

FREMONT ENVIRONMENTAL INC.

February 09, 2023

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

Subject: **Facility Closure Data Submittal**
PTF-64N64W 32SENE
API # 05-123-14878
SENE Sec. 32, T4N, R64W
Weld County, Colorado
Fremont Project No. C022-089
Facility # 327571, Remediation #23226

Dear Mr. Peterson:

As you requested, Fremont Environmental Inc. (Fremont) personnel conducted Facility/Flowline Closure activities for the Noble Energy Inc. (Noble) PTF-64N64W 32SENE. Impacted soil was encountered 5.0ft below the produced water vault during abandonment 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. Henchan, 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	X	Partially Buried Vault Closure
Site Name & COGCC Facility PTF-64N64W 32SENE Number: Facility ID: 327571		Date: 07/19/2022-07/21/2022						Remediation Project #: 23226
Associated Wells: PTF C32-1 & PTF C32-8 API: 05-123-14878 Facility ID: 247081 API: 05-123-14879 Facility ID: 247082		Age of Site: 1991						Number of Photos Attached: 6 Photos
Location: (GPS coordinates of southeast berm) 40.271571, -104.565736							Estimated Facility Size (acres): ~2 Acre	

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

Good housekeeping. General condition of site looked good. Waste management well maintained.

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

None observed

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

None observed

Tanks	
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Tank Contents	Oil								
Size (barrels)	300 BBLS								
Age	1991								
Construction Material	Steel								
Tank type (AST/DDV, etc.)	AST								
Visual Integrity of Tank	No Damage								
Condition of tank foundation	No Impacts								
PID Readings	High @ 0.0ppm								
Soil impacts present at valves or hatches?	No Impacts								
PID Readings	N/A								
Sample taken? Location/ Sample ID#	40.271571, -104.565736 NAST01@6.0"								
Photo Number(s)	Photo 1A								

Other observations regarding tanks:
AST was removed prior to sampling.

Separators

Separator size	UNK								
Vertical or Horizontal	Horizontal								
Age	1991								
Soil impacts above 12.5' from	No Impacts								
PID Readings	High @ 1.0ppm								
Sample taken? Location/ Sample ID#	40.271798, -104.565748 NSEP02 @ 3.5'								
Photo Number(s)	Photo 4A-4C								

Other observations regarding separators
The separator appeared to be in good condition with minimal corrosion.

Third Party Equipment

[illegible]

Third Party <i>Owner</i>	UNK													
Removal Date	Still Present													
Sample taken? <i>Location/Depth</i>	MET01 @ 6.0"													
PID Readings	High @ 0.9ppm													
Photo Number(s)	Photo 6A													
Other Facility Equipment														
Equipment type	ECD													
Equipment <i>Condition</i>	No Damage													
Age	1991													
Soil impacts	No Impacts													
Chemical Name PID Readings	High @ 0.0ppm													
Sample taken? <i>Location/Depth</i>	Sample Field Screened Only													
Photo Number(s)	Photo 5A													
Other observations regarding other facility or third party equipment: ECD appeared to be in good condition with minimal corrosion.														
Summary														
Was impacted soil identified? No Yes - less than 10 cubic yards Yes - more than 10 cubic yards														
Total number of samples field screened: 3 Samples					Total number of samples collected: 6 Samples									
Highest PID Reading: High at 1.0ppm (NSEP02@3.5')					Total number of samples submitted to lab for analysis: 3 Samples									
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														

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: PTF-64N64W 32SENE Facility ID: 327571		Date: 07/19/2022-07/21/2022						Remediation Project #: 23226
Associated Wells: PTF C32-1 & PTF C32-8 API: 05-123-14878 Facility ID: 247081 API: 05-123-14879 Facility ID: 247082		Age of Site: 1991						Number of Photos Attached: 7 Photos
Location: (GPS coordinates of vault or southeastern tank berm for multiple) 40.271605, -104.565741							Estimated Facility Size (acres): ~2 acre	
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)								
Good housekeeping. On-site equipment appeared to be in good condition with minor corrosion. The dumpline had no evidence of any damages. Waste management well maintained.								
USCS Soil Type: SW					Estimated Depth to Groundwater: 8-10ft			
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 floor, north, south and west sidewalls of the produced water vault (PWV) excavation. Additional investigation is required. Refer to the volatile organic soil chemistry table (Table 1) and polycyclic aromatic hydrocarbon soil chemistry table (Table 2) for reference. Impacts were left in place								
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) None observed								
Buried or Partially Buried Vessels								
Tank Contents	Produced Water							
Size (barrels)	48 BBLS							
Age	1991							
Construction Material	PBV Concrete							
Visual Integrity of Tank	No Damage							
Condition of tank contents	Staining/Odor							
PID Readings	High @ 1263ppm							
Condition of dumpline	No Damage							
PID Readings	High @ 15.5ppm							
Sample taken? Location/Sample ID#	Base and each sidewall of PWV excavation							
Photo Number(s)	Photo 2A-2E & 3A-3B							
Other observations regarding partially buried vessels:								
Summary								
Was impacted soil identified? No Yes - less than 10 cubic yards Yes - more than 10 cubic yards								
Total number of samples field screened: 2 samples					Total number of samples collected: 7 samples			
Highest PID Reading: High @ 1263ppm (NPWVB01 @ 5.0')					Total number of samples submitted to lab for analysis: 5 samples			
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.
PTF-64N64W 32SENE, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-089

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)
NAST01@6.0"	7/19/2022	0.5 Ft	Floor	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	60	<50
NPWVB01@5.0'	7/20/2022	5.0 Ft	Floor	<0.0020	<0.0050	<0.0050	7.6	14	9.1	0.46	920	1300	74
NPWVN01@4.0'	7/20/2022	4.0 Ft	Sidewall	<0.0020	<0.0050	0.013	0.038	6.3	0.97	0.15	99	910	58
NPWVS01@4.0'	7/20/2022	4.0 Ft	Sidewall	0.013	0.0073	0.26	21	30	18	0.47	2000	990	55
NPWVE01@4.0'	7/20/2022	4.0 Ft	Sidewall	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
NPWVW01@4.0'	7/20/2022	4.0 Ft	Sidewall	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	170	<50
NSEP02@3.5'	7/20/2022	3.5 Ft	Floor	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<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.
PTF-64N64W 32SENE, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-089

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)
NAST01@6.0"	7/19/2022	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
NPWVB01@5.0'	7/20/2022	5.0 Ft	Floor	0.163	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0382	<0.00500	<0.00500	0.136	<0.00500	0.0355	1.32	<0.00500
NPWVN01@4.0'	7/20/2022	4.0 Ft	Sidewall	0.107	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0233	<0.00500	<0.00500	0.0509	<0.00500	0.0203	1.20	<0.00500
NPWVS01@4.0'	7/20/2022	4.0 Ft	Sidewall	0.123	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0224	<0.00500	<0.00500	0.0677	<0.00500	0.0194	0.927	<0.00500
NPWVE01@4.0'	7/20/2022	4.0 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
NPWVW01@4.0'	7/20/2022	4.0 Ft	Sidewall	0.0503	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00687	<0.00500	<0.00500	0.0283	<0.00500	<0.00500	0.207	<0.00500
NSEP02@3.5'	7/20/2022	3.5 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
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)

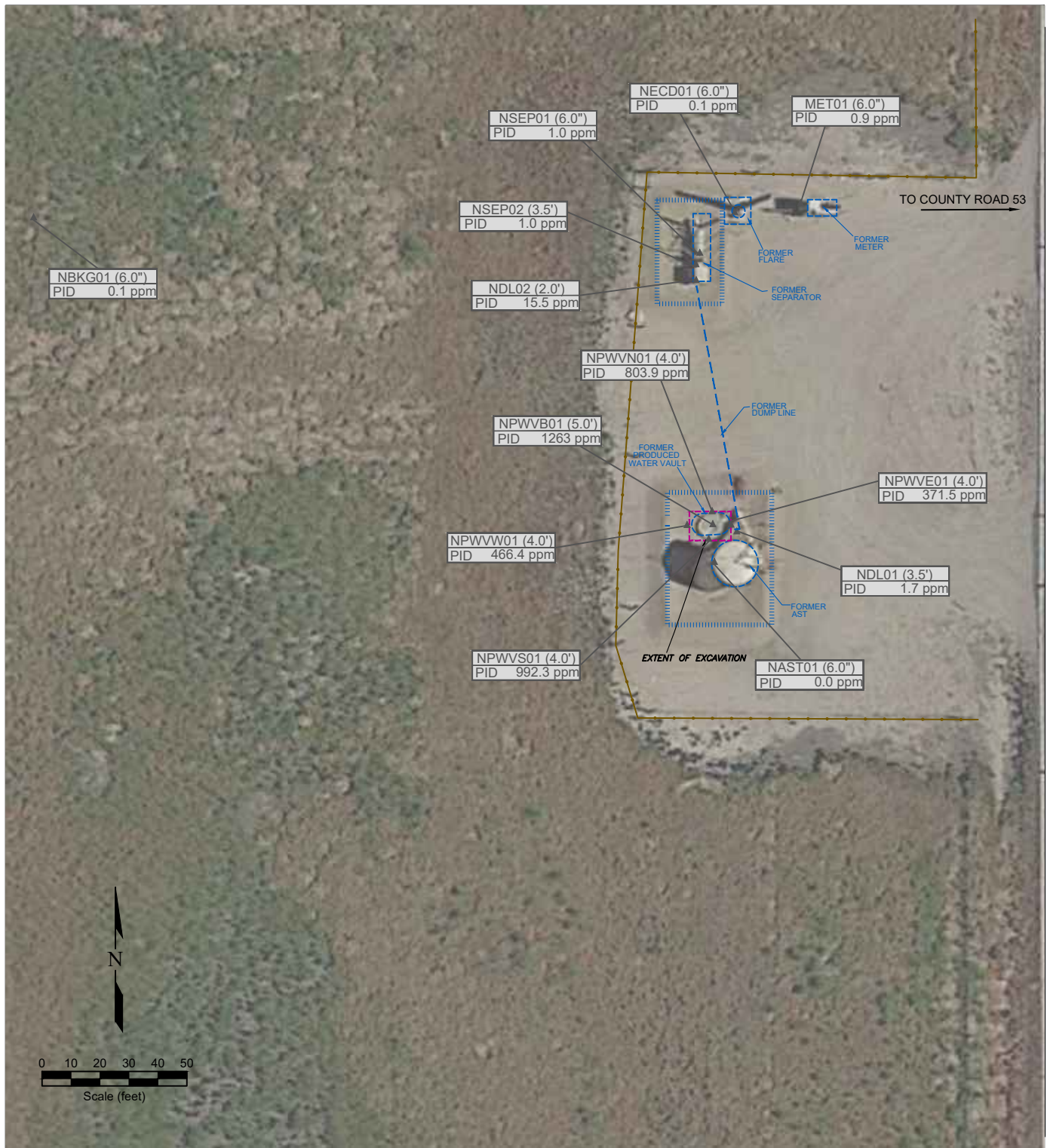
TABLE 3
SUMMARY OF INORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
PTF-64N64W 32SENE, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-089

SAMPLE LOCATION	DATE SAMPLED	DEPTH ft	EC mmhos/cm	pH pH units	SAR units	BORON mg/L
NAST01@6.0"	7/19/2022	0.5 Ft	0.713	6.38	0.347	0.147
NPWVB01@5.0'	7/20/2022	5.0 Ft	0.518	7.68	0.192	0.197
NPWVN01@4.0'	7/20/2022	4.0 Ft	1.19	7.92	1.43	0.603
NPWVS01@4.0'	7/20/2022	4.0 Ft	0.550	7.85	0.143	0.366
NPWVE01@4.0'	7/20/2022	4.0 Ft	0.486	7.77	0.177	0.156
NPWVW01@4.0'	7/20/2022	4.0 Ft	0.411	7.77	0.124	0.130
NSEP02@3.5'	7/20/2022	3.5 Ft	0.522	7.66	0.458	0.287
NBKG01@6.0"	7/20/2022	0.5 Ft	0.320	7.39	0.0672	0.162
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.
PTF-64N64W 32SENE, WELD COUNTY, COLORADO
FREMONT PROJECT C022-089

Location	Latitude	Longitude	PID Reading	Field Observations
NAST01@6.0"	40.271571	-104.565736	0.0ppm	No Impacts Noted
NSEP01@6.0"	40.271812	-104.565750	1.0ppm	No Impacts Noted
NSEP02@3.5'	40.271798	-104.565748	1.0ppm	No Impacts Noted
NPWVB01@5.0'	40.271605	-104.565741	1263ppm	Staining and Odor Present
NPWVN01@4.0'	40.271619	-104.565740	803.9ppm	Staining and Odor Present
NPWVS01@4.0'	40.271592	-104.565737	992.3ppm	Staining and Odor Present
NPWVE01@4.0'	40.271605	-104.565715	371.5ppm	Staining and Odor Present
NPWVW01@4.0'	40.271605	-104.565761	466.4ppm	Staining and Odor Present
NDL01@3.5'	40.271793	-104.565749	1.7ppm	No Impacts Noted
NDL02@2.0'	40.271616	-104.565732	15.5ppm	No Impacts Noted
MET01@6.0"	40.271842	-104.56565	0.9ppm	No Impacts Noted
NECD01@6.0"	40.271840	-104.565711	0.1ppm	No Impacts Noted
NBKG01@6.0"	40.271861	-104.566436	0.1ppm	No Impacts Noted



LEGEND

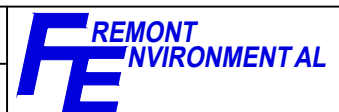
▲ PID READING LOCATION	○ ABOVE GROUND STORAGE TANK	FORMER FACILITY	BUILDING	CONTAINMENT WALL	EXTENT OF EXCAVATION
		FORMER FENCE LINE		FENCE LINE	DUMP LINE

PID READING LOCATION IDENTIFICATION
 PHOTO IONIZATION DETECTION (ppm)

Figure 2
SITE MAP

Noble Energy, Inc. ~ PTF-64N64W 32SENE
 SENE Sec. 32, T4N, R64W, 6th PM
 Weld County, Colorado
 40.271692°, -104.565620°

Project No. C022-089	API # 05-123-14878	Facility # 327571
Date 2/7/23	Remediation # 23226	Filename 22089QN1



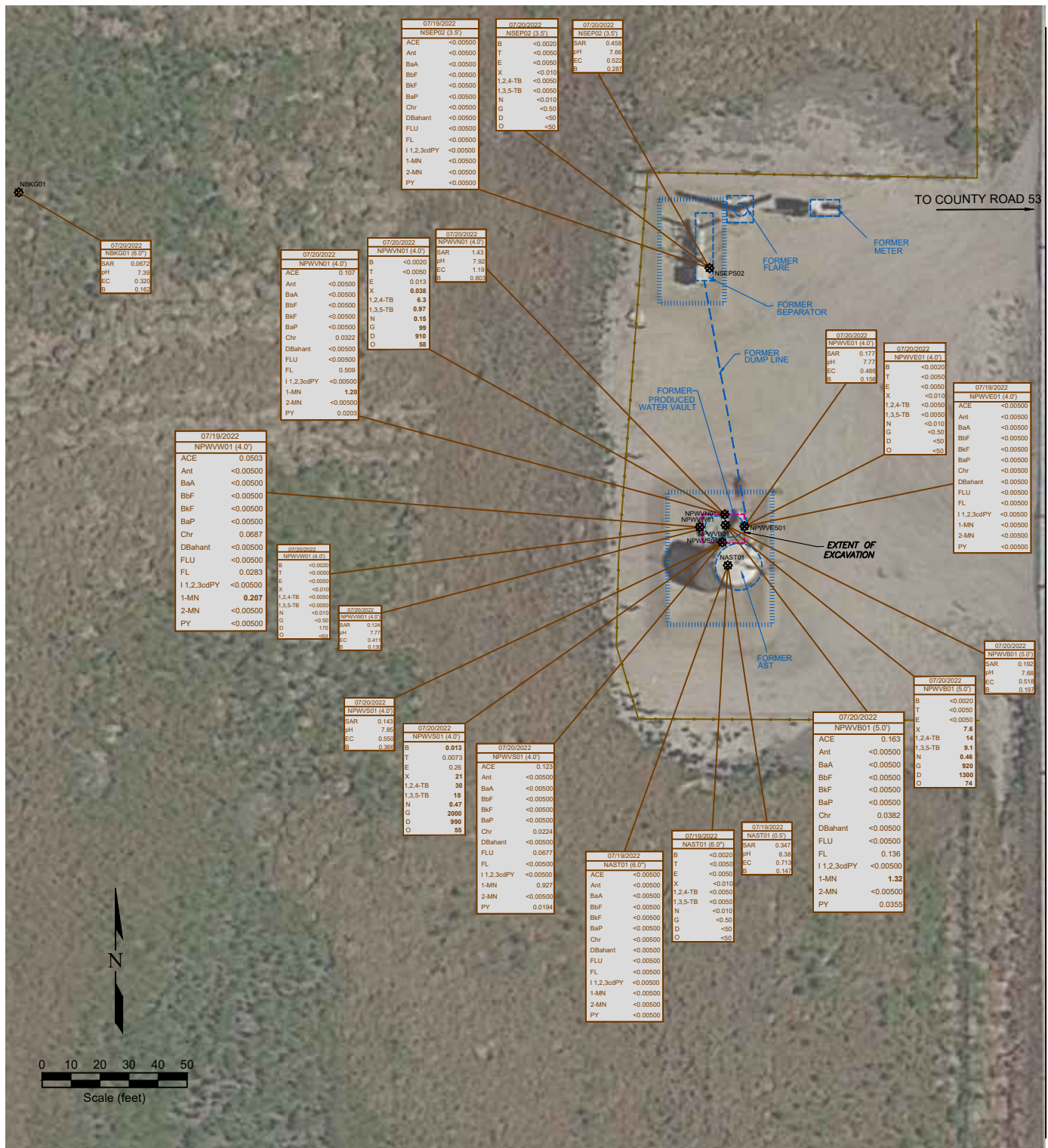


Figure 3
SOIL CHEMISTRY MAP
July 20, 2022

Noble Energy, Inc. ~ PTF-64N64W 32SENE
SENE Sec. 32, T4N, R64W, 6th PM
Weld County, Colorado
40.271692°, -104.565620°

DATE SAMPLED	SAMPLE ID and DEPTH (ft)	DATE SAMPLED	SAMPLE ID and DEPTH (ft)	DATE SAMPLED	SAMPLE ID and DEPTH (ft)
07/21/2022	NPWVS01 (5.0')	07/20/2022	NPWVS01 (4.0')	07/20/2022	NPWVS01 (4.0')
ACE	<0.00500	ACE	0.013	ACE	<0.00500
Ant	<0.00500	Ant	0.0073	Ant	<0.00500
BaA	0.00575	BaA	0.0073	BaA	<0.00500
BbF	<0.00500	BbF	0.0073	BbF	<0.00500
BkF	0.00667	BkF	0.0073	BkF	<0.00500
BaP	<0.00500	BaP	0.0073	BaP	<0.00500
Chr	0.00798	Chr	0.0073	Chr	<0.00500
DBahant	<0.00500	DBahant	0.0073	DBahant	<0.00500
FLU	0.0277	FLU	0.0073	FLU	<0.00500
1,2,3cdPY	<0.00500	1,2,3cdPY	0.0073	1,2,3cdPY	<0.00500
1-MN	<0.00500	1-MN	0.0073	1-MN	<0.00500
2-MN	0.00810	2-MN	0.0073	2-MN	<0.00500
PY	0.0155	PY	0.0073	PY	<0.00500
	0.194		0.0073		<0.00500

Project No. C022-089	API # 05-123-14878	Facility # 327571	
Date 2/7/23	Reviewed By 23226	Filename 22089QN	



#1A – PTF-64N64W 32SENE – Above Ground Storage Tank – NAST01@6.0' – No Impacts Noted – PID 0.0ppm – Sample Submitted for Lab Analysis



#2A – PTF-64N64W 32SENE – Base of Produced Water Vault Excavation – NPWVB01@5.0' – Staining and Odor Present – PID 1263ppm – Sample Submitted for Lab Analysis



Jul 20, 2022 11:31:33 AM

#2B – PTF-64N64W 32SENE – North Sidewall of Produced Water Vault Excavation – NPWVN01@4.0' – Staining and Odor Present – PID 803.9ppm – Sample Submitted for Lab Analysis



Jul 20, 2022 11:31:56 AM

#2C – PTF-64N64W 32SENE – South Sidewall of Produced Water Vault Excavation – NPWVS01@4.0' – Staining and Odor Present – PID 992.3ppm – Sample Submitted for Lab Analysis



#2D – PTF-64N64W 32SENE – East Sidewall of Produced Water Vault Excavation – NPWVE01@4.0'
– Staining and Odor Present – PID 371.5ppm – Sample Submitted for Lab Analysis



#2E – PTF-64N64W 32SENE – West Sidewall of Produced Water Vault Excavation – NPWVW01@4.0'
– Staining and Odor Present – PID 466.4ppm – Sample Submitted for Lab Analysis



#3A – PTF-64N64W 32SENE – Dumplines – AST and PWV Tie-in - NDL02@2.0'– No Impacts Noted –
PID 15.5ppm



#3B – PTF-64N64W 32SENE – Dumplines – Separator Tie-in - NDL01@3.5'– No Impacts Noted –
PID 1.7ppm



Jul 19, 2022 8:47:15 AM

#4A – PTF-64N64W 32SENE – Separator – Good Condition – Minimal Corrosion



Jul 19, 2022 12:19:43 PM

#4B – PTF-64N64W 32SENE – Separator – NSEP01@6.0' – No Impacts Noted – PID 1.0ppm



#4C – PTF-64N64W 32SENE – Separator – NSEP02@3.5' – No Impacts Noted – PID 1.0ppm – Sample Submitted for Lab Analysis



#5A – PTF-64N64W 32SENE – Combustion Unit – Good Condition – Minimal Corrosion – NECD01@6.0' – No Impacts Noted – PID 0.1ppm



#6A – PTF-64N64W 32SENE – Third Party Meter Shed – MET01@6.0" – No Impacts Noted – PID 0.9ppm



#7A – PTF-64N64W 32SENE – NBKG01@6.0" – No Impacts Noted – PID 0.1ppm – Sample Submitted for Lab Analysis

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 28, 2022

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - PTF-64N64W 32SENE

Work Order #2207292

Enclosed are the results of analyses for samples received by Summit Scientific on 07/21/22 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury

President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
NAST01@6.0"	2207292-01	Soil	07/19/22 00:00	07/21/22 16:00
1FL01@3.0'	2207292-02	Soil	07/19/22 00:00	07/21/22 16:00
NSEP01@3.5'	2207292-03	Soil	07/20/22 00:00	07/21/22 16:00
NPWVB01@5.0'	2207292-04	Soil	07/20/22 00:00	07/21/22 16:00
NPWVN01@4.0'	2207292-05	Soil	07/20/22 00:00	07/21/22 16:00
NPWVS01@4.0'	2207292-06	Soil	07/20/22 00:00	07/21/22 16:00
NPWVE01@4.0'	2207292-07	Soil	07/20/22 00:00	07/21/22 16:00
NPWVW01@4.0'	2207292-08	Soil	07/20/22 00:00	07/21/22 16:00
SAST01@6.0"	2207292-09	Soil	07/20/22 00:00	07/21/22 16:00
SBKG01@6.0"	2207292-10	Soil	07/20/22 00:00	07/21/22 16:00
SPWVB01@5.0'	2207292-11	Soil	07/21/22 00:00	07/21/22 16:00
SPWVE01@4.0'	2207292-12	Soil	07/21/22 00:00	07/21/22 16:00
SSEP02@4.0'	2207292-13	Soil	07/21/22 00:00	07/21/22 16:00
NBKG01@6.0"	2207292-14	Soil	07/20/22 00:00	07/21/22 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

S₂

2207292.1

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

Page 1 of 2

Client: Fremont Env

Project Manager: Paul Henahan

Address:

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

City/State/Zip:

jeff@fremontenv.com

Phone:

Project Name: PTF-64N64W 32SENE

Sampler Name: J6

Project Number:

					Preservative				Matrix				Analysis Requested						Special Instructions		
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX+N	TMBS (915)	GR0, DR0, OR0	PAHs (915)	EC, pH, SAR				
1	NAST01@6.0"	07/19/20		W			X			X			X	X	X	X	X				
2	1FLO1@3.0'	↓					X						X	X	X	X	X				
3	NSEP01@3.5'	07/20/22											X	X	X	X	X				
4	NPWVB01@5.0'												X	X	X	X	X				
5	NPWVN01@4.0'												X	X	X	X	X				
6	NPWVS01@4.0'												X	X	X	X	X				
7	NPWVE01@4.0'												X	X	X	X	X				
8	NPWVW01@4.0'												X	X	X	X	X				
9	SAST01@6.0"												X	X	X	X	X				
10	SBKG01@6.0"			1													X				

Relinquished by: <u>[Signature]</u>	Date/Time: <u>07/21/22/1030</u>	Received by: <u>[Signature]</u>	Date/Time: <u>72122 1600</u>	Turn Around Time (Check)	Same Day <u> </u> 72 hours 24 hours <u> </u> Standard <u>X</u> 48 hours <u> </u> Sample Integrity: Samples Intact: <u>Yes</u> No	Notes: <u>Bill to Noble</u>
Relinquished by:	Date/Time:	Received by:	Date/Time:			
Temperature Upon Receipt: <u>5.1</u>	Corrected Temperature <u>5.1</u>	HNO3 lot #				
IR gun correction: <u>0</u>	IR gun #: <u>1</u>					

Summit Scientific

S₂

2207292.2

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

Page 2 of 2

Client: Fremont Env

Project Manager: Paul Henahan

Address:

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

City/State/Zip:

jeffg@fremontenv.com

Phone:

Project Name: PTF-64N64W J25ENE

Sampler Name: J6

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions	
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEX+N	TMBS (915)	6RO, DAO, 6RO	PAHs (915)	EC, PM, SAR	Reten				
1	SPWVB01@5.0'	07/21/22		W			X			X				X	X	X	X	X				
2	SPWVE01@4.0'	↓		↓			↓			↓				X	X	X	X	X				
3	SSEP02@4.0'	↓		↓			↓			↓				X	X	X	X	X				
4	SBK601@6.0"	07/20/22		↓			↓			↓								X				
5																						
6																						
7																						
8																						
9																						
10																						

Relinquished by: <u>[Signature]</u>	Date/Time: <u>07/21/22/1030</u>	Received by: <u>[Signature]</u>	Date/Time: <u>7/21/22 1000</u>	Turn Around Time (Check)	Same Day _____ 72 hours _____ 24 hours _____ Standard <u>X</u> 48 hours _____ Sample Integrity: Samples Intact: <u>(Yes)</u> No	Notes: <u>Bill to Noble</u>
Relinquished by:	Date/Time:	Received by:	Date/Time:			
Temperature Upon Receipt: <u>5.1</u>	Corrected Temperature <u>5.1</u>	HNO ₃ lot #				
IR gun correction: <u>0</u>	IR gun #: <u>1</u>					

S₂

2/2

S2 Work Order# 2207292

Sample Receipt Checklist


Client: FremontClient Project ID: DTF-64N64W 32SENE

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

	-			
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Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 5.1 Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6 °C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	-			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.

 Custodian Printed Name

7-21-22
 Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NAST01@6.0"

2207292-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/19/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFG0414	07/22/22	07/23/22	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: **07/19/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0395	98.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0423	106 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0497	124 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/19/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	60	50	mg/kg	1	BFG0416	07/22/22	07/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/19/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.5	108 %	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 - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NAST01@6.0"
2207292-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/19/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFG0412	07/22/22	07/23/22	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: **07/19/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0243	72.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0270	80.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/19/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.147	0.0100	mg/L	1	BFG0427	07/22/22	07/22/22	EPA 6020B	

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

Date Sampled: **07/19/22 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 - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NAST01@6.0"
2207292-01 (Soil)

Summit Scientific

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

Calcium	66.0	0.0540	mg/L dry	1	BFG0443	07/25/22	07/26/22	EPA 6020B
Magnesium	8.77	0.0540	"	"	"	"	"	"
Sodium	11.3	0.0540	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **07/19/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.347	0.00100	units	1	BFG0496	07/27/22	07/27/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/19/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.6		%	1	BFG0430	07/22/22	07/22/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/19/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.713	0.0100	mmhos/cm	1	BFG0475	07/26/22	07/26/22	EPA 120.1	

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

Date Sampled: **07/19/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.38		pH Units	1	BFG0474	07/26/22	07/26/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

1FL01@3.0'
2207292-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/19/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFG0414	07/22/22	07/23/22	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: **07/19/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0428	107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0410	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0409	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/19/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFG0416	07/22/22	07/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/19/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.4	99.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

1FL01@3.0'
2207292-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/19/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFG0412	07/22/22	07/23/22	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: **07/19/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0268	80.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0260	77.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/19/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.832	0.0100	mg/L	1	BFG0427	07/22/22	07/22/22	EPA 6020B	

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

Date Sampled: **07/19/22 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 - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

1FL01@3.0'
2207292-02 (Soil)

Summit Scientific

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

Calcium	89.4	0.0532	mg/L dry	1	BFG0443	07/25/22	07/26/22	EPA 6020B
Magnesium	39.5	0.0532	"	"	"	"	"	"
Sodium	53.3	0.0532	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **07/19/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.18	0.00100	units	1	BFG0496	07/27/22	07/27/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/19/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.0		%	1	BFG0430	07/22/22	07/22/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/19/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.93	0.0100	mmhos/cm	1	BFG0475	07/26/22	07/26/22	EPA 120.1	

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

Date Sampled: **07/19/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.71		pH Units	1	BFG0474	07/26/22	07/26/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NSEP01@3.5'
2207292-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFG0414	07/22/22	07/23/22	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: **07/20/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0422	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	99.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0409	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFG0416	07/22/22	07/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.4	99.0 %	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 - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NSEP01@3.5'
2207292-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFG0412	07/22/22	07/23/22	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: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0267	80.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0292	87.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.287	0.0100	mg/L	1	BFG0427	07/22/22	07/22/22	EPA 6020B	

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

Date Sampled: **07/20/22 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 - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NSEP01@3.5'
2207292-03 (Soil)

Summit Scientific

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

Calcium	38.1	0.0563	mg/L dry	1	BFG0443	07/25/22	07/26/22	EPA 6020B
Magnesium	10.1	0.0563	"	"	"	"	"	"
Sodium	12.3	0.0563	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.458	0.00100	units	1	BFG0496	07/27/22	07/27/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.8		%	1	BFG0430	07/22/22	07/22/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.522	0.0100	mmhos/cm	1	BFG0475	07/26/22	07/26/22	EPA 120.1	

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

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.66		pH Units	1	BFG0474	07/26/22	07/26/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NPWVB01@5.0'
2207292-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFG0414	07/22/22	07/23/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	7.6	1.0	"	100	"	"	"	"	
1,2,4-Trimethylbenzene	14	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	9.1	0.50	"	"	"	"	"	"	
Naphthalene	0.46	0.0038	"	1	"	"	"	"	
Gasoline Range Hydrocarbons	920	50	"	100	"	"	"	"	

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0476	119 %	50-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>	0.0386	96.4 %	50-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0456	114 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	1300	50	mg/kg	1	BFG0416	07/22/22	07/23/22	EPA 8015M	
C28-C36 (ORO)	74	50	"	"	"	"	"	"	

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>	13.5	108 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NPWVB01@5.0'
2207292-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.163	0.00500	mg/kg	1	BFG0412	07/22/22	07/23/22	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	0.0382	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.136	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0355	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	1.32	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0222	66.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0342	103 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.197	0.0100	mg/L	1	BFG0427	07/22/22	07/22/22	EPA 6020B	

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

Date Sampled: **07/20/22 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 - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NPWVB01@5.0'
2207292-04 (Soil)

Summit Scientific

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

Calcium	62.0	0.0542	mg/L dry	1	BFG0443	07/25/22	07/26/22	EPA 6020B
Magnesium	10.7	0.0542	"	"	"	"	"	"
Sodium	6.22	0.0542	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.192	0.00100	units	1	BFG0496	07/27/22	07/27/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.3		%	1	BFG0430	07/22/22	07/22/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.518	0.0100	mmhos/cm	1	BFG0475	07/26/22	07/26/22	EPA 120.1	

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

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.68		pH Units	1	BFG0474	07/26/22	07/26/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NPWVN01@4.0'
2207292-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFG0414	07/22/22	07/23/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.013	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.038	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	6.3	0.050	"	10	"	"	"	"	
1,3,5-Trimethylbenzene	0.97	0.050	"	"	"	"	"	"	
Naphthalene	0.15	0.0038	"	1	"	"	"	"	
Gasoline Range Hydrocarbons	99	5.0	"	10	"	"	"	"	

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0345	86.3 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	97.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.273	683 %	50-150		"	"	"	"	S-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	910	50	mg/kg	1	BFG0416	07/22/22	07/23/22	EPA 8015M	
C28-C36 (ORO)	58	50	"	"	"	"	"	"	

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.9	112 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NPWVN01@4.0'
2207292-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.107	0.00500	mg/kg	1	BFG0412	07/22/22	07/23/22	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	0.0233	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.0509	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0203	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	1.20	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0233	69.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0282	84.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.603	0.0100	mg/L	1	BFG0427	07/22/22	07/22/22	EPA 6020B	

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

Date Sampled: **07/20/22 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 - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NPWVN01@4.0'
2207292-05 (Soil)

Summit Scientific

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

Calcium	58.1	0.0581	mg/L dry	1	BFG0443	07/25/22	07/26/22	EPA 6020B
Magnesium	26.7	0.0581	"	"	"	"	"	"
Sodium	52.4	0.0581	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.43	0.00100	units	1	BFG0496	07/27/22	07/27/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.0		%	1	BFG0430	07/22/22	07/22/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.19	0.0100	mmhos/cm	1	BFG0475	07/26/22	07/26/22	EPA 120.1	

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

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.92		pH Units	1	BFG0474	07/26/22	07/26/22	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NPWVS01@4.0'
2207292-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.013	0.0020	mg/kg	1	BFG0414	07/22/22	07/23/22	EPA 8260B	
Toluene	0.0073	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.26	0.0050	"	"	"	"	"	"	
Xylenes (total)	21	1.0	"	100	"	"	"	"	
1,2,4-Trimethylbenzene	30	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	18	0.50	"	"	"	"	"	"	
Naphthalene	0.47	0.0038	"	1	"	"	"	"	
Gasoline Range Hydrocarbons	2000	50	"	100	"	"	"	"	

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0476	119 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0384	96.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0492	123 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	990	50	mg/kg	1	BFG0416	07/22/22	07/23/22	EPA 8015M	
C28-C36 (ORO)	55	50	"	"	"	"	"	"	

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.0	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 - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NPWVS01@4.0'
2207292-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.123	0.00500	mg/kg	1	BFG0412	07/22/22	07/23/22	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	0.0224	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.0677	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0194	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.927	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0249	74.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0354	106 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.366	0.0100	mg/L	1	BFG0427	07/22/22	07/22/22	EPA 6020B	

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

Date Sampled: **07/20/22 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 - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NPWVS01@4.0'
2207292-06 (Soil)

Summit Scientific

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

Calcium	56.1	0.0585	mg/L dry	1	BFG0443	07/25/22	07/26/22	EPA 6020B
Magnesium	6.47	0.0585	"	"	"	"	"	"
Sodium	4.23	0.0585	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.143	0.00100	units	1	BFG0496	07/27/22	07/27/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.5		%	1	BFG0430	07/22/22	07/22/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.550	0.0100	mmhos/cm	1	BFG0475	07/26/22	07/26/22	EPA 120.1	

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

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.85		pH Units	1	BFG0474	07/26/22	07/26/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NPWVE01@4.0'
2207292-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFG0414	07/22/22	07/23/22	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: **07/20/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0398	99.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0420	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFG0416	07/22/22	07/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/20/22 00:00**

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

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NPWVE01@4.0'
2207292-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFG0412	07/22/22	07/23/22	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: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0259	77.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0282	84.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.156	0.0100	mg/L	1	BFG0427	07/22/22	07/22/22	EPA 6020B	

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

Date Sampled: **07/20/22 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 - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NPWVE01@4.0'
2207292-07 (Soil)

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

Calcium	62.8	0.0541	mg/L dry	1	BFG0443	07/25/22	07/26/22	EPA 6020B
Magnesium	9.69	0.0541	"	"	"	"	"	"
Sodium	5.71	0.0541	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.177	0.00100	units	1	BFG0496	07/27/22	07/27/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.4		%	1	BFG0430	07/22/22	07/22/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.486	0.0100	mmhos/cm	1	BFG0475	07/26/22	07/26/22	EPA 120.1	

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

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.77		pH Units	1	BFG0474	07/26/22	07/26/22	EPA 9045D	

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Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NPWVW01@4.0'
2207292-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFG0414	07/22/22	07/23/22	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: **07/20/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0338	84.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0406	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0335	83.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	170	50	mg/kg	1	BFG0416	07/22/22	07/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.4	99.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
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Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NPWVW01@4.0'
2207292-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.0503	0.00500	mg/kg	1	BFG0412	07/22/22	07/23/22	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	0.00687	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.0283	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.207	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0194	58.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0332	99.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.130	0.0100	mg/L	1	BFG0427	07/22/22	07/22/22	EPA 6020B	

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

Date Sampled: **07/20/22 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 - PTF-64N64W 32SENE
Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NPWVW01@4.0'
2207292-08 (Soil)

Summit Scientific

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

Calcium	46.1	0.0536	mg/L dry	1	BFG0443	07/25/22	07/26/22	EPA 6020B
Magnesium	8.10	0.0536	"	"	"	"	"	"
Sodium	3.47	0.0536	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.124	0.00100	units	1	BFG0496	07/27/22	07/27/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.2		%	1	BFG0430	07/22/22	07/22/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.411	0.0100	mmhos/cm	1	BFG0475	07/26/22	07/26/22	EPA 120.1	

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

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.77		pH Units	1	BFG0474	07/26/22	07/26/22	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

SAST01@6.0"
2207292-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFG0414	07/22/22	07/23/22	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: **07/20/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0397	99.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0422	105 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0458	114 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFG0416	07/22/22	07/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.1	96.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

SAST01@6.0"
2207292-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFG0412	07/22/22	07/23/22	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: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0299	89.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0330	98.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0647	0.0100	mg/L	1	BFG0427	07/22/22	07/22/22	EPA 6020B	

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

Date Sampled: **07/20/22 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 - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

SAST01@6.0"
2207292-09 (Soil)

Summit Scientific

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

Calcium	24.5	0.0520	mg/L dry	1	BFG0443	07/25/22	07/26/22	EPA 6020B
Magnesium	6.22	0.0520	"	"	"	"	"	"
Sodium	2.01	0.0520	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0939	0.00100	units	1	BFG0496	07/27/22	07/27/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.1		%	1	BFG0430	07/22/22	07/22/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.316	0.0100	mmhos/cm	1	BFG0475	07/26/22	07/26/22	EPA 120.1	

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

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.26		pH Units	1	BFG0474	07/26/22	07/26/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

SBKG01@6.0"
2207292-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.228	0.0100	mg/L	1	BFG0427	07/22/22	07/22/22	EPA 6020B	

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

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	232	0.0511	mg/L dry	1	BFG0443	07/25/22	07/26/22	EPA 6020B	
Magnesium	114	0.0511	"	"	"	"	"	"	
Sodium	17.0	0.0511	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.228	0.00100	units	1	BFG0496	07/27/22	07/27/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.9		%	1	BFG0430	07/22/22	07/22/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.90	0.0100	mmhos/cm	1	BFG0475	07/26/22	07/26/22	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 - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

SBKG01@6.0"
2207292-10 (Soil)

Summit Scientific

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

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	4.83			pH Units	1	BFG0474	07/26/22	07/26/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
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Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

SPWVB01@5.0'
2207292-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFG0414	07/22/22	07/23/22	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: **07/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0394	98.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0413	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0413	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFG0416	07/22/22	07/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.2	114 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

SPWVB01@5.0'
2207292-11 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFG0412	07/22/22	07/23/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.00575	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.00657	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.00798	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0227	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0194	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.00810	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0155	0.00500	"	"	"	"	"	"	

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0232	69.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0341	102 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0531	0.0100	mg/L	1	BFG0427	07/22/22	07/22/22	EPA 6020B	

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

Date Sampled: **07/21/22 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 - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

SPWVB01@5.0'
2207292-11 (Soil)

Summit Scientific

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

Calcium	33.0	0.0518	mg/L dry	1	BFG0443	07/25/22	07/26/22	EPA 6020B
Magnesium	7.99	0.0518	"	"	"	"	"	"
Sodium	5.19	0.0518	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.210	0.00100	units	1	BFG0496	07/27/22	07/27/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.5		%	1	BFG0430	07/22/22	07/22/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.358	0.0100	mmhos/cm	1	BFG0475	07/26/22	07/26/22	EPA 120.1	

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

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.79		pH Units	1	BFG0474	07/26/22	07/26/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

SPWVE01@4.0'
2207292-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFG0414	07/22/22	07/23/22	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: **07/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0397	99.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0403	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0415	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFG0416	07/22/22	07/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.3	115 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

SPWVE01@4.0'
2207292-12 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFG0412	07/22/22	07/23/22	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: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0277	83.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0323	96.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0700	0.0100	mg/L	1	BFG0427	07/22/22	07/22/22	EPA 6020B	

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

Date Sampled: **07/21/22 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 - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

SPWVE01@4.0'
2207292-12 (Soil)

Summit Scientific

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

Calcium	12.0	0.0543	mg/L dry	1	BFG0443	07/25/22	07/26/22	EPA 6020B
Magnesium	3.28	0.0543	"	"	"	"	"	"
Sodium	1.99	0.0543	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.131	0.00100	units	1	BFG0496	07/27/22	07/27/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.0		%	1	BFG0430	07/22/22	07/22/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.175	0.0100	mmhos/cm	1	BFG0475	07/26/22	07/26/22	EPA 120.1	

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

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.37		pH Units	1	BFG0474	07/26/22	07/26/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

SSEP02@4.0'
2207292-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFG0414	07/22/22	07/23/22	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: **07/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0425	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0413	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFG0416	07/22/22	07/24/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.7	118 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

SSEP02@4.0'
2207292-13 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFG0412	07/22/22	07/23/22	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: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0285	85.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0330	98.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0512	0.0100	mg/L	1	BFG0427	07/22/22	07/22/22	EPA 6020B	

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

Date Sampled: **07/21/22 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 - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

SSEP02@4.0'
2207292-13 (Soil)

Summit Scientific

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

Calcium	21.6	0.0529	mg/L dry	1	BFG0443	07/25/22	07/26/22	EPA 6020B
Magnesium	6.04	0.0529	"	"	"	"	"	"
Sodium	3.42	0.0529	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.168	0.00100	units	1	BFG0496	07/27/22	07/27/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.5		%	1	BFG0430	07/22/22	07/22/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.289	0.0100	mmhos/cm	1	BFG0475	07/26/22	07/26/22	EPA 120.1	

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

Date Sampled: **07/21/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.65		pH Units	1	BFG0474	07/26/22	07/26/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NBKG01@6.0"
2207292-14 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.162	0.0100	mg/L	1	BFG0427	07/22/22	07/22/22	EPA 6020B	

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

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	18.9	0.0505	mg/L dry	1	BFG0443	07/25/22	07/26/22	EPA 6020B	
Magnesium	9.93	0.0505	"	"	"	"	"	"	
Sodium	1.45	0.0505	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0672	0.00100	units	1	BFG0496	07/27/22	07/27/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	99.0		%	1	BFG0430	07/22/22	07/22/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.320	0.0100	mmhos/cm	1	BFG0475	07/26/22	07/26/22	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 - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

NBKG01@6.0"
2207292-14 (Soil)

Summit Scientific

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

Date Sampled: **07/20/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.39			pH Units	1	BFG0474	07/26/22	07/26/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BFG0414 - EPA 5030 Soil MS

Blank (BFG0414-BLK1)

Prepared: 07/22/22 Analyzed: 07/23/22

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	0.0377		"	0.0400		94.4	50-150			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.6	50-150			

LCS (BFG0414-BS1)

Prepared: 07/22/22 Analyzed: 07/23/22

Benzene	0.0680	0.0020	mg/kg	0.0750		90.6	70-130			
Toluene	0.0741	0.0050	"	0.0750		98.8	70-130			
Ethylbenzene	0.0763	0.0050	"	0.0750		102	70-130			
m,p-Xylene	0.153	0.010	"	0.150		102	70-130			
o-Xylene	0.0734	0.0050	"	0.0750		97.8	70-130			
1,2,4-Trimethylbenzene	0.0810	0.0050	"	0.0750		108	70-130			
1,3,5-Trimethylbenzene	0.0797	0.0050	"	0.0750		106	70-130			
Naphthalene	0.0790	0.0038	"	0.0750		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0339		"	0.0400		84.8	50-150			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0400		95.8	50-150			

Matrix Spike (BFG0414-MS1)

Source: 2207285-01

Prepared: 07/22/22 Analyzed: 07/23/22

Benzene	0.0653	0.0020	mg/kg	0.0750	ND	87.0	70-130			
Toluene	0.0703	0.0050	"	0.0750	ND	93.8	70-130			
Ethylbenzene	0.0756	0.0050	"	0.0750	ND	101	70-130			
m,p-Xylene	0.151	0.010	"	0.150	0.00384	98.4	70-130			
o-Xylene	0.0738	0.0050	"	0.0750	ND	98.4	70-130			
1,2,4-Trimethylbenzene	0.0836	0.0050	"	0.0750	ND	111	70-130			
1,3,5-Trimethylbenzene	0.0802	0.0050	"	0.0750	ND	107	70-130			
Naphthalene	0.0900	0.0038	"	0.0750	ND	120	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0324		"	0.0400		81.0	50-150			
Surrogate: Toluene-d8	0.0394		"	0.0400		98.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400		94.9	50-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

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

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

Batch BFG0414 - EPA 5030 Soil MS

Matrix Spike Dup (BFG0414-MSD1)		Source: 2207285-01			Prepared: 07/22/22 Analyzed: 07/23/22					
Benzene	0.0626	0.0020	mg/kg	0.0750	ND	83.4	70-130	4.22	30	
Toluene	0.0699	0.0050	"	0.0750	ND	93.2	70-130	0.642	30	
Ethylbenzene	0.0757	0.0050	"	0.0750	ND	101	70-130	0.119	30	
m,p-Xylene	0.152	0.010	"	0.150	0.00384	99.0	70-130	0.573	30	
o-Xylene	0.0740	0.0050	"	0.0750	ND	98.6	70-130	0.284	30	
1,2,4-Trimethylbenzene	0.0835	0.0050	"	0.0750	ND	111	70-130	0.144	30	
1,3,5-Trimethylbenzene	0.0815	0.0050	"	0.0750	ND	109	70-130	1.59	30	
Naphthalene	0.0916	0.0038	"	0.0750	ND	122	70-130	1.69	30	
<hr/>										
Surrogate: 1,2-Dichloroethane-d4	0.0336		"	0.0400		84.0	50-150			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.5	50-150			
Surrogate: 4-Bromofluorobenzene	0.0385		"	0.0400		96.3	50-150			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BFG0416 - EPA 3550A

Blank (BFG0416-BLK1)

Prepared & Analyzed: 07/22/22

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

LCS (BFG0416-BS1)

Prepared & Analyzed: 07/22/22

C10-C28 (DRO)	589	50	mg/kg	500	118	70-130					
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Matrix Spike (BFG0416-MS1)

Source: 2207285-01

Prepared & Analyzed: 07/22/22

C10-C28 (DRO)	504	50	mg/kg	500	32.4	94.2	70-130				
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Matrix Spike Dup (BFG0416-MSD1)

Source: 2207285-01

Prepared & Analyzed: 07/22/22

C10-C28 (DRO)	474	50	mg/kg	500	32.4	88.2	70-130	6.13	20		
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFG0412 - EPA 5030 Soil MS

Blank (BFG0412-BLK1)

Prepared: 07/22/22 Analyzed: 07/23/22

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	"							
Surrogate: 2-Methylnaphthalene-d10	0.0380		"	0.0333		114	40-150			
Surrogate: Fluoranthene-d10	0.0296		"	0.0333		88.9	40-150			

LCS (BFG0412-BS1)

Prepared: 07/22/22 Analyzed: 07/23/22

Acenaphthene	0.0269	0.00500	mg/kg	0.0333	80.6	31-137
Anthracene	0.0355	0.00500	"	0.0333	107	30-120
Benzo (a) anthracene	0.0356	0.00500	"	0.0333	107	30-120
Benzo (a) pyrene	0.0356	0.00500	"	0.0333	107	30-120
Benzo (b) fluoranthene	0.0369	0.00500	"	0.0333	111	30-120
Benzo (k) fluoranthene	0.0343	0.00500	"	0.0333	103	30-120
Chrysene	0.0385	0.00500	"	0.0333	116	30-120
Dibenz (a,h) anthracene	0.0309	0.00500	"	0.0333	92.7	30-120
Fluoranthene	0.0313	0.00500	"	0.0333	93.8	30-120
Fluorene	0.0252	0.00500	"	0.0333	75.7	30-120
Indeno (1,2,3-cd) pyrene	0.0267	0.00500	"	0.0333	80.1	30-120
Pyrene	0.0381	0.00500	"	0.0333	114	35-142
1-Methylnaphthalene	0.0342	0.00500	"	0.0333	103	35-142
2-Methylnaphthalene	0.0255	0.00500	"	0.0333	76.6	35-142
Surrogate: 2-Methylnaphthalene-d10	0.0301		"	0.0333	90.2	40-150
Surrogate: Fluoranthene-d10	0.0358		"	0.0333	107	40-150

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFG0412 - EPA 5030 Soil MS

Matrix Spike (BFG0412-MS1)

Source: 2207292-01

Prepared: 07/22/22 Analyzed: 07/23/22

Acenaphthene	0.0190	0.00500	mg/kg	0.0333	ND	57.1	31-137		
Anthracene	0.0328	0.00500	"	0.0333	ND	98.5	30-120		
Benzo (a) anthracene	0.0239	0.00500	"	0.0333	ND	71.6	30-120		
Benzo (a) pyrene	0.0247	0.00500	"	0.0333	ND	74.2	30-120		
Benzo (b) fluoranthene	0.0275	0.00500	"	0.0333	ND	82.4	30-120		
Benzo (k) fluoranthene	0.0322	0.00500	"	0.0333	ND	96.6	30-120		
Chrysene	0.0283	0.00500	"	0.0333	ND	84.8	30-120		
Dibenz (a,h) anthracene	0.0179	0.00500	"	0.0333	ND	53.6	30-120		
Fluoranthene	0.0349	0.00500	"	0.0333	ND	105	30-120		
Fluorene	0.0181	0.00500	"	0.0333	ND	54.2	30-120		
Indeno (1,2,3-cd) pyrene	0.0158	0.00500	"	0.0333	ND	47.5	30-120		
Pyrene	0.0365	0.00500	"	0.0333	ND	109	35-142		
1-Methylnaphthalene	0.0236	0.00500	"	0.0333	ND	70.7	15-130		
2-Methylnaphthalene	0.0179	0.00500	"	0.0333	ND	53.7	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0209		"	0.0333		62.6	40-150		
Surrogate: Fluoranthene-d10	0.0270		"	0.0333		81.1	40-150		

Matrix Spike Dup (BFG0412-MSD1)

Source: 2207292-01

Prepared: 07/22/22 Analyzed: 07/23/22

Acenaphthene	0.0213	0.00500	mg/kg	0.0333	ND	63.8	31-137	11.1	30
Anthracene	0.0373	0.00500	"	0.0333	ND	112	30-120	12.8	30
Benzo (a) anthracene	0.0264	0.00500	"	0.0333	ND	79.2	30-120	10.1	30
Benzo (a) pyrene	0.0276	0.00500	"	0.0333	ND	82.7	30-120	10.8	30
Benzo (b) fluoranthene	0.0305	0.00500	"	0.0333	ND	91.6	30-120	10.6	30
Benzo (k) fluoranthene	0.0356	0.00500	"	0.0333	ND	107	30-120	10.1	30
Chrysene	0.0309	0.00500	"	0.0333	ND	92.7	30-120	8.96	30
Dibenz (a,h) anthracene	0.0200	0.00500	"	0.0333	ND	59.9	30-120	11.0	30
Fluoranthene	0.0373	0.00500	"	0.0333	ND	112	30-120	6.59	30
Fluorene	0.0187	0.00500	"	0.0333	ND	56.0	30-120	3.22	30
Indeno (1,2,3-cd) pyrene	0.0191	0.00500	"	0.0333	ND	57.2	30-120	18.7	30
Pyrene	0.0395	0.00500	"	0.0333	ND	119	35-142	7.90	30
1-Methylnaphthalene	0.0270	0.00500	"	0.0333	ND	80.9	15-130	13.5	50
2-Methylnaphthalene	0.0249	0.00500	"	0.0333	ND	74.8	15-130	32.8	50
Surrogate: 2-Methylnaphthalene-d10	0.0243		"	0.0333		73.0	40-150		
Surrogate: Fluoranthene-d10	0.0286		"	0.0333		85.9	40-150		

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

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

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

Batch BFG0427 - EPA 3050B

Blank (BFG0427-BLK1)

Prepared & Analyzed: 07/22/22

Boron ND 0.0100 mg/L

LCS (BFG0427-BS1)

Prepared & Analyzed: 07/22/22

Boron 4.80 0.0100 mg/L 5.00 95.9 80-120

Duplicate (BFG0427-DUP1)

Source: 2207292-01

Prepared & Analyzed: 07/22/22

Boron 0.149 0.0100 mg/L 0.147 1.66 20

Matrix Spike (BFG0427-MS1)

Source: 2207292-01

Prepared & Analyzed: 07/22/22

Boron 4.86 0.0100 mg/L 5.00 0.147 94.3 75-125

Matrix Spike Dup (BFG0427-MSD1)

Source: 2207292-01

Prepared & Analyzed: 07/22/22

Boron 4.77 0.0100 mg/L 5.00 0.147 92.5 75-125 1.87 25

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

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

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

Batch BFG0443 - General Preparation

Blank (BFG0443-BLK1)

Prepared: 07/25/22 Analyzed: 07/26/22

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

LCS (BFG0443-BS1)

Prepared: 07/25/22 Analyzed: 07/26/22

Calcium	5.51	0.0500	mg/L wet	5.00	110	70-130
Magnesium	5.45	0.0500	"	5.00	109	70-130
Sodium	5.28	0.0500	"	5.00	106	70-130

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

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

Summit Scientific

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

Batch BFG0430 - General Preparation

Duplicate (BFG0430-DUP1)		Source: 2207033-11			Prepared & Analyzed: 07/22/22					
% Solids	87.0		%		86.9		0.0599		20	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

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

Summit Scientific

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

Batch BFG0475 - General Preparation

Blank (BFG0475-BLK1)

Prepared & Analyzed: 07/26/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFG0475-BS1)

Prepared & Analyzed: 07/26/22

Specific Conductance (EC) 0.147 0.0100 mmhos/cm 0.150 98.0 95-105

Duplicate (BFG0475-DUP1)

Source: 2207292-01

Prepared & Analyzed: 07/26/22

Specific Conductance (EC) 0.706 0.0100 mmhos/cm 0.713 1.03 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

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

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

Batch BFG0474 - General Preparation

LCS (BFG0474-BS1)

Prepared & Analyzed: 07/26/22

pH	9.15	pH Units	9.18	99.7	95-105
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Duplicate (BFG0474-DUP1)

Source: 2207292-01

Prepared & Analyzed: 07/26/22

pH	6.42	pH Units	6.38	0.625	20
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - PTF-64N64W 32SENE

Project Number: [none]
Project Manager: Paul Henchan

Reported:
07/28/22 12:59

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.
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