

FREMONT ENVIRONMENTAL INC.

May 24, 2023

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

Subject: **Flowline Closure Data Submittal**
Herbst 1-22-4-64 Flowline
API # 05-123-10933
NESE Sec. 22, T4N, R64W
Weld County, Colorado
Fremont Project No. C023-066
Remediation # 21809

Dear Mr. Peterson:

As requested, Fremont Environmental Inc. (Fremont) personnel conducted flowline abandonment activities at the Noble Energy Inc. (Noble) Herbst 1-22-4-64 Flowline. The soil sample 1-22-4-64 FL01@5' was reported with a pH slightly above the regulatory limit. Details of the flowline abandonment activities are documented in the attached Closure Report. Groundwater was not encountered during decommissioning activities.

Please contact me at (970) 213-7488 if you require any additional information. Fremont appreciates the opportunity to provide this service.

Sincerely,

FREMONT ENVIRONMENTAL INC.



Chris Lattes
Consultant

Attachments:

Figures
Tables
Flowline Closure Checklist
Photos
Laboratory Reports

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

Flowline Closure Checklist

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

Additional Attachments:		Tank Battery Closure		Wellhead Closure		Pit Closure		Partially Buried Vault Closure
Site Name & COGCC Facility Number: HERBST 1-22-4-64		Date: 3/1/2023					Remediation Project #: 21809	
Associated Wells: 05-123-10933		Age of Site: Unknown					Number of Photos Attached: See attached	
Starting point: (GPS coordinates and descriptions) 40.296263, -104.529808								
End point: (GPS coordinates and descriptions) 40.294775, -104.529149								
USCS Soil Type: Silt with Clay (ML)					Estimated Depth to Groundwater: Unknown			
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) No observed hydrocarbon impacted soil or spills.								
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) No observed salt crusted soil or vegetation.								
Flowlines								
Flowline type	Wellhead Line							
Depth	4-5'							
Age	Unknown							
Length	571							
Construction Material	2" Steel							
Were flowlines pulled?	Yes							
Visual Integrity of lines	Good Condition							
Visual impacts if trenched	None observed							
PID Readings if trenched	0-9.4 ppm							
Sample taken? Location/Sample ID#	See attached figure							
Photo Number(s)	See attached							
Other observations regarding on location flowlines:								
Summary								
Was impacted soil identified? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - less than 10 cubic yards <input type="checkbox"/> Yes - more than 10 cubic yards								
Total number of samples field screened: 7					Total number of samples collected: 7			
Highest PID Reading: 9.4 ppm					Total number of samples submitted to lab for analysis: 2			
If more than 10 cubic yards of impacted soil were observed: N/A								
Vertical extent:					Estimated spill volume:			
Lateral extent:					Volume of soil removed:			
Is additional investigation required?								
Was groundwater encountered during the investigation? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - not impacted or in contact with impacted soils <input type="checkbox"/> Yes - groundwater impacted and/or in contact with impacted soils								
Measured depth to groundwater:					Was remedial groundwater removal conducted? Yes <input type="checkbox"/> No <input type="checkbox"/>			
Date Groundwater was encountered:					Commencement date of removal:			
Sheen on groundwater? <input type="checkbox"/> Yes <input type="checkbox"/> No					Volume of groundwater removed prior to sampling:			
Free product observed? <input type="checkbox"/> Yes <input type="checkbox"/> No					Volume of groundwater removed post sampling:			
Total number of samples collected:					Total Volume of groundwater removed:			
Total number of samples submitted to lab for analysis:								

TABLE 1
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY, INC.
HERBST 1-22-4-64, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-066

Sample ID	Sample Date	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	1,2,4- Trimethyl- Benzene (mg/kg)	1,3,5- Trimethyl- Benzene (mg/kg)	Naphthalene (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
COGCC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	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**		
1-22-04-64 FL01@5'	03/02/2023	5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SEP04@4'	03/01/2023	4'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50

Bold faced values exceed the COGCC Table 915-1 concentrations

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

* Indicates laboratory minimum detection limit in excess of SSL

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

NA - Not analyzed

TABLE 2
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE ENERGY, INC.
HERBST 1-22-4-64, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-066

Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3- cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
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
1-22-04-64 FL01@5'	03/02/2023	5'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP04@4'	03/01/2023	4'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Bold faced values exceed the COGCC Table 915-1 concentrations

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

* Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed

TABLE 3
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE ENERGY, INC.
HERBST 1-22-4-64, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-066

Sample ID	Sample Date	Depth (ft)	pH	EC (mmhos/cm)	SAR	Boron (mg/L)
COGCC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
1-22-04-64 FL01@5'	03/02/2023	5'	8.35	0.423	3.28	0.515
SEP04@4'	03/01/2023	4'	7.86	3.770	1.8	1.520

Bold faced values exceed the COGCC Table 915-1 concentrations

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

NA - Not analyzed

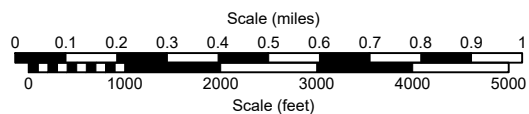
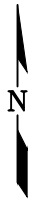
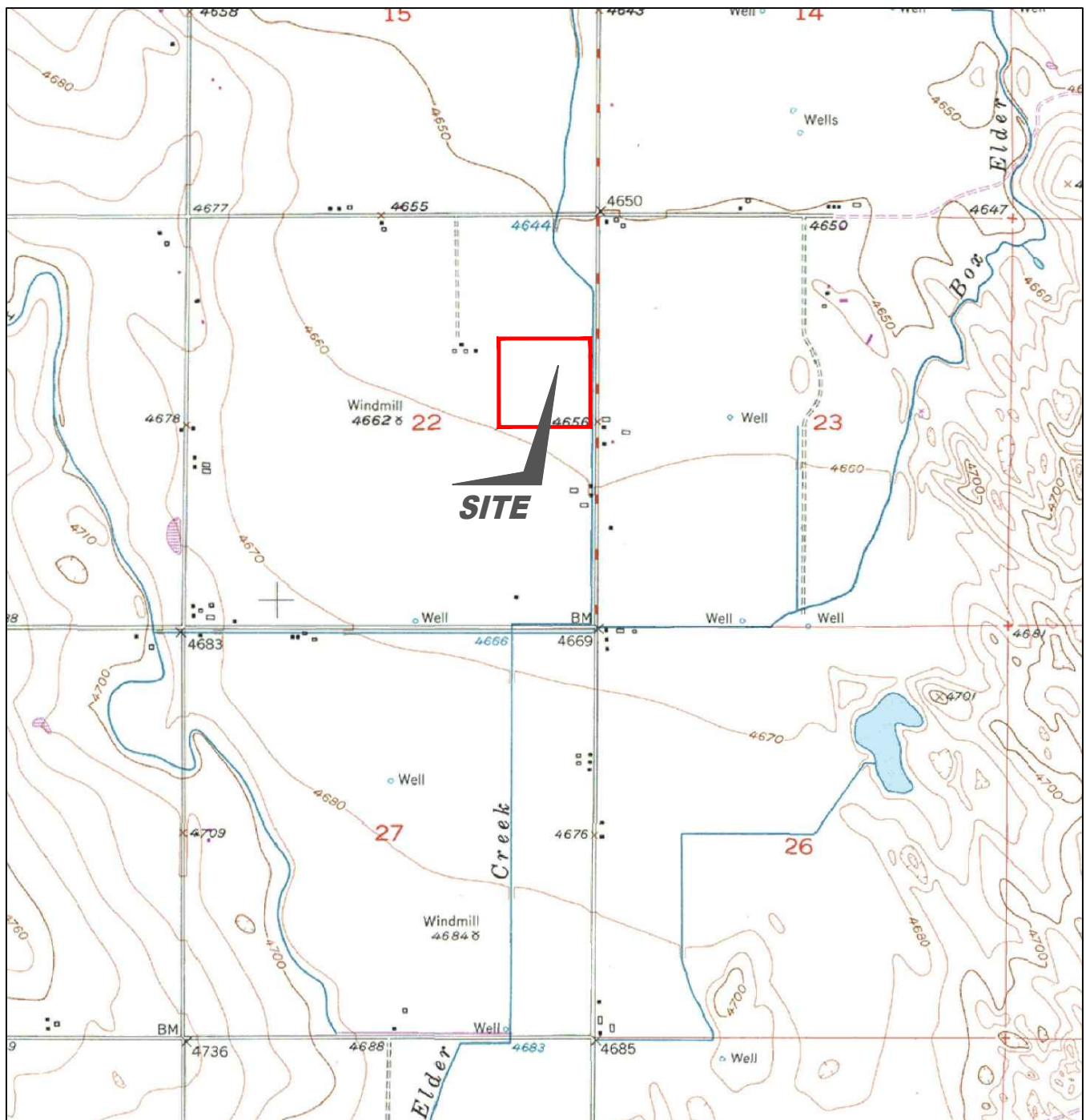
TABLE 4
SUMMARY OF POTHOLE FIELD OBSERVATIONS
NOBLE ENERGY, INC.
HERBST 1-22-4-64, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-066

Location	Latitude	Longitude	PID Reading	Field Observations
1-22-4-64 FL01@5'	40.296263	-104.529808	0.2	No suspected impacts.
1-22-4-64 FL02@5'	40.295972	-104.52976	1.1	No suspected impacts.
1-22-4-64 FL03@5'	40.295757	-104.52964	0.3	No suspected impacts.
1-22-4-64 FL04@4'	40.295557	-104.529542	0.0	No suspected impacts.
1-22-4-64 FL05@5'	40.295353	-104.529441	0.3	No suspected impacts.
1-22-4-64 FL05@4'	40.29497	-104.52924	0.1	No suspected impacts.
SEP04@4'	40.294775	-104.529149	9.4	No suspected impacts.

TABLE 5
SUMMARY OF FLOW LINE CONDITION
NOBLE ENERGY, INC.
HERBST 1-22-4-64, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-066

START	STOP	FOOTAGE	PIPE TYPE AND CONDITION
1-22-4-64 FL01@5'	1-22-4-64 FL02@5'	107	2" steel, good condition.
1-22-4-64 FL02@5'	1-22-4-64 FL03@5'	85	2" steel, good condition.
1-22-4-64 FL03@5'	1-22-4-64 FL04@4'	76	2" steel, good condition.
1-22-4-64 FL04@4'	1-22-4-64 FL05@5'	79	2" steel, good condition.
1-22-4-64 FL05@5'	1-22-4-64 FL05@4'	150	2" steel, good condition.
1-22-4-64 FL05@4'	SEP04@4'	74	2" steel, good condition.

571 Total linear feet of flow line



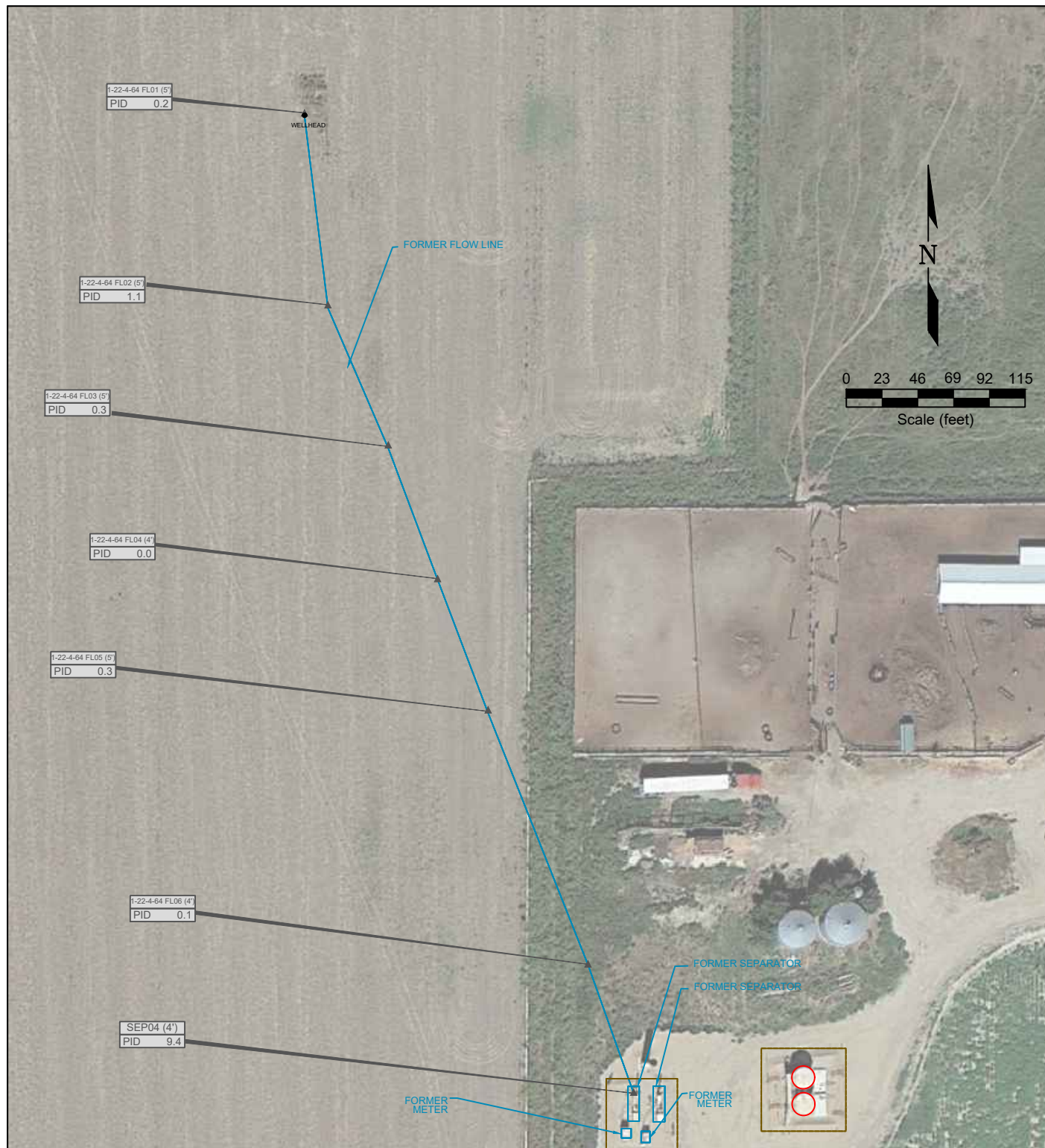
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

NOBLE ENERGY INC - HERBST 1-22-4-64
NESE Sec. 22, T4N, R64W, 6th PM
Weld County, Colorado
40.296279°, -104.529783°

Project # CO23-066	API # 05-123-10933	Facility #
Date 7/29/23	Remediation # 21809	Filename 23066T





LEGEND

- WELLHEAD LOCATION
- ▲ PID READING LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FORMER FACILITY
- FLOW LINE

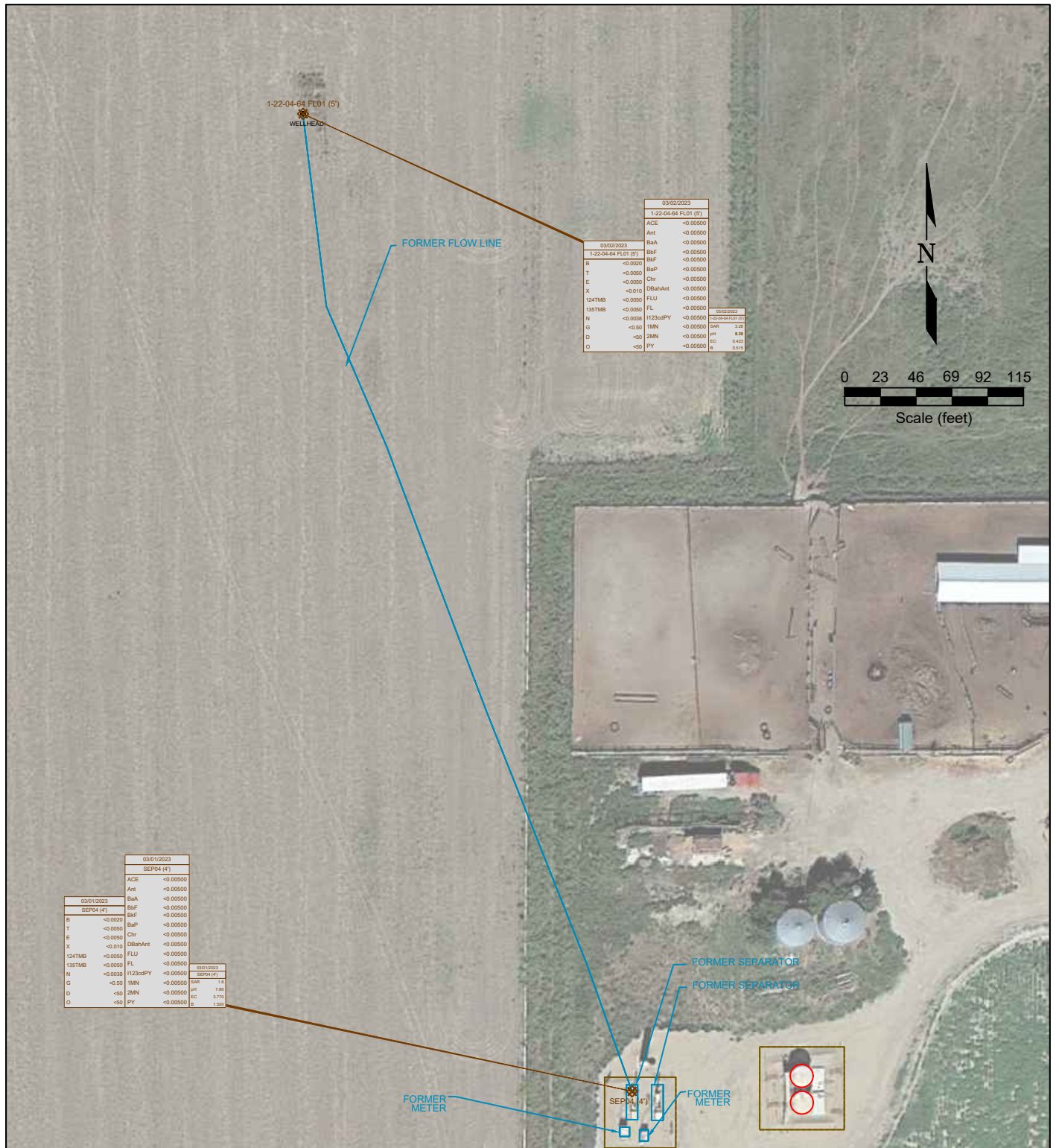
FL01 PID READING LOCATION IDENTIFICATION
PID 0.1 PHOTO IONIZATION DETECTION (ppm)

Figure 2
SITE MAP

NOBLE ENERGY INC - HERBST 1-22-4-64
NESE Sec. 22, T4N, R64W, 6th PM
Weld County, Colorado
40.296279°, -104.529783°

Project # CO23-066	API # 05-123-10933	Facility #
Date 7/29/23	Remediation # 21809	Filename 23066Q





LEGEND

- WELLHEAD LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FLOW LINE
- FORMER FACILITY

12/16/2022	DATE SAMPLED	12/16/2022	DATE SAMPLED	12/16/2022	DATE SAMPLED
FL01 (4)	SAMPLE ID and DEPTH (ft)	FL01 (4)	SAMPLE ID and DEPTH (ft)	FL01 (4)	SAMPLE ID and DEPTH (ft)
ACE	<0.0050	B	<0.0050	SAR	0.992
Ant	<0.0050	T	<0.0050	pH	8.84
BaA	<0.0050	E	<0.0050	EC	0.381
BaP	<0.0050	X	<0.010	B	0.215
BbF	<0.0050	124TMB	<0.0050		
BkF	<0.0050	135TMB	<0.0050		
B	<0.0050	N	<0.0038		
T	<0.0050	G	<0.50		
E	<0.0050	D	<50		
X	<0.010	O	<50		
124TMB	<0.0050				
135TMB	<0.0050				
N	<0.0038				
G	<0.50				
D	<50				
O	<50				

Figure 3
SOIL CHEMISTRY MAP

NOBLE ENERGY INC - HERBST 1-22-4-64
NESE Sec. 22, T4N, R64W, 6th PM
Weld County, Colorado
40.296279°, -104.529783°

Project #	API #	Facility #	
CO23-066	05-123-10933		
Date	Remediation #	Filename	
7/29/23	21809	23066Q	

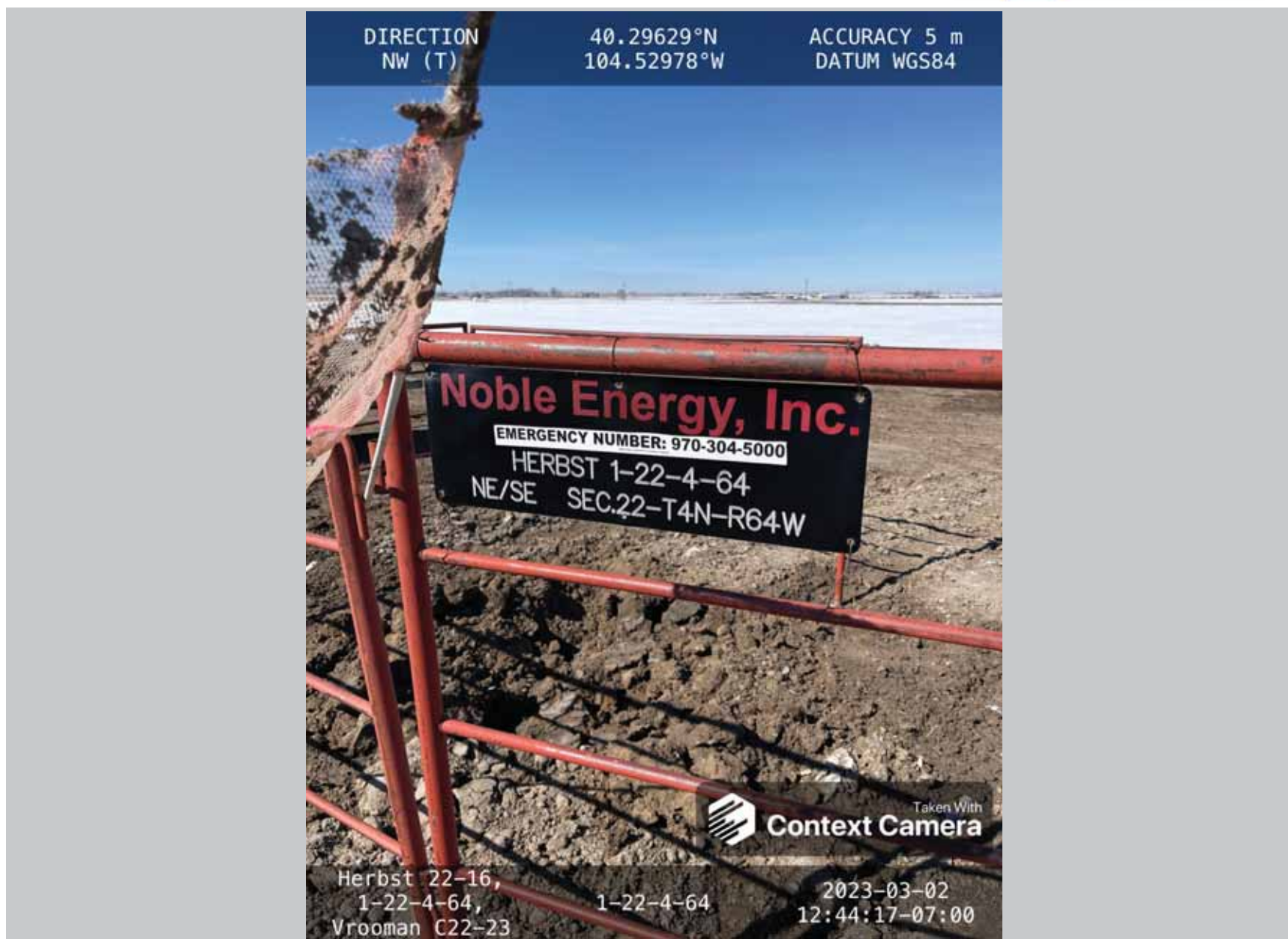
Photo Log



Description:

SEP04@4'

Photo Log



Description:

Herbst 1-22-4-64 Wellhead Placard

Photo Log



Description:

1-22-4-64 FL01@5'

Photo Log



Description:

1-22-4-64 FL02@5'

Photo Log



Description:

1-22-4-64 FL03@5'

Photo Log



DIRECTION
SE (T)

40.29556°N
104.52956°W

ACCURACY 5 m
DATUM WGS84



Taken With
Context Camera

Herbst 22-16,
1-22-4-64,
Vrooman C22-23

1-22-4-64 FL04

2023-03-02
13:13:07-07:00

Description:

1-22-4-64 FL04@4'

Photo Log



Description:

1-22-4-64 FL05@5'

Photo Log



Description:

1-22-4-64 FL06@4'

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 20, 2023

Paul Henehan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Herbst 1-22-04-64

Work Order #2303239

Enclosed are the results of analyses for samples received by Summit Scientific on 03/09/23 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Sheely".

Scott Sheely For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Herbst 1-22-04-64

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:50

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1-22-04-64 FL01@5'	2303239-01	Soil	03/02/23 00:00	03/09/23 16:30

Summit Scientific

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

Summit Scientific

S₂

2303239

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310 ♦ 303-374-5933 (f)

Page 1 of 1

Client: Fremont Environmental

Project Manager: Paul Henehan

Address:

E-Mail: Fremont Distribution List: PaulH, EthanB, JeffG and ChrisL. @fremontenv.com

City/State/Zip:

Bill to Noble

Phone:

Project Name: Herbst 1-22-04-64

Sampler Name: Chris Lattes

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	TPH, BTEX, TMS, Naph.	PAH (915)	EC, SAR, pH, Boron	Metals (915)	TDS, Chloride, Sulfate	HOLD			
1	1-22-04-64 FL01@S'	3/2/23		2			X			X			X	X	X						
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time	(Check)	Notes: FL
Chris Lattes	3/9/23 11:45	SL	3/9/23 11:45	Same Day	72 hours	
				24 hours	Standard	
				48 hours		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:		
SL	3/9/23 1630	[Signature]	3/9/23 1630			
Relinquished by:	Date/Time:	Received by:	Date/Time:	Temperature Upon Receipt:		
				7.6		
				Samples Intact:	(Yes) No	

S₂

Sample Receipt Checklist

S2 Work Order# Z303239Client: Fremont Client Project ID: Herbst 1-22-04-604Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------	--------------------------	--------------------------

Matrix (Check all that apply) Air ☐ Soil ☒ Solid ☐ Water ☐ Other ☐Temp (°C) 7.6Thermometer # 1

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

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

Custodian Printed Name

Date/Time

3/9/23 1630



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Herbst 1-22-04-64

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:50

1-22-04-64 FL01@5'
2303239-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/02/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGC0336	03/13/23	03/14/23	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: **03/02/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0399	99.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0397	99.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0428	107 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/02/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGC0339	03/13/23	03/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/02/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.1	112 %	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 - Herbst 1-22-04-64

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:50

1-22-04-64 FL01@5'
2303239-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/02/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGC0300	03/10/23	03/14/23	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: **03/02/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0251	75.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0169	50.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/02/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.515	0.0100	mg/L	1	BGC0458	03/15/23	03/18/23	EPA 6020B	

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

Date Sampled: **03/02/23 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 - Herbst 1-22-04-64

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:50

1-22-04-64 FL01@5'
2303239-01 (Soil)

Summit Scientific

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

Calcium	10.4	0.0611	mg/L dry	1	BGC0438	03/15/23	03/18/23	EPA 6020B
Magnesium	3.59	0.0611	"	"	"	"	"	"
Sodium	48.1	0.0611	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/02/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.28	0.00100	units	1	BGC0575	03/18/23	03/18/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/02/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.9		%	1	BGC0311	03/10/23	03/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/02/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.423	0.0100	mmhos/cm	1	BGC0494	03/16/23	03/17/23	EPA 120.1	

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

Date Sampled: **03/02/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.35		pH Units	1	BGC0493	03/16/23	03/17/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Herbst 1-22-04-64

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:50

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 BGC0336 - EPA 5030 Soil MS

Blank (BGC0336-BLK1)

Prepared & Analyzed: 03/13/23

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	0.0389		"	0.0400		97.4	50-150			
Surrogate: Toluene-d8	0.0392		"	0.0400		98.1	50-150			
Surrogate: 4-Bromofluorobenzene	0.0428		"	0.0400		107	50-150			

LCS (BGC0336-BS1)

Prepared: 03/13/23 Analyzed: 03/14/23

Benzene	0.0909	0.0020	mg/kg	0.125		72.7	70-130			
Toluene	0.105	0.0050	"	0.125		83.7	70-130			
Ethylbenzene	0.133	0.0050	"	0.125		107	70-130			
m,p-Xylene	0.267	0.010	"	0.250		107	70-130			
o-Xylene	0.124	0.0050	"	0.125		99.1	70-130			
1,2,4-Trimethylbenzene	0.146	0.0050	"	0.125		117	70-130			
1,3,5-Trimethylbenzene	0.146	0.0050	"	0.125		117	70-130			
Naphthalene	0.0997	0.0038	"	0.125		79.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0409		"	0.0400		102	50-150			
Surrogate: Toluene-d8	0.0400		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0401		"	0.0400		100	50-150			

Matrix Spike (BGC0336-MS1)

Source: 2303235-01

Prepared: 03/13/23 Analyzed: 03/14/23

Benzene	0.0905	0.0020	mg/kg	0.125	ND	72.4	70-130			
Toluene	0.106	0.0050	"	0.125	ND	84.9	70-130			
Ethylbenzene	0.134	0.0050	"	0.125	ND	107	70-130			
m,p-Xylene	0.265	0.010	"	0.250	ND	106	70-130			
o-Xylene	0.126	0.0050	"	0.125	ND	101	70-130			
1,2,4-Trimethylbenzene	0.148	0.0050	"	0.125	ND	118	70-130			
1,3,5-Trimethylbenzene	0.146	0.0050	"	0.125	ND	117	70-130			
Naphthalene	0.110	0.0038	"	0.125	ND	88.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0422		"	0.0400		106	50-150			
Surrogate: Toluene-d8	0.0406		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

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 - Herbst 1-22-04-64

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:50

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 BGC0336 - EPA 5030 Soil MS

Matrix Spike Dup (BGC0336-MSD1)	Source: 2303235-01			Prepared: 03/13/23 Analyzed: 03/14/23						
Benzene	0.0899	0.0020	mg/kg	0.125	ND	71.9	70-130	0.732	30	
Toluene	0.106	0.0050	"	0.125	ND	84.5	70-130	0.482	30	
Ethylbenzene	0.139	0.0050	"	0.125	ND	111	70-130	3.94	30	
m,p-Xylene	0.275	0.010	"	0.250	ND	110	70-130	3.60	30	
o-Xylene	0.128	0.0050	"	0.125	ND	103	70-130	1.91	30	
1,2,4-Trimethylbenzene	0.148	0.0050	"	0.125	ND	118	70-130	0.102	30	
1,3,5-Trimethylbenzene	0.151	0.0050	"	0.125	ND	120	70-130	3.28	30	
Naphthalene	0.106	0.0038	"	0.125	ND	85.2	70-130	3.52	30	
Surrogate: 1,2-Dichloroethane-d4	0.0404		"	0.0400		101	50-150			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400		101	50-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Herbst 1-22-04-64

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:50

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGC0339 - EPA 3550A

Blank (BGC0339-BLK1)

Prepared & Analyzed: 03/13/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	14.8		"	12.5		118	30-150			

LCS (BGC0339-BS1)

Prepared & Analyzed: 03/13/23

C10-C28 (DRO)	580	50	mg/kg	500		116	70-130			
Surrogate: o-Terphenyl	14.3		"	12.5		114	30-150			

Matrix Spike (BGC0339-MS1)

Source: 2303235-01

Prepared & Analyzed: 03/13/23

C10-C28 (DRO)	509	50	mg/kg	500	13.0	99.2	70-130			
Surrogate: o-Terphenyl	12.4		"	12.5		98.8	30-150			

Matrix Spike Dup (BGC0339-MSD1)

Source: 2303235-01

Prepared & Analyzed: 03/13/23

C10-C28 (DRO)	510	50	mg/kg	500	13.0	99.3	70-130	0.118	20	
Surrogate: o-Terphenyl	12.3		"	12.5		98.3	30-150			

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 - Herbst 1-22-04-64

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:50

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 BGC0300 - EPA 5030 Soil MS

Blank (BGC0300-BLK1)

Prepared: 03/10/23 Analyzed: 03/13/23

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	0.0254		"	0.0333		76.3	40-150			
Surrogate: Fluoranthene-d10	0.0443		"	0.0333		133	40-150			

LCS (BGC0300-BS1)

Prepared: 03/10/23 Analyzed: 03/13/23

Acenaphthene	0.0357	0.00500	mg/kg	0.0333	107	31-137
Anthracene	0.0344	0.00500	"	0.0333	103	30-120
Benzo (a) anthracene	0.0325	0.00500	"	0.0333	97.6	30-120
Benzo (a) pyrene	0.0300	0.00500	"	0.0333	89.9	30-120
Benzo (b) fluoranthene	0.0338	0.00500	"	0.0333	101	30-120
Benzo (k) fluoranthene	0.0365	0.00500	"	0.0333	109	30-120
Chrysene	0.0314	0.00500	"	0.0333	94.3	30-120
Dibenz (a,h) anthracene	0.0300	0.00500	"	0.0333	90.1	30-120
Fluoranthene	0.0345	0.00500	"	0.0333	103	30-120
Fluorene	0.0343	0.00500	"	0.0333	103	30-120
Indeno (1,2,3-cd) pyrene	0.0306	0.00500	"	0.0333	91.8	30-120
Pyrene	0.0363	0.00500	"	0.0333	109	35-142
1-Methylnaphthalene	0.0344	0.00500	"	0.0333	103	35-142
2-Methylnaphthalene	0.0225	0.00500	"	0.0333	67.4	35-142
Surrogate: 2-Methylnaphthalene-d10	0.0393		"	0.0333	118	40-150
Surrogate: Fluoranthene-d10	0.0343		"	0.0333	103	40-150

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Herbst 1-22-04-64

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:50

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 BGC0300 - EPA 5030 Soil MS

Matrix Spike (BGC0300-MS1)

Source: 2303046-01

Prepared: 03/10/23 Analyzed: 03/13/23

Acenaphthene	0.0212	0.00500	mg/kg	0.0333	ND	63.6	31-137		
Anthracene	0.0209	0.00500	"	0.0333	ND	62.6	30-120		
Benzo (a) anthracene	0.0217	0.00500	"	0.0333	ND	65.1	30-120		
Benzo (a) pyrene	0.0202	0.00500	"	0.0333	ND	60.5	30-120		
Benzo (b) fluoranthene	0.0196	0.00500	"	0.0333	ND	58.7	30-120		
Benzo (k) fluoranthene	0.0204	0.00500	"	0.0333	ND	61.3	30-120		
Chrysene	0.0181	0.00500	"	0.0333	ND	54.3	30-120		
Dibenz (a,h) anthracene	0.0166	0.00500	"	0.0333	ND	49.9	30-120		
Fluoranthene	0.0213	0.00500	"	0.0333	ND	63.8	30-120		
Fluorene	0.0208	0.00500	"	0.0333	ND	62.5	30-120		
Indeno (1,2,3-cd) pyrene	0.0175	0.00500	"	0.0333	ND	52.5	30-120		
Pyrene	0.0217	0.00500	"	0.0333	ND	65.0	35-142		
1-Methylnaphthalene	0.0192	0.00500	"	0.0333	ND	57.7	15-130		
2-Methylnaphthalene	0.0175	0.00500	"	0.0333	ND	52.5	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0248		"	0.0333		74.4	40-150		
Surrogate: Fluoranthene-d10	0.0249		"	0.0333		74.8	40-150		

Matrix Spike Dup (BGC0300-MSD1)

Source: 2303046-01

Prepared: 03/10/23 Analyzed: 03/13/23

Acenaphthene	0.0212	0.00500	mg/kg	0.0333	ND	63.6	31-137	0.0236	30
Anthracene	0.0210	0.00500	"	0.0333	ND	63.0	30-120	0.548	30
Benzo (a) anthracene	0.0217	0.00500	"	0.0333	ND	65.2	30-120	0.0445	30
Benzo (a) pyrene	0.0176	0.00500	"	0.0333	ND	52.7	30-120	13.9	30
Benzo (b) fluoranthene	0.0194	0.00500	"	0.0333	ND	58.3	30-120	0.723	30
Benzo (k) fluoranthene	0.0204	0.00500	"	0.0333	ND	61.1	30-120	0.399	30
Chrysene	0.0183	0.00500	"	0.0333	ND	54.9	30-120	1.07	30
Dibenz (a,h) anthracene	0.0176	0.00500	"	0.0333	ND	52.7	30-120	5.43	30
Fluoranthene	0.0218	0.00500	"	0.0333	ND	65.5	30-120	2.57	30
Fluorene	0.0209	0.00500	"	0.0333	ND	62.8	30-120	0.351	30
Indeno (1,2,3-cd) pyrene	0.0171	0.00500	"	0.0333	ND	51.2	30-120	2.56	30
Pyrene	0.0223	0.00500	"	0.0333	ND	67.0	35-142	3.05	30
1-Methylnaphthalene	0.0220	0.00500	"	0.0333	ND	65.9	15-130	13.3	50
2-Methylnaphthalene	0.0177	0.00500	"	0.0333	ND	53.2	15-130	1.36	50
Surrogate: 2-Methylnaphthalene-d10	0.0267		"	0.0333		80.1	40-150		
Surrogate: Fluoranthene-d10	0.0245		"	0.0333		73.6	40-150		

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Herbst 1-22-04-64

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:50

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 BGC0458 - EPA 3050B

Blank (BGC0458-BLK1)

Prepared: 03/15/23 Analyzed: 03/18/23

Boron ND 0.0100 mg/L

LCS (BGC0458-BS1)

Prepared: 03/15/23 Analyzed: 03/18/23

Boron 4.91 0.0100 mg/L 5.00 98.3 80-120

Duplicate (BGC0458-DUP1)

Source: 2303234-06

Prepared: 03/15/23 Analyzed: 03/18/23

Boron 0.467 0.0100 mg/L 0.483 3.27 20

Matrix Spike (BGC0458-MS1)

Source: 2303234-06

Prepared: 03/15/23 Analyzed: 03/18/23

Boron 4.96 0.0100 mg/L 5.00 0.483 89.5 75-125

Matrix Spike Dup (BGC0458-MSD1)

Source: 2303234-06

Prepared: 03/15/23 Analyzed: 03/18/23

Boron 4.97 0.0100 mg/L 5.00 0.483 89.8 75-125 0.274 25

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Herbst 1-22-04-64

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:50

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

Summit Scientific

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

Batch BGC0438 - General Preparation

Blank (BGC0438-BLK1)

Prepared: 03/15/23 Analyzed: 03/18/23

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

LCS (BGC0438-BS1)

Prepared: 03/15/23 Analyzed: 03/18/23

Calcium	5.74	0.0500	mg/L wet	5.00	115	70-130
Magnesium	5.49	0.0500	"	5.00	110	70-130
Sodium	5.02	0.0500	"	5.00	100	70-130

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Herbst 1-22-04-64

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:50

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 BGC0311 - General Preparation

Duplicate (BGC0311-DUP1)		Source: 2303238-01		Prepared: 03/10/23 Analyzed: 03/13/23	
% Solids	73.5		%	73.7	0.364 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Herbst 1-22-04-64

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:50

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 BGC0494 - General Preparation

Blank (BGC0494-BLK1)

Prepared: 03/16/23 Analyzed: 03/17/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGC0494-BS1)

Prepared: 03/16/23 Analyzed: 03/17/23

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 101 95-105

Duplicate (BGC0494-DUP1)

Source: 2303229-01

Prepared: 03/16/23 Analyzed: 03/17/23

Specific Conductance (EC) 4.42 0.0100 mmhos/cm 4.51 2.04 20

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Herbst 1-22-04-64

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:50

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 BGC0493 - General Preparation

LCS (BGC0493-BS1)

Prepared: 03/16/23 Analyzed: 03/17/23

pH	9.08	pH Units	9.18	98.9	95-105
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Duplicate (BGC0493-DUP1)

Source: 2303229-01

Prepared: 03/16/23 Analyzed: 03/17/23

pH	7.82	pH Units	7.89	0.891	20
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Herbst 1-22-04-64

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:50

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 22, 2023

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Dechant State H36-19 Tank

Work Order #2303230

Enclosed are the results of analyses for samples received by Summit Scientific on 03/09/23 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01@6"	2303230-01	Soil	03/01/23 00:00	03/09/23 16:30
AST02@6"	2303230-02	Soil	03/01/23 00:00	03/09/23 16:30
PWVS01@9'	2303230-03	Soil	03/01/23 00:00	03/09/23 16:30
PWVB01@8'	2303230-04	Soil	03/01/23 00:00	03/09/23 16:30
SEP02@4'	2303230-05	Soil	03/01/23 00:00	03/09/23 16:30
SEP04@4'	2303230-06	Soil	03/01/23 00:00	03/09/23 16:30

Summit Scientific

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

Summit Scientific

S₂

2303230

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310 ♦ 303-374-5933 (f)

Page 1 of 1

Client: Fremont Environmental

Project Manager: Paul Henehan

Address:

E-Mail: Fremont Distribution List: PaulH, EthanB, JeffG and ChrisL. @fremontenv.com

City/State/Zip:

Bill to Noble

Phone:

Project Name: Dechant State H36-19 TANK

Sampler Name: Chris Lattes

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	TPH, BTEX, TMS, Naph.	PAH (915)	EC, SAR, pH, Boron	Metals (915)	TDS, Chloride, Sulfate	HOLD			
1	ASTP1 @ 6"	3/1/23		2			X			X				X	X	X					
2	ASTP2 @ 6"			2			X			X				X	X	X					
3	PWV301 @ 7'			2			X			X				X	X	X					
4	PWV301 @ 8'			2			X			X				X	X	X					
5	SEP02 @ 4'			2			X			X				X	X	X					
6	SEP04 @ 4'	3/1/23		2			X			X				X	X	X					
7																					
8																					
9																					
10																					

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time	(Check)	Notes: Associated w/ Herbst 22-16 FL Herbst 1-22-04-84 FL Vrooman C22-23 FL
Chris Lattes	3/1/23 11:30	S2	3/1/23 11:30	Same Day	72 hours	
				24 hours	Standard	
				48 hours		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:		
S2	3/9/23 1030	[Signature]	3/9/23 1030			
Relinquished by:	Date/Time:	Received by:	Date/Time:	Temperature Upon Receipt:		
				7.0		
				Samples Intact:	Yes No	

S₂

Sample Receipt Checklist

S2 Work Order# 2303230Client: Fremont Client Project ID: Dedham State H36-19 TankShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: _____

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------	--------------------------	--------------------------

Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 7.6Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>none</u>
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

CS
Custodian Printed Name

3/1/23 1630
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

AST01@6"
2303230-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGC0290	03/10/23	03/11/23	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: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0390	97.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0386	96.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0419	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGC0292	03/10/23	03/11/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.9	103 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

AST01@6"
2303230-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGC0300	03/10/23	03/13/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0213	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0181	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0331	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.0115	0.00500	"	"	"	"	"	"	
Chrysene	0.0159	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0232	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.00869	0.00500	"	"	"	"	"	"	
Pyrene	0.0239	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0178	53.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0250	74.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.110	0.0100	mg/L	1	BGC0382	03/14/23	03/16/23	EPA 6020B	

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

Date Sampled: **03/01/23 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 - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

AST01@6"
2303230-01 (Soil)

Summit Scientific

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

Calcium	30.1	0.0558	mg/L dry	1	BGC0438	03/15/23	03/18/23	EPA 6020B
Magnesium	11.9	0.0558	"	"	"	"	"	"
Sodium	18.5	0.0558	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.722	0.00100	units	1	BGC0575	03/18/23	03/18/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.6		%	1	BGC0309	03/10/23	03/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.265	0.0100	mmhos/cm	1	BGC0494	03/16/23	03/17/23	EPA 120.1	

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

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.63		pH Units	1	BGC0493	03/16/23	03/17/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henehan

Reported:
03/22/23 07:30

AST02@6"
2303230-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGC0290	03/10/23	03/11/23	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: **03/01/23 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	0.0394	98.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0428	107 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGC0292	03/10/23	03/11/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.1	88.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

AST02@6"
2303230-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGC0300	03/10/23	03/14/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.00636	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.00575	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0114	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.00590	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00607	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0188	56.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0246	73.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.352	0.0100	mg/L	1	BGC0382	03/14/23	03/16/23	EPA 6020B	

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

Date Sampled: **03/01/23 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 - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

AST02@6"
2303230-02 (Soil)

Summit Scientific

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

Calcium	222	0.0590	mg/L dry	1	BGC0438	03/15/23	03/18/23	EPA 6020B
Magnesium	123	0.0590	"	"	"	"	"	"
Sodium	96.1	0.0590	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.28	0.00100	units	1	BGC0575	03/18/23	03/18/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.8		%	1	BGC0309	03/10/23	03/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.373	0.0100	mmhos/cm	1	BGC0494	03/16/23	03/17/23	EPA 120.1	

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

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.22		pH Units	1	BGC0493	03/16/23	03/17/23	EPA 9045D	

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henehan

Reported:
03/22/23 07:30

PWVS01@9'
2303230-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGC0290	03/10/23	03/11/23	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: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0404	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0433	108 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGC0292	03/10/23	03/11/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.6	100 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

PWVS01@9'
2303230-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGC0300	03/10/23	03/14/23	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: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0141	42.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0186	55.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.139	0.0100	mg/L	1	BGC0382	03/14/23	03/16/23	EPA 6020B	

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

Date Sampled: **03/01/23 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 - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

PWVS01@9'
2303230-03 (Soil)

Summit Scientific

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

Calcium	35.2	0.0653	mg/L dry	1	BGC0438	03/15/23	03/18/23	EPA 6020B
Magnesium	11.6	0.0653	"	"	"	"	"	"
Sodium	7.93	0.0653	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.296	0.00100	units	1	BGC0575	03/18/23	03/18/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	76.6		%	1	BGC0309	03/10/23	03/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.331	0.0100	mmhos/cm	1	BGC0494	03/16/23	03/17/23	EPA 120.1	

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

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.76		pH Units	1	BGC0493	03/16/23	03/17/23	EPA 9045D	

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henehan

Reported:
03/22/23 07:30

PWVB01@8'
2303230-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGC0290	03/10/23	03/11/23	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: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0416	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0425	106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGC0292	03/10/23	03/11/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.8	94.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henahan

Reported:
03/22/23 07:30

PWVB01@8'
2303230-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGC0300	03/10/23	03/14/23	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: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0174	52.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0224	67.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.340	0.0100	mg/L	1	BGC0382	03/14/23	03/16/23	EPA 6020B	

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

Date Sampled: **03/01/23 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 - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

PWVB01@8'
2303230-04 (Soil)

Summit Scientific

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

Calcium	93.3	0.0601	mg/L dry	1	BGC0438	03/15/23	03/18/23	EPA 6020B
Magnesium	64.8	0.0601	"	"	"	"	"	"
Sodium	36.8	0.0601	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.716	0.00100	units	1	BGC0575	03/18/23	03/18/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.2		%	1	BGC0309	03/10/23	03/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.177	0.0100	mmhos/cm	1	BGC0494	03/16/23	03/17/23	EPA 120.1	

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

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.09		pH Units	1	BGC0493	03/16/23	03/17/23	EPA 9045D	

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henehan

Reported:
03/22/23 07:30

SEP02@4'
2303230-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGC0290	03/10/23	03/21/23	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: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0499	125 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0387	96.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0416	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGC0292	03/10/23	03/11/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/01/23 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

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

SEP02@4'
2303230-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGC0300	03/10/23	03/14/23	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: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0165	49.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0234	70.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.217	0.0100	mg/L	1	BGC0382	03/14/23	03/16/23	EPA 6020B	

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

Date Sampled: **03/01/23 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 - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

SEP02@4'
2303230-05 (Soil)

Summit Scientific

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

Calcium	42.8	0.0606	mg/L dry	1	BGC0438	03/15/23	03/18/23	EPA 6020B
Magnesium	16.0	0.0606	"	"	"	"	"	"
Sodium	83.1	0.0606	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.75	0.00100	units	1	BGC0575	03/18/23	03/18/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.5		%	1	BGC0309	03/10/23	03/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.616	0.0100	mmhos/cm	1	BGC0494	03/16/23	03/17/23	EPA 120.1	

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

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.31		pH Units	1	BGC0493	03/16/23	03/17/23	EPA 9045D	

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

SEP04@4'
2303230-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGC0290	03/10/23	03/13/23	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: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0374	93.5 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0384	95.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0397	99.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGC0292	03/10/23	03/11/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.3	98.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

SEP04@4'
2303230-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGC0300	03/10/23	03/14/23	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: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0163	48.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0248	74.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	1.52	0.0100	mg/L	1	BGC0382	03/14/23	03/16/23	EPA 6020B	

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

Date Sampled: **03/01/23 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 - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

SEP04@4'
2303230-06 (Soil)

Summit Scientific

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

Calcium	502	0.0692	mg/L dry	1	BGC0438	03/15/23	03/18/23	EPA 6020B
Magnesium	155	0.0692	"	"	"	"	"	"
Sodium	180	0.0692	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.80	0.00100	units	1	BGC0575	03/18/23	03/18/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	72.3		%	1	BGC0309	03/10/23	03/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.77	0.0100	mmhos/cm	1	BGC0494	03/16/23	03/17/23	EPA 120.1	

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

Date Sampled: **03/01/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.86		pH Units	1	BGC0493	03/16/23	03/17/23	EPA 9045D	

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

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 BGC0290 - EPA 5030 Soil MS

Blank (BGC0290-BLK1)

Prepared: 03/10/23 Analyzed: 03/11/23

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	0.0422		"	0.0400		106	50-150			
Surrogate: Toluene-d8	0.0395		"	0.0400		98.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0415		"	0.0400		104	50-150			

LCS (BGC0290-BS1)

Prepared: 03/10/23 Analyzed: 03/11/23

Benzene	0.158	0.0020	mg/kg	0.150		105	70-130			
Toluene	0.155	0.0050	"	0.150		103	70-130			
Ethylbenzene	0.159	0.0050	"	0.150		106	70-130			
m,p-Xylene	0.321	0.010	"	0.300		107	70-130			
o-Xylene	0.155	0.0050	"	0.150		103	70-130			
1,2,4-Trimethylbenzene	0.159	0.0050	"	0.150		106	70-130			
1,3,5-Trimethylbenzene	0.159	0.0050	"	0.150		106	70-130			
Naphthalene	0.149	0.0038	"	0.150		99.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0411		"	0.0400		103	50-150			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400		97.0	50-150			

Matrix Spike (BGC0290-MS1)

Source: 2303195-01

Prepared: 03/10/23 Analyzed: 03/11/23

Benzene	0.146	0.0020	mg/kg	0.150	ND	97.4	70-130			
Toluene	0.145	0.0050	"	0.150	ND	96.4	70-130			
Ethylbenzene	0.146	0.0050	"	0.150	ND	97.5	70-130			
m,p-Xylene	0.293	0.010	"	0.300	ND	97.7	70-130			
o-Xylene	0.141	0.0050	"	0.150	ND	94.2	70-130			
1,2,4-Trimethylbenzene	0.139	0.0050	"	0.150	ND	92.5	70-130			
1,3,5-Trimethylbenzene	0.142	0.0050	"	0.150	ND	94.5	70-130			
Naphthalene	0.131	0.0038	"	0.150	ND	87.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0424		"	0.0400		106	50-150			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.4	50-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

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 BGC0290 - EPA 5030 Soil MS

Matrix Spike Dup (BGC0290-MSD1)	Source: 2303195-01			Prepared: 03/10/23 Analyzed: 03/11/23						
Benzene	0.146	0.0020	mg/kg	0.150	ND	97.6	70-130	0.164	30	
Toluene	0.143	0.0050	"	0.150	ND	95.5	70-130	0.917	30	
Ethylbenzene	0.145	0.0050	"	0.150	ND	96.7	70-130	0.865	30	
m,p-Xylene	0.292	0.010	"	0.300	ND	97.4	70-130	0.277	30	
o-Xylene	0.141	0.0050	"	0.150	ND	93.9	70-130	0.362	30	
1,2,4-Trimethylbenzene	0.136	0.0050	"	0.150	ND	90.9	70-130	1.75	30	
1,3,5-Trimethylbenzene	0.138	0.0050	"	0.150	ND	91.8	70-130	2.92	30	
Naphthalene	0.120	0.0038	"	0.150	ND	80.1	70-130	8.35	30	
Surrogate: 1,2-Dichloroethane-d4	0.0430		"	0.0400		107	50-150			
Surrogate: Toluene-d8	0.0400		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.8	50-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGC0292 - EPA 3550A

Blank (BGC0292-BLK1)

Prepared: 03/10/23 Analyzed: 03/11/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	12.1		"	12.5		97.0	30-150			

LCS (BGC0292-BS1)

Prepared: 03/10/23 Analyzed: 03/11/23

C10-C28 (DRO)	455	50	mg/kg	500		91.0	70-130			
Surrogate: o-Terphenyl	11.7		"	12.5		93.6	30-150			

Matrix Spike (BGC0292-MS1)

Source: 2303195-01

Prepared: 03/10/23 Analyzed: 03/11/23

C10-C28 (DRO)	436	50	mg/kg	500	18.9	83.4	70-130			
Surrogate: o-Terphenyl	9.59		"	12.5		76.7	30-150			

Matrix Spike Dup (BGC0292-MSD1)

Source: 2303195-01

Prepared: 03/10/23 Analyzed: 03/11/23

C10-C28 (DRO)	380	50	mg/kg	500	18.9	72.3	70-130	13.6	20	
Surrogate: o-Terphenyl	9.34		"	12.5		74.7	30-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGC0300 - EPA 5030 Soil MS

Blank (BGC0300-BLK1)

Prepared: 03/10/23 Analyzed: 03/13/23

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	0.0254	"	0.0333	76.3	40-150
Surrogate: Fluoranthene-d10	0.0443	"	0.0333	133	40-150

LCS (BGC0300-BS1)

Prepared: 03/10/23 Analyzed: 03/13/23

Acenaphthene	0.0357	0.00500	mg/kg	0.0333	107	31-137
Anthracene	0.0344	0.00500	"	0.0333	103	30-120
Benzo (a) anthracene	0.0325	0.00500	"	0.0333	97.6	30-120
Benzo (a) pyrene	0.0300	0.00500	"	0.0333	89.9	30-120
Benzo (b) fluoranthene	0.0338	0.00500	"	0.0333	101	30-120
Benzo (k) fluoranthene	0.0365	0.00500	"	0.0333	109	30-120
Chrysene	0.0314	0.00500	"	0.0333	94.3	30-120
Dibenz (a,h) anthracene	0.0300	0.00500	"	0.0333	90.1	30-120
Fluoranthene	0.0345	0.00500	"	0.0333	103	30-120
Fluorene	0.0343	0.00500	"	0.0333	103	30-120
Indeno (1,2,3-cd) pyrene	0.0306	0.00500	"	0.0333	91.8	30-120
Pyrene	0.0363	0.00500	"	0.0333	109	35-142
1-Methylnaphthalene	0.0344	0.00500	"	0.0333	103	35-142
2-Methylnaphthalene	0.0225	0.00500	"	0.0333	67.4	35-142

Surrogate: 2-Methylnaphthalene-d10	0.0393	"	0.0333	118	40-150
Surrogate: Fluoranthene-d10	0.0343	"	0.0333	103	40-150

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

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 BGC0300 - EPA 5030 Soil MS

Matrix Spike (BGC0300-MS1)

Source: 2303046-01

Prepared: 03/10/23 Analyzed: 03/13/23

Acenaphthene	0.0212	0.00500	mg/kg	0.0333	ND	63.6	31-137		
Anthracene	0.0209	0.00500	"	0.0333	ND	62.6	30-120		
Benzo (a) anthracene	0.0217	0.00500	"	0.0333	ND	65.1	30-120		
Benzo (a) pyrene	0.0202	0.00500	"	0.0333	ND	60.5	30-120		
Benzo (b) fluoranthene	0.0196	0.00500	"	0.0333	ND	58.7	30-120		
Benzo (k) fluoranthene	0.0204	0.00500	"	0.0333	ND	61.3	30-120		
Chrysene	0.0181	0.00500	"	0.0333	ND	54.3	30-120		
Dibenz (a,h) anthracene	0.0166	0.00500	"	0.0333	ND	49.9	30-120		
Fluoranthene	0.0213	0.00500	"	0.0333	ND	63.8	30-120		
Fluorene	0.0208	0.00500	"	0.0333	ND	62.5	30-120		
Indeno (1,2,3-cd) pyrene	0.0175	0.00500	"	0.0333	ND	52.5	30-120		
Pyrene	0.0217	0.00500	"	0.0333	ND	65.0	35-142		
1-Methylnaphthalene	0.0192	0.00500	"	0.0333	ND	57.7	15-130		
2-Methylnaphthalene	0.0175	0.00500	"	0.0333	ND	52.5	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0248		"	0.0333		74.4	40-150		
Surrogate: Fluoranthene-d10	0.0249		"	0.0333		74.8	40-150		

Matrix Spike Dup (BGC0300-MSD1)

Source: 2303046-01

Prepared: 03/10/23 Analyzed: 03/13/23

Acenaphthene	0.0212	0.00500	mg/kg	0.0333	ND	63.6	31-137	0.0236	30
Anthracene	0.0210	0.00500	"	0.0333	ND	63.0	30-120	0.548	30
Benzo (a) anthracene	0.0217	0.00500	"	0.0333	ND	65.2	30-120	0.0445	30
Benzo (a) pyrene	0.0176	0.00500	"	0.0333	ND	52.7	30-120	13.9	30
Benzo (b) fluoranthene	0.0194	0.00500	"	0.0333	ND	58.3	30-120	0.723	30
Benzo (k) fluoranthene	0.0204	0.00500	"	0.0333	ND	61.1	30-120	0.399	30
Chrysene	0.0183	0.00500	"	0.0333	ND	54.9	30-120	1.07	30
Dibenz (a,h) anthracene	0.0176	0.00500	"	0.0333	ND	52.7	30-120	5.43	30
Fluoranthene	0.0218	0.00500	"	0.0333	ND	65.5	30-120	2.57	30
Fluorene	0.0209	0.00500	"	0.0333	ND	62.8	30-120	0.351	30
Indeno (1,2,3-cd) pyrene	0.0171	0.00500	"	0.0333	ND	51.2	30-120	2.56	30
Pyrene	0.0223	0.00500	"	0.0333	ND	67.0	35-142	3.05	30
1-Methylnaphthalene	0.0220	0.00500	"	0.0333	ND	65.9	15-130	13.3	50
2-Methylnaphthalene	0.0177	0.00500	"	0.0333	ND	53.2	15-130	1.36	50
Surrogate: 2-Methylnaphthalene-d10	0.0267		"	0.0333		80.1	40-150		
Surrogate: Fluoranthene-d10	0.0245		"	0.0333		73.6	40-150		

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

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 BGC0382 - EPA 3050B

Blank (BGC0382-BLK1)

Prepared: 03/14/23 Analyzed: 03/16/23

Boron ND 0.0100 mg/L

LCS (BGC0382-BS1)

Prepared: 03/14/23 Analyzed: 03/16/23

Boron 5.14 0.0100 mg/L 5.00 103 80-120

Duplicate (BGC0382-DUP1)

Source: 2303229-01

Prepared: 03/14/23 Analyzed: 03/16/23

Boron 0.526 0.0100 mg/L 0.540 2.58 20

Matrix Spike (BGC0382-MS1)

Source: 2303229-01

Prepared: 03/14/23 Analyzed: 03/16/23

Boron 5.50 0.0100 mg/L 5.00 0.540 99.2 75-125

Matrix Spike Dup (BGC0382-MSD1)

Source: 2303229-01

Prepared: 03/14/23 Analyzed: 03/16/23

Boron 5.45 0.0100 mg/L 5.00 0.540 98.2 75-125 0.959 25

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

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 BGC0438 - General Preparation

Blank (BGC0438-BLK1)

Prepared: 03/15/23 Analyzed: 03/18/23

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

LCS (BGC0438-BS1)

Prepared: 03/15/23 Analyzed: 03/18/23

Calcium	5.74	0.0500	mg/L wet	5.00	115	70-130
Magnesium	5.49	0.0500	"	5.00	110	70-130
Sodium	5.02	0.0500	"	5.00	100	70-130

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

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 BGC0309 - General Preparation

Duplicate (BGC0309-DUP1)		Source: 2303226-05		Prepared: 03/10/23 Analyzed: 03/13/23	
% Solids	89.5		%	91.3	2.03 20

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

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 BGC0494 - General Preparation

Blank (BGC0494-BLK1)

Prepared: 03/16/23 Analyzed: 03/17/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGC0494-BS1)

Prepared: 03/16/23 Analyzed: 03/17/23

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 101 95-105

Duplicate (BGC0494-DUP1)

Source: 2303229-01

Prepared: 03/16/23 Analyzed: 03/17/23

Specific Conductance (EC) 4.42 0.0100 mmhos/cm 4.51 2.04 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

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

Summit Scientific

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

Batch BGC0493 - General Preparation

LCS (BGC0493-BS1)

Prepared: 03/16/23 Analyzed: 03/17/23

pH	9.08	pH Units	9.18	98.9	95-105
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Duplicate (BGC0493-DUP1)

Source: 2303229-01

Prepared: 03/16/23 Analyzed: 03/17/23

pH	7.82	pH Units	7.89	0.891	20
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Dechant State H36-19 Tank

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/22/23 07:30

Notes and Definitions

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