dry	1	BFH0400	08/18/22	08/22/22	EPA 6020B	
Magnesium	2.45	0.0528	"	"	"	"	"	"	
Sodium	2.03	0.0528	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.170	0.00100	units	1	BFH0452	08/22/22	08/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.8		%	1	BFH0331	08/16/22	08/16/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.142	0.0100	mmhos/cm	1	BFH0428	08/19/22	08/19/22	EPA 120.1	

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

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/23/22 09:22

BKG01@6.0"
2208191-06 (Soil)

Summit Scientific

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

Date Sampled: **08/08/22 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	6.56		pH Units	1	BFH0429	08/19/22	08/19/22	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 - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

9FL09@3.0'
2208191-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.063	0.0020	mg/kg	1	BFH0333	08/16/22	08/18/22	EPA 8260B	
Toluene	0.87	0.050	"	10	"	"	08/18/22	"	
Ethylbenzene	0.45	0.0050	"	1	"	"	08/18/22	"	
Xylenes (total)	6.1	0.10	"	10	"	"	08/18/22	"	
1,2,4-Trimethylbenzene	0.093	0.0050	"	1	"	"	08/18/22	"	
1,3,5-Trimethylbenzene	0.24	0.0050	"	"	"	"	"	"	
Naphthalene	0.041	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	77	5.0	"	10	"	"	08/18/22	"	

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	50-150		"	"	08/18/22	"	
Surrogate: Toluene-d8		95.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		136 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	520	50	mg/kg	1	BFH0335	08/16/22	08/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		104 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

9FL09@3.0'
2208191-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.0493	0.00500	mg/kg	1	BFH0309	08/16/22	08/19/22	EPA 8270D SIM	
Anthracene	0.110	0.0500	"	10	"	"	08/19/22	"	
Benzo (a) anthracene	ND	0.0500	"	"	"	"	"	"	
Benzo (a) pyrene	0.00529	0.00500	"	1	"	"	08/19/22	"	
Benzo (b) fluoranthene	ND	0.0500	"	10	"	"	08/19/22	"	
Benzo (k) fluoranthene	ND	0.0500	"	"	"	"	"	"	
Chrysene	0.0188	0.00500	"	1	"	"	08/19/22	"	
Dibenz (a,h) anthracene	ND	0.0500	"	10	"	"	08/19/22	"	
Fluoranthene	ND	0.0500	"	"	"	"	"	"	
Fluorene	0.0676	0.00500	"	1	"	"	08/19/22	"	
Indeno (1,2,3-cd) pyrene	ND	0.0500	"	10	"	"	08/19/22	"	
Pyrene	0.00848	0.00500	"	1	"	"	08/19/22	"	
1-Methylnaphthalene	0.343	0.0500	"	10	"	"	08/19/22	"	
2-Methylnaphthalene	0.650	0.0500	"	"	"	"	"	"	

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		79.4 %	40-150		"	"	08/19/22	"	
Surrogate: Fluoranthene-d10		85.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0595	0.0100	mg/L	1	BFH0282	08/15/22	08/16/22	EPA 6020B	

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

Date Sampled: **08/09/22 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 - State 64N64W 36NESE

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/23/22 09:22

9FL09@3.0'
2208191-07 (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	61.7	0.0549	mg/L dry	1	BFH0400	08/18/22	08/22/22	EPA 6020B	
Magnesium	13.1	0.0549	"	"	"	"	"	"	
Sodium	9.03	0.0549	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.272	0.00100	units	1	BFH0452	08/22/22	08/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.1		%	1	BFH0331	08/16/22	08/16/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.634	0.0100	mmhos/cm	1	BFH0428	08/19/22	08/19/22	EPA 120.1	

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

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.77		pH Units	1	BFH0429	08/19/22	08/19/22	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 - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

9FL07@3.0'
2208191-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFH0333	08/16/22	08/18/22	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: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		91.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFH0335	08/16/22	08/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		91.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

9FL07@3.0'
2208191-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFH0309	08/16/22	08/19/22	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: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		104 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		83.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0636	0.0100	mg/L	1	BFH0282	08/15/22	08/16/22	EPA 6020B	

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

Date Sampled: **08/09/22 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 - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

9FL07@3.0'
2208191-08 (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	10.3	0.0544	mg/L dry	1	BFH0400	08/18/22	08/22/22	EPA 6020B	
Magnesium	3.12	0.0544	"	"	"	"	"	"	
Sodium	1.98	0.0544	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.139	0.00100	units	1	BFH0452	08/22/22	08/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.0		%	1	BFH0331	08/16/22	08/16/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.135	0.0100	mmhos/cm	1	BFH0428	08/19/22	08/19/22	EPA 120.1	

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

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.12		pH Units	1	BFH0429	08/19/22	08/19/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

9FL03@3.0'
2208191-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFH0333	08/16/22	08/18/22	EPA 8260B	
Toluene	0.11	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.28	0.0050	"	"	"	"	"	"	
Xylenes (total)	1.7	0.10	"	10	"	"	08/18/22	"	
1,2,4-Trimethylbenzene	1.3	0.050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.48	0.050	"	"	"	"	"	"	
Naphthalene	0.17	0.0038	"	1	"	"	08/18/22	"	
Gasoline Range Hydrocarbons	42	5.0	"	10	"	"	08/18/22	"	

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		91.7 %	50-150		"	"	08/18/22	"	
Surrogate: Toluene-d8		97.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		249 %	50-150		"	"	"	"	S-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	82	50	mg/kg	1	BFH0335	08/16/22	08/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		47.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

9FL03@3.0'
2208191-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFH0309	08/16/22	08/19/22	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	0.00686	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.0369	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0914	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.147	0.00500	"	"	"	"	"	"	

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	65.3 %	40-150	"	"	"	"	"	"	
Surrogate: Fluoranthene-d10	87.2 %	40-150	"	"	"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0578	0.0100	mg/L	1	BFH0282	08/15/22	08/16/22	EPA 6020B	

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

Date Sampled: **08/09/22 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 - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

9FL03@3.0'
2208191-09 (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	14.3	0.0525	mg/L dry	1	BFH0400	08/18/22	08/22/22	EPA 6020B	
Magnesium	3.92	0.0525	"	"	"	"	"	"	
Sodium	12.7	0.0525	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.767	0.00100	units	1	BFH0452	08/22/22	08/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.2		%	1	BFH0331	08/16/22	08/16/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.251	0.0100	mmhos/cm	1	BFH0428	08/19/22	08/19/22	EPA 120.1	

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

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.71		pH Units	1	BFH0429	08/19/22	08/19/22	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

9FL01@3.0'
2208191-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFH0333	08/16/22	08/18/22	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: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		92.5 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		92.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		132 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFH0335	08/16/22	08/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		51.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

9FL01@3.0'
2208191-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFH0309	08/16/22	08/19/22	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	0.00837	0.00500	"	"	"	"	"	"	

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		85.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		81.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0456	0.0100	mg/L	1	BFH0282	08/15/22	08/16/22	EPA 6020B	

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

Date Sampled: **08/09/22 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 - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

9FL01@3.0'
2208191-10 (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	5.61	0.0561	mg/L dry	1	BFH0400	08/18/22	08/22/22	EPA 6020B	
Magnesium	2.07	0.0561	"	"	"	"	"	"	
Sodium	2.67	0.0561	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.245	0.00100	units	1	BFH0452	08/22/22	08/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.2		%	1	BFH0331	08/16/22	08/16/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0759	0.0100	mmhos/cm	1	BFH0428	08/19/22	08/19/22	EPA 120.1	

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

Date Sampled: **08/09/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.47		pH Units	1	BFH0429	08/19/22	08/19/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

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 BFH0333 - EPA 5030 Soil MS

Blank (BFH0333-BLK1)

Prepared: 08/16/22 Analyzed: 08/17/22

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	0.0356		"	0.0400		89.0	50-150			
Surrogate: Toluene-d8	0.0368		"	0.0400		91.9	50-150			
Surrogate: 4-Bromofluorobenzene	0.0335		"	0.0400		83.7	50-150			

LCS (BFH0333-BS1)

Prepared: 08/16/22 Analyzed: 08/17/22

Benzene	0.0693	0.0020	mg/kg	0.0750		92.4	70-130			
Toluene	0.0695	0.0050	"	0.0750		92.7	70-130			
Ethylbenzene	0.0782	0.0050	"	0.0750		104	70-130			
m,p-Xylene	0.156	0.010	"	0.150		104	70-130			
o-Xylene	0.0742	0.0050	"	0.0750		98.9	70-130			
1,2,4-Trimethylbenzene	0.0741	0.0050	"	0.0750		98.8	70-130			
1,3,5-Trimethylbenzene	0.0771	0.0050	"	0.0750		103	70-130			
Naphthalene	0.0798	0.0038	"	0.0750		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0344		"	0.0400		86.0	50-150			
Surrogate: Toluene-d8	0.0367		"	0.0400		91.7	50-150			
Surrogate: 4-Bromofluorobenzene	0.0351		"	0.0400		87.8	50-150			

Matrix Spike (BFH0333-MS1)

Source: 2208188-01

Prepared: 08/16/22 Analyzed: 08/17/22

Benzene	0.0682	0.0020	mg/kg	0.0750	ND	91.0	70-130			
Toluene	0.0704	0.0050	"	0.0750	ND	93.9	70-130			
Ethylbenzene	0.0761	0.0050	"	0.0750	ND	101	70-130			
m,p-Xylene	0.151	0.010	"	0.150	ND	100	70-130			
o-Xylene	0.0730	0.0050	"	0.0750	ND	97.3	70-130			
1,2,4-Trimethylbenzene	0.0748	0.0050	"	0.0750	ND	99.7	70-130			
1,3,5-Trimethylbenzene	0.0768	0.0050	"	0.0750	ND	102	70-130			
Naphthalene	0.0865	0.0038	"	0.0750	ND	115	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0363		"	0.0400		90.7	50-150			
Surrogate: Toluene-d8	0.0370		"	0.0400		92.5	50-150			
Surrogate: 4-Bromofluorobenzene	0.0345		"	0.0400		86.2	50-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

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 BFH0333 - EPA 5030 Soil MS

Matrix Spike Dup (BFH0333-MSD1)	Source: 2208188-01			Prepared: 08/16/22 Analyzed: 08/17/22						
Benzene	0.0700	0.0020	mg/kg	0.0750	ND	93.4	70-130	2.65	30	
Toluene	0.0716	0.0050	"	0.0750	ND	95.5	70-130	1.69	30	
Ethylbenzene	0.0775	0.0050	"	0.0750	ND	103	70-130	1.80	30	
m,p-Xylene	0.154	0.010	"	0.150	ND	103	70-130	2.42	30	
o-Xylene	0.0746	0.0050	"	0.0750	ND	99.5	70-130	2.28	30	
1,2,4-Trimethylbenzene	0.0769	0.0050	"	0.0750	ND	103	70-130	2.81	30	
1,3,5-Trimethylbenzene	0.0790	0.0050	"	0.0750	ND	105	70-130	2.81	30	
Naphthalene	0.0969	0.0038	"	0.0750	ND	129	70-130	11.4	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0357</i>		<i>"</i>	<i>0.0400</i>		<i>89.3</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0374</i>		<i>"</i>	<i>0.0400</i>		<i>93.6</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0352</i>		<i>"</i>	<i>0.0400</i>		<i>88.0</i>	<i>50-150</i>			

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/23/22 09:22

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BFH0335 - EPA 3550A

Blank (BFH0335-BLK1)

Prepared: 08/16/22 Analyzed: 08/17/22

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

LCS (BFH0335-BS1)

Prepared: 08/16/22 Analyzed: 08/17/22

C10-C28 (DRO)	544	50	mg/kg	500	109	70-130				
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Matrix Spike (BFH0335-MS1)

Source: 2208188-01

Prepared: 08/16/22 Analyzed: 08/17/22

C10-C28 (DRO)	529	50	mg/kg	500	ND	106	70-130			
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Matrix Spike Dup (BFH0335-MSD1)

Source: 2208188-01

Prepared: 08/16/22 Analyzed: 08/17/22

C10-C28 (DRO)	561	50	mg/kg	500	ND	112	70-130	5.91	20	
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Fremont Environmental
PO Box 1289
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Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

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 BFH0309 - EPA 5030 Soil MS

Blank (BFH0309-BLK1)

Prepared: 08/16/22 Analyzed: 08/19/22

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>	<i>0.0390</i>		<i>"</i>	<i>0.0333</i>		<i>117</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0327</i>		<i>"</i>	<i>0.0333</i>		<i>98.2</i>		<i>40-150</i>		

LCS (BFH0309-BS1)

Prepared: 08/16/22 Analyzed: 08/19/22

Acenaphthene	0.0278	0.00500	mg/kg	0.0333		83.4		31-137		
Anthracene	0.0322	0.00500	"	0.0333		96.5		30-120		
Benzo (a) anthracene	0.0312	0.00500	"	0.0333		93.7		30-120		
Benzo (a) pyrene	0.0345	0.00500	"	0.0333		103		30-120		
Benzo (b) fluoranthene	0.0337	0.00500	"	0.0333		101		30-120		
Benzo (k) fluoranthene	0.0391	0.00500	"	0.0333		117		30-120		
Chrysene	0.0336	0.00500	"	0.0333		101		30-120		
Dibenz (a,h) anthracene	0.0345	0.00500	"	0.0333		104		30-120		
Fluoranthene	0.0347	0.00500	"	0.0333		104		30-120		
Fluorene	0.0277	0.00500	"	0.0333		83.2		30-120		
Indeno (1,2,3-cd) pyrene	0.0321	0.00500	"	0.0333		96.2		30-120		
Pyrene	0.0322	0.00500	"	0.0333		96.6		35-142		
1-Methylnaphthalene	0.0274	0.00500	"	0.0333		82.3		35-142		
2-Methylnaphthalene	0.0283	0.00500	"	0.0333		84.9		35-142		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0303</i>		<i>"</i>	<i>0.0333</i>		<i>90.9</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0345</i>		<i>"</i>	<i>0.0333</i>		<i>104</i>		<i>40-150</i>		

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

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 BFH0309 - EPA 5030 Soil MS

Matrix Spike (BFH0309-MS1)	Source: 2208181-01			Prepared: 08/16/22 Analyzed: 08/19/22						
Acenaphthene	0.0176	0.00500	mg/kg	0.0333	ND	52.7	31-137			
Anthracene	0.0207	0.00500	"	0.0333	ND	62.0	30-120			
Benzo (a) anthracene	0.0205	0.00500	"	0.0333	ND	61.6	30-120			
Benzo (a) pyrene	0.0207	0.00500	"	0.0333	ND	62.1	30-120			
Benzo (b) fluoranthene	0.0211	0.00500	"	0.0333	ND	63.4	30-120			
Benzo (k) fluoranthene	0.0217	0.00500	"	0.0333	ND	65.0	30-120			
Chrysene	0.0205	0.00500	"	0.0333	ND	61.5	30-120			
Dibenz (a,h) anthracene	0.0216	0.00500	"	0.0333	ND	64.9	30-120			
Fluoranthene	0.0240	0.00500	"	0.0333	ND	71.9	30-120			
Fluorene	0.0167	0.00500	"	0.0333	ND	50.2	30-120			
Indeno (1,2,3-cd) pyrene	0.0211	0.00500	"	0.0333	ND	63.3	30-120			
Pyrene	0.0209	0.00500	"	0.0333	ND	62.6	35-142			
1-Methylnaphthalene	0.0204	0.00500	"	0.0333	ND	61.2	15-130			
2-Methylnaphthalene	0.0212	0.00500	"	0.0333	ND	63.5	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0214</i>		"	<i>0.0333</i>		<i>64.2</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0232</i>		"	<i>0.0333</i>		<i>69.6</i>	<i>40-150</i>			

Matrix Spike Dup (BFH0309-MSD1)	Source: 2208181-01			Prepared: 08/16/22 Analyzed: 08/19/22						
Acenaphthene	0.0199	0.00500	mg/kg	0.0333	ND	59.7	31-137	12.4	30	
Anthracene	0.0238	0.00500	"	0.0333	ND	71.5	30-120	14.2	30	
Benzo (a) anthracene	0.0264	0.00500	"	0.0333	ND	79.2	30-120	25.0	30	
Benzo (a) pyrene	0.0266	0.00500	"	0.0333	ND	79.8	30-120	25.0	30	
Benzo (b) fluoranthene	0.0300	0.00500	"	0.0333	ND	89.9	30-120	34.5	30	QR-02
Benzo (k) fluoranthene	0.0309	0.00500	"	0.0333	ND	92.8	30-120	35.3	30	QR-02
Chrysene	0.0265	0.00500	"	0.0333	ND	79.6	30-120	25.7	30	
Dibenz (a,h) anthracene	0.0199	0.00500	"	0.0333	ND	59.6	30-120	8.40	30	
Fluoranthene	0.0278	0.00500	"	0.0333	ND	83.3	30-120	14.8	30	
Fluorene	0.0212	0.00500	"	0.0333	ND	63.5	30-120	23.5	30	
Indeno (1,2,3-cd) pyrene	0.0200	0.00500	"	0.0333	ND	59.9	30-120	5.39	30	
Pyrene	0.0281	0.00500	"	0.0333	ND	84.3	35-142	29.4	30	
1-Methylnaphthalene	0.0255	0.00500	"	0.0333	ND	76.6	15-130	22.4	50	
2-Methylnaphthalene	0.0253	0.00500	"	0.0333	ND	75.9	15-130	17.7	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0270</i>		"	<i>0.0333</i>		<i>81.0</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0256</i>		"	<i>0.0333</i>		<i>76.8</i>	<i>40-150</i>			

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/23/22 09:22

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 BFH0282 - EPA 3050B

Blank (BFH0282-BLK1)

Prepared: 08/15/22 Analyzed: 08/16/22

Boron ND 0.0100 mg/L

LCS (BFH0282-BS1)

Prepared: 08/15/22 Analyzed: 08/16/22

Boron 5.30 0.0100 mg/L 5.00 106 80-120

Duplicate (BFH0282-DUP1)

Source: 2208144-02

Prepared: 08/15/22 Analyzed: 08/16/22

Boron 0.950 0.0100 mg/L 0.942 0.861 20

Matrix Spike (BFH0282-MS1)

Source: 2208144-02

Prepared: 08/15/22 Analyzed: 08/16/22

Boron 6.02 0.0100 mg/L 5.00 0.942 102 75-125

Matrix Spike Dup (BFH0282-MSD1)

Source: 2208144-02

Prepared: 08/15/22 Analyzed: 08/16/22

Boron 6.09 0.0100 mg/L 5.00 0.942 103 75-125 1.09 25

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 PO Box 1289
 Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/23/22 09:22

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

Summit Scientific

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

Batch BFH0400 - General Preparation

Blank (BFH0400-BLK1)

Prepared: 08/18/22 Analyzed: 08/22/22

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

LCS (BFH0400-BS1)

Prepared: 08/18/22 Analyzed: 08/22/22

Calcium	5.55	0.0500	mg/L wet	5.00		111	70-130			
Magnesium	5.51	0.0500	"	5.00		110	70-130			
Sodium	5.29	0.0500	"	5.00		106	70-130			

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/23/22 09:22

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

Summit Scientific

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

Batch BFH0331 - General Preparation

Duplicate (BFH0331-DUP1)		Source: 2208171-01			Prepared & Analyzed: 08/16/22				
% Solids	87.8		%		87.6		0.200	20	

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/23/22 09:22

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 BFH0428 - General Preparation

Blank (BFH0428-BLK1)

Prepared & Analyzed: 08/19/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFH0428-BS1)

Prepared & Analyzed: 08/19/22

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

Duplicate (BFH0428-DUP1)

Source: 2208179-07

Prepared & Analyzed: 08/19/22

Specific Conductance (EC) 1.79 0.0100 mmhos/cm 1.78 0.336 20

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/23/22 09:22

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

Summit Scientific

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

Batch BFH0429 - General Preparation

LCS (BFH0429-BS1)

Prepared & Analyzed: 08/19/22

pH 9.02 pH Units 95-105

Duplicate (BFH0429-DUP1)

Source: 2208179-07

Prepared & Analyzed: 08/19/22

pH 7.92 pH Units 7.90 0.253 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - State 64N64W 36NESE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/23/22 09:22

Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- 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