

FREMONT ENVIRONMENTAL INC.

May 4, 2023

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

Subject: **Facility Closure Data Submittal**
Booth CC31-17D Tank Facility
Facility ID: 426349
NWNE Sec. 31, T4N, R63W
Weld County, Colorado
Fremont Project No. C023-029
Remediation # 25058

Dear Mr. Peterson:

As requested, Fremont Environmental Inc. (Fremont) personnel conducted facility abandonment activities at the Noble Energy Inc. (Noble) Booth CC31-17D Tank Facility. Details of the facility abandonment activities are documented in the attached Closure Report. The soil sample collected from the base of the PWV excavation (PWVB01@6') was reported with elevated concentrations of organic compounds. Additionally, the sample collected from under the North AST (AST01@1') was reported with a pH below the regulatory limit. Groundwater was not encountered during facility abandonment 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.

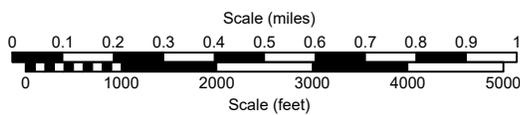
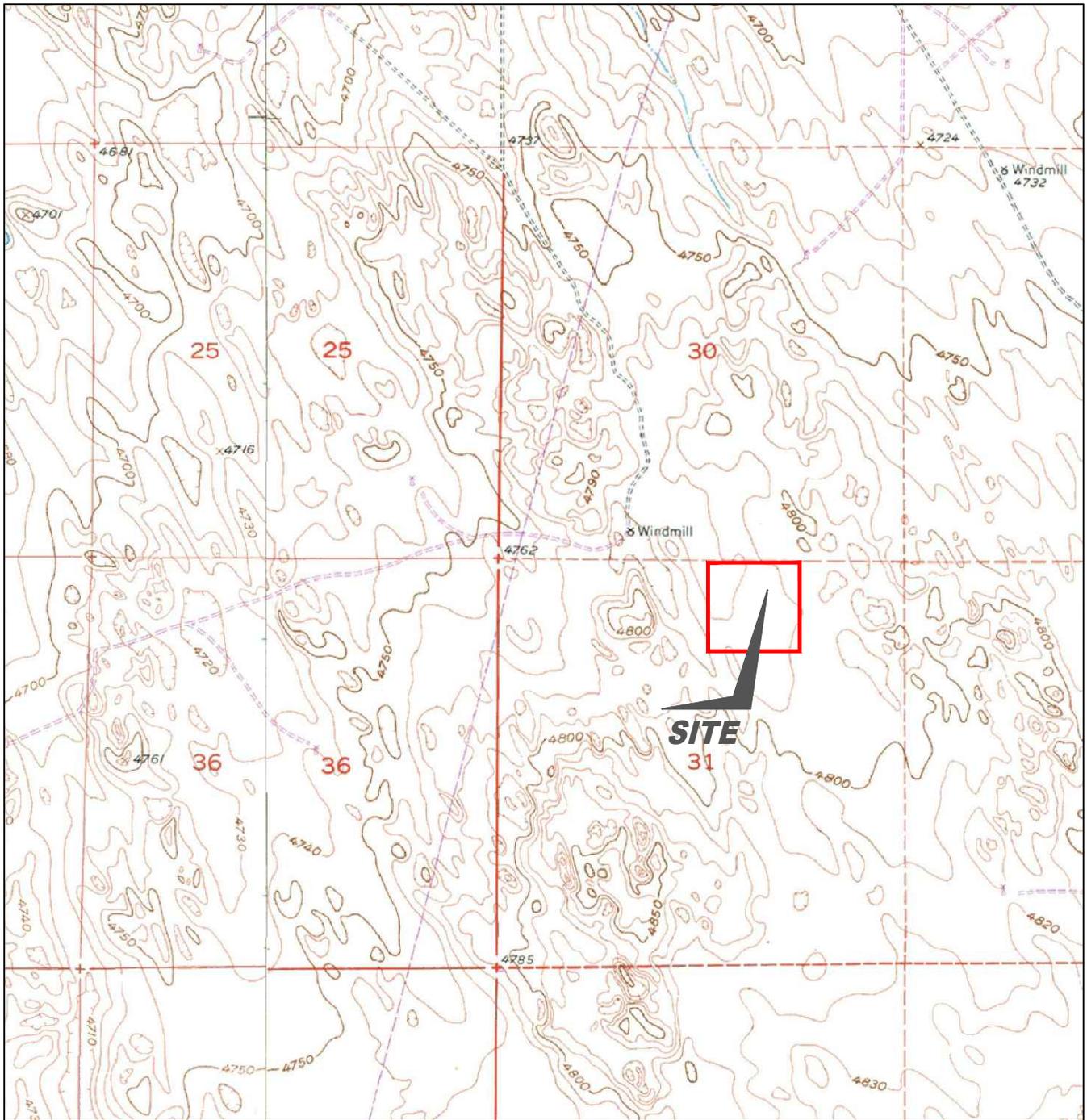


Chris Lattes
Consultant

Attachments:

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

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



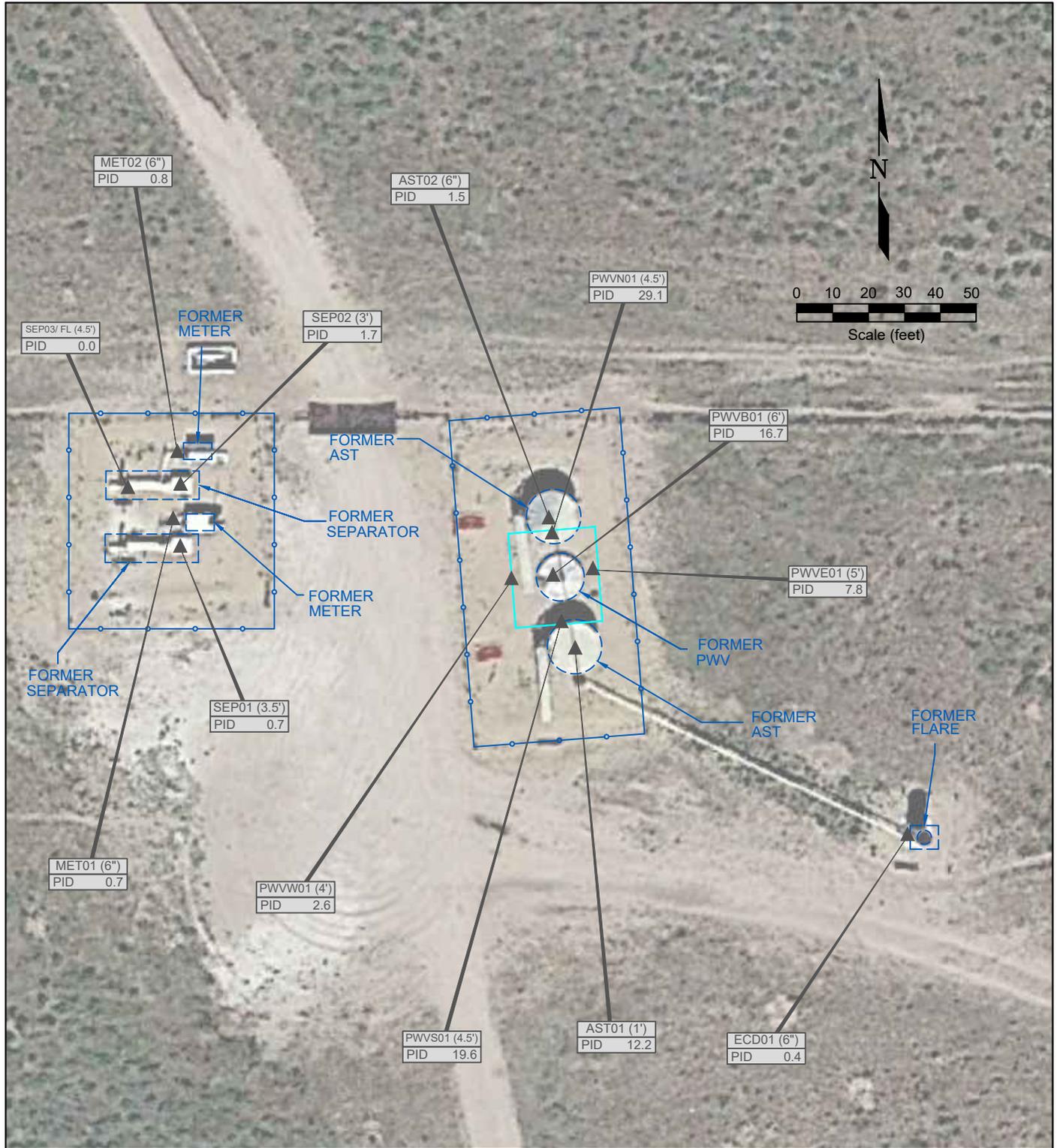
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

NOBLE ENERGY INC - BOOTH CC31-17D TANK
 NWNE Sec. 31, T4N, R63W, 6th PM
 Weld County, Colorado
 40.276016°, -104.478727°

Project # CO23-029	API #	Facility # 426349
Date 08/29/2023	Remediation # 25058	Filename 23029T





- WELLHEAD LOCATION
- ▲ PID READING LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FORMER FACILITY
- FENCE LINE
- EXTENT OF EXCAVATION

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

**Figure 2
SITE MAP**

NOBLE ENERGY INC - BOOTH CC31-17D TANK
 NWNE Sec. 31, T4N, R63W, 6th PM
 Weld County, Colorado
 40.276016°, -104.478727°

Project # CO23-029	API #	Facility # 426349
Date 9/6/23	Remediation # 25058	Filename 23029Q

REMONT ENVIRONMENTAL

TABLE 1
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY INC
BOOTH CC31-17D TANK, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-029

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		
AST01@1'	02/03/2023	1'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST02@6"	02/03/2023	6"	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
PWVB01@6'	02/03/2023	6'	<0.0020	0.022	0.017	0.18	0.11	0.054	<0.0038	52	2400	120
PWVN01@4.5'	02/03/2023	4.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SEP01@3.5'	02/03/2023	3.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SEP02@3'	02/03/2023	3'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SEP03/FL@4.5'	02/06/2023	4.5'	<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)

* 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
BOOTH CC31-17D TANK, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-029

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
AST01@1'	02/03/2023	1'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST02@6"	02/03/2023	6"	<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
PWVB01@6'	02/03/2023	6'	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.32	<0.0500	<0.0500	1.5	<0.0500	0.0802	0.961	0.37
PWVN01@4.5'	02/03/2023	4.5'	<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	0.0121
SEP01@3.5'	02/03/2023	3.5'	<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
SEP02@3'	02/03/2023	3'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP03/FL@4.5'	02/06/2023	4.5'	<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

Bold faced values exceed the COGCC Table 915-1 concentrations

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

TABLE 3
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE ENERGY INC
BOOTH CC31-17D TANK, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-029

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
AST01@1'	02/03/2023	1'	5.73	0.12	0.0102	0.0568
AST02@6"	02/03/2023	6"	6.55	0.47	0.0342	0.0388
PWVB01@6'	02/03/2023	6'	7.49	0.506	0.938	0.0793
PWVN01@4.5'	02/03/2023	4.5'	6.87	0.0937	0.0234	0.149
SEP01@3.5'	02/03/2023	3.5'	7.84	0.315	1.32	0.183
SEP02@3'	02/03/2023	3'	7.47	0.244	0.0187	0.101
SEP03/FL@4.5'	02/06/2023	4.5'	7.75	0.429	0.175	0.0802

Bold faced values exceed the COGCC Table 915-1 concentrations

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

TABLE 4
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE ENERGY INC
BOOTH CC31-17D TANK, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-029

Sample ID	Sample Date	Depth (ft)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
COGCC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
COGCC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
PWVB01@6'	02/03/2023	6'	2.51	71.8	0.151	<0.30	4.13	5.1	4.26	<0.260	0.0224	15.5

Bold faced values exceed the COGCC Table 915-1 concentrations

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

NA - Not analyzed

Photo Log



DIRECTION
NW (T)

40.27599°N
104.47862°W

ACCURACY 5 m
DATUM WGS84



Taken With
Context Camera

Booth CC 31-17

Separators

2023-02-03
11:37:58-07:00

Description:

Separator Overview Facing NW

Photo Log



Description:

SEP01@3.5'

Photo Log



Description:

SEP02@3'

Photo Log



Description:

SEP03/FL@4.5'

Photo Log



Description:

MET01@6"

Photo Log



Description:

MET02@6"

Photo Log



DIRECTION
NW (T)

40.27588°N
104.47832°W

ACCURACY 5 m
DATUM WGS84



Taken With
Context Camera

Booth CC 31-17

Tank Battery

2023-02-03
11:45:14-07:00

Description:

Tank Battery Overview Facing NW

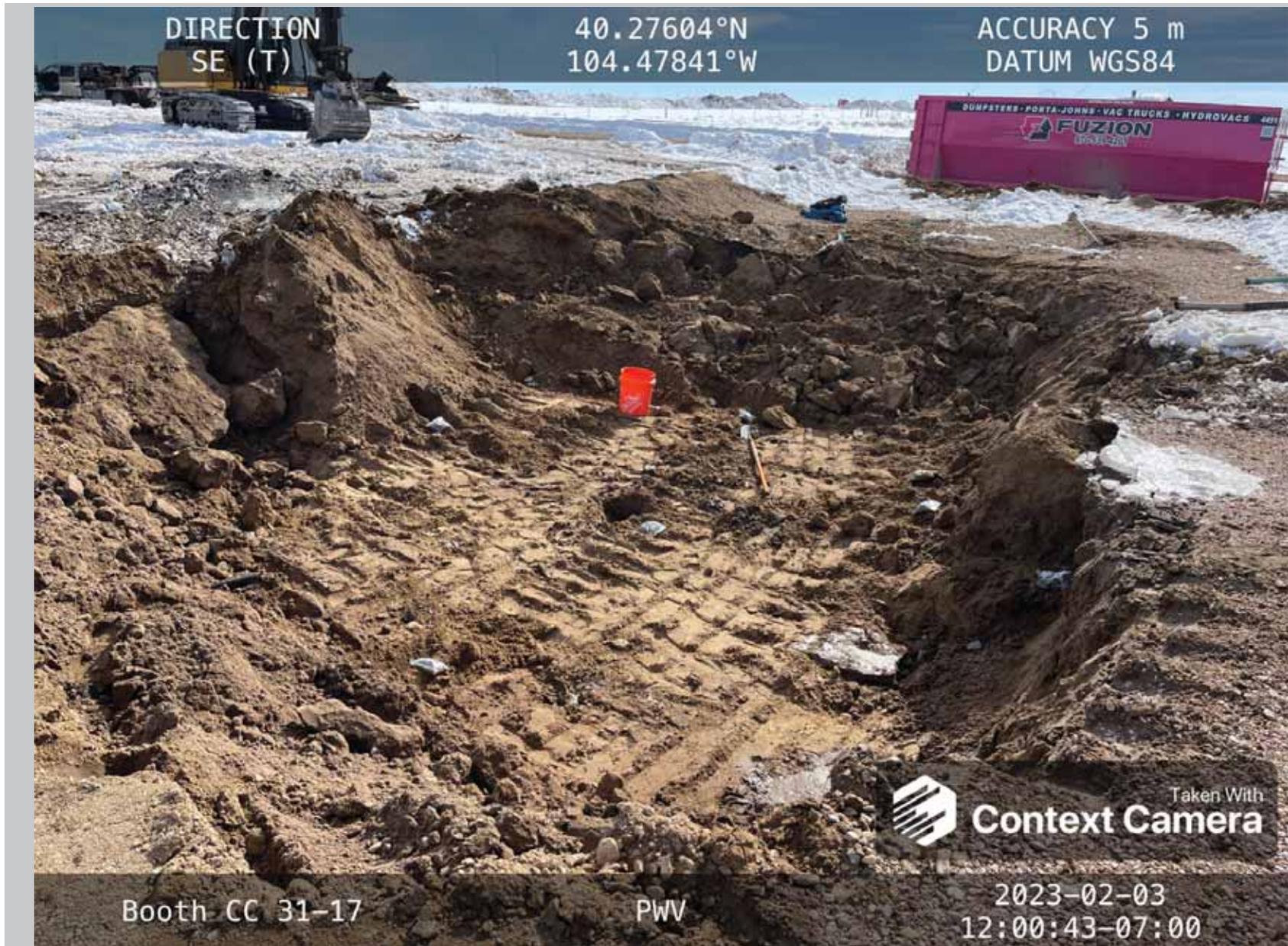
Photo Log



Description:

PWV Excavation Facing SE

Photo Log



Description:

PWV Excavation Facing SE

Photo Log



Description:

AST01@1'

Photo Log



Description:

AST02@6"

Photo Log



Description:

ECD01@Surface

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80401

303.277.9310

February 16, 2023

Paul Henehan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Booth CC 31-17

Work Order # 2302124

Enclosed are the results of analyses for samples received by Summit Scientific on 02/07/23 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Scott Sheely For Paul Shrewsbury

President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
02/16/23 12:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP01@3.5'	2302124-01	Soil	02/03/23 00:00	02/07/23 16:30
SEP02@3'	2302124-02	Soil	02/03/23 00:00	02/07/23 16:30
AST01@1'	2302124-03	Soil	02/03/23 00:00	02/07/23 16:30
AST02@6"	2302124-04	Soil	02/03/23 00:00	02/07/23 16:30
PWVN01@4.5'	2302124-05	Soil	02/03/23 00:00	02/07/23 16:30
PWVB01@6'	2302124-06	Soil	02/03/23 00:00	02/07/23 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.

2302124

Summit Scientific

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310 ♦ 303-374-5933 (F)

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: Booth CC 31-17

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, TMBs, Naph.	PAH (915)	EC, SAR, pH, Boron	Metals (915)	TDS, Chloride, Sulfate		HOLD
1	SEPP1 @ 3.5'	2/3/23		1			X			X			X	X	X				
2	SEPP2 @ 3'			1			X			X			X	X	X				
3	ASTA1 @ 1'			2			X			X			X	X	X				
4	ASTA2 @ 6"			2			X			X			X	X	X				
5	PWVND1 @ 4.5'			2			X			X			X	X	X				
6	PWVBP1 @ 6"	2/3/23		2			X			X			X	X	X				
7																			
8																			
9																			
10																			

Relinquished by: Chris Lattes	Date/Time: 2/7/23 10:40	Received by: [Signature]	Date/Time: 2/7/23 10:40	Turn Around Time (Check):	Notes: Booth CC 31-17
Relinquished by: S2	Date/Time: 2/23/23 10:30	Received by: [Signature]	Date/Time: 2/23/23 10:30	Same Day _____ 72 hours _____	+ Facility
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours _____ Standard <input checked="" type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	48 hours _____	
				Sample Integrity:	
				Temperature Upon Receipt: 8.7	
				Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

S₂

Sample Receipt Checklist

S2 Work Order# 2302124

Client: Fremont Client Project ID: Booth CC 31-17

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

Grid of boxes for shipping method selection

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

Temp (°C) 8.7

Thermometer #

Table with 5 columns: Yes, No, N/A, Comments (if any). Rows include questions about cooling, custody seals, sample due dates, water samples, COC form, sample integrity, volume, COC agreement, sample IDs, headspace, preservation, pH, and field filtering.

Additional Comments (if any):

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

AS Custodian Printed Name

2/7/23 Date/Time



Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 02/16/23 12:32

SEP01@3.5'
2302124-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGB0195	02/08/23	02/09/23	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: **02/03/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		80.4 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		106 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		115 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGB0197	02/08/23	02/08/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		82.2 %		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 - Booth CC 31-17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
02/16/23 12:32

SEP01@3.5'
2302124-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Acenaphthene	ND	0.00500		mg/kg	1	BGB0297	02/10/23	02/11/23	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: **02/03/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 2-Methylnaphthalene-d10		46.4 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		63.8 %		40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Boron	0.183	0.0100		mg/L	1	BGB0312	02/10/23	02/12/23	EPA 6020B	

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

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
02/16/23 12:32

SEP01@3.5'
2302124-01 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	27.9	0.0563		mg/L dry	1	BGB0225	02/08/23	02/10/23	EPA 6020B	
Magnesium	6.11	0.0563		"	"	"	"	"	"	
Sodium	29.6	0.0563		"	"	"	"	"	"	

Calculated Analysis

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.32	0.00100		units	1	BGB0377	02/13/23	02/13/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.7			%	1	BGB0351	02/13/23	02/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.315	0.0100		mmhos/cm	1	BGB0274	02/09/23	02/09/23	EPA 120.1	

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

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.84			pH Units	1	BGB0275	02/09/23	02/09/23	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
02/16/23 12:32

SEP02@3'
2302124-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGB0195	02/08/23	02/09/23	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: **02/03/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		82.1 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		106 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		115 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGB0197	02/08/23	02/09/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		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 - Booth CC 31-17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
02/16/23 12:32

SEP02@3'
2302124-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGB0297	02/10/23	02/11/23	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: **02/03/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		40.8 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		70.6 %		40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.101	0.0100		mg/L	1	BGB0312	02/10/23	02/12/23	EPA 6020B	

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

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

Analyte	Result	Reporting Limit	MDL	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 - Booth CC 31-17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
02/16/23 12:32

SEP02@3'
2302124-02 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	441	0.0564		mg/L dry	1	BGB0225	02/08/23	02/10/23	EPA 6020B	
Magnesium	81.9	0.0564		"	"	"	"	"	"	
Sodium	1.63	0.0564		"	"	"	"	"	"	

Calculated Analysis

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0187	0.00100		units	1	BGB0377	02/13/23	02/13/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.6			%	1	BGB0351	02/13/23	02/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.244	0.0100		mmhos/cm	1	BGB0274	02/09/23	02/09/23	EPA 120.1	

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

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.47			pH Units	1	BGB0275	02/09/23	02/09/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
02/16/23 12:32

AST01@1'
2302124-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020		mg/kg	1	BGB0195	02/08/23	02/10/23	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: **02/03/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		77.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		108 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		117 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50		mg/kg	1	BGB0197	02/08/23	02/09/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		96.1 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 02/16/23 12:32

AST01@1'
2302124-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGB0297	02/10/23	02/11/23	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: **02/03/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		53.9 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		74.3 %		40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0568	0.0100		mg/L	1	BGB0312	02/10/23	02/12/23	EPA 6020B	

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

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

Analyte	Result	Reporting Limit	MDL	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 - Booth CC 31-17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 02/16/23 12:32

AST01@1'
2302124-03 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	164	0.0534		mg/L dry	1	BGB0225	02/08/23	02/10/23	EPA 6020B	
Magnesium	19.4	0.0534		"	"	"	"	"	"	
Sodium	0.518	0.0534		"	"	"	"	"	"	

Calculated Analysis

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0102	0.00100		units	1	BGB0377	02/13/23	02/13/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.7			%	1	BGB0351	02/13/23	02/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.120	0.0100		mmhos/cm	1	BGB0274	02/09/23	02/09/23	EPA 120.1	

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

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	5.73			pH Units	1	BGB0275	02/09/23	02/09/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
02/16/23 12:32

**AST02@6''
2302124-04 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGB0195	02/08/23	02/10/23	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: **02/03/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		80.3 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		107 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		116 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGB0197	02/08/23	02/09/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		105 %		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 - Booth CC 31-17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
02/16/23 12:32

AST02@6''
2302124-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGB0297	02/10/23	02/11/23	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: **02/03/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		41.0 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		73.4 %		40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0388	0.0100		mg/L	1	BGB0312	02/10/23	02/12/23	EPA 6020B	

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

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

Analyte	Result	Reporting Limit	MDL	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 - Booth CC 31-17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
02/16/23 12:32

**AST02@6''
2302124-04 (Soil)**

Summit Scientific

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	56.4	0.0530		mg/L dry	1	BGB0225	02/08/23	02/10/23	EPA 6020B	
Magnesium	10.0	0.0530		"	"	"	"	"	"	
Sodium	1.06	0.0530		"	"	"	"	"	"	

Calculated Analysis

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0342	0.00100		units	1	BGB0377	02/13/23	02/13/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.4			%	1	BGB0351	02/13/23	02/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.470	0.0100		mmhos/cm	1	BGB0274	02/09/23	02/09/23	EPA 120.1	

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

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.55			pH Units	1	BGB0275	02/09/23	02/09/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
02/16/23 12:32

PWVN01@4.5'
2302124-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGB0195	02/08/23	02/10/23	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: **02/03/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		79.6 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		112 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		113 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGB0197	02/08/23	02/09/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		110 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
02/16/23 12:32

PWVN01@4.5'
2302124-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGB0297	02/10/23	02/11/23	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	0.0121	0.00500		"	"	"	"	"	"	

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		42.6 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		65.5 %		40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.149	0.0100		mg/L	1	BGB0312	02/10/23	02/12/23	EPA 6020B	

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

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

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

Project: Noble - Booth CC 31-17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 02/16/23 12:32

PWVN01@4.5'
2302124-05 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	52.3	0.0553		mg/L dry	1	BGB0225	02/08/23	02/10/23	EPA 6020B	
Magnesium	11.4	0.0553		"	"	"	"	"	"	
Sodium	0.718	0.0553		"	"	"	"	"	"	

Calculated Analysis

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0234	0.00100		units	1	BGB0377	02/13/23	02/13/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.4			%	1	BGB0351	02/13/23	02/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0937	0.0100		mmhos/cm	1	BGB0274	02/09/23	02/09/23	EPA 120.1	

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

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.87			pH Units	1	BGB0275	02/09/23	02/09/23	EPA 9045D	

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PO Box 1289
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Project: Noble - Booth CC 31-17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
02/16/23 12:32

PWVB01@6'
2302124-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020		mg/kg	1	BGB0195	02/08/23	02/10/23	EPA 8260B	
Toluene	0.022	0.0050		"	"	"	"	"	"	
Ethylbenzene	0.017	0.0050		"	"	"	"	"	"	
Xylenes (total)	0.18	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.11	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.054	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	52	0.50		"	"	"	"	"	"	

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		86.9 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		88.0 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		118 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	2400	50		mg/kg	1	BGB0197	02/08/23	02/09/23	EPA 8015M	
C28-C36 (ORO)	120	50		"	"	"	"	"	"	

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		109 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Z-01

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
02/16/23 12:32

PWVB01@6'
2302124-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Z-01

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.0500		mg/kg	10	BGB0297	02/10/23	02/11/23	EPA 8270D SIM	
Anthracene	ND	0.0500		"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.0500		"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0500		"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0500		"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.0500		"	"	"	"	"	"	
Chrysene	0.320	0.0500		"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0500		"	"	"	"	"	"	
Fluoranthene	ND	0.0500		"	"	"	"	"	"	
Fluorene	1.50	0.0500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.0500		"	"	"	"	"	"	
Pyrene	0.0802	0.0500		"	"	"	"	"	"	
1-Methylnaphthalene	0.961	0.0500		"	"	"	"	"	"	
2-Methylnaphthalene	0.370	0.0500		"	"	"	"	"	"	

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		%		40-150		"	"	"	"	S-01
Surrogate: Fluoranthene-d10		%		40-150		"	"	"	"	S-01

Total Metals by EPA 6020B Hot Water Soluble Extraction

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0793	0.0100		mg/L	1	BGB0312	02/10/23	02/12/23	EPA 6020B	

Total Metals by EPA 6020B

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

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

Project: Noble - Booth CC 31-17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
02/16/23 12:32

PWVB01@6'
2302124-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.51	0.238	0.201	mg/kg dry	1	BGB0440	02/14/23	02/15/23	EPA 6020B	
Barium	71.8	0.476	0.376	"	"	"	"	"	"	
Cadmium	0.151	0.238	0.00857	"	"	"	"	"	"	
Copper	4.13	0.476	0.0249	"	"	"	"	"	"	
Lead	5.10	0.238	0.0654	"	"	"	"	"	"	
Nickel	4.26	0.476	0.0726	"	"	"	"	"	"	
Selenium	ND	0.260	0.175	"	"	"	"	"	"	
Silver	0.0224	0.0238	0.00318	"	"	"	"	"	"	
Zinc	15.5	0.476	0.317	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGB0465	02/15/23	02/15/23	EPA 7196A	

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

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	65.3	0.0595		mg/L dry	1	BGB0225	02/08/23	02/10/23	EPA 6020B	
Magnesium	11.0	0.0595		"	"	"	"	"	"	
Sodium	31.1	0.0595		"	"	"	"	"	"	

Calculated Analysis

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.938	0.00100		units	1	BGB0377	02/13/23	02/13/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 02/16/23 12:32

PWVB01@6'
2302124-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	84.0			%	1	BGB0351	02/13/23	02/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.506	0.0100		mmhos/cm	1	BGB0274	02/09/23	02/09/23	EPA 120.1	

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

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.49			pH Units	1	BGB0275	02/09/23	02/09/23	EPA 9045D	

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 PO Box 1289
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Project: Noble - Booth CC 31-17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 02/16/23 12:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGB0195 - EPA 5030 Soil MS

Blank (BGB0195-BLK1)

Prepared: 02/08/23 Analyzed: 02/09/23

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	0.0330		"	0.0400		82.4	50-150			
Surrogate: Toluene-d8	0.0414		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0463		"	0.0400		116	50-150			

LCS (BGB0195-BS1)

Prepared: 02/08/23 Analyzed: 02/09/23

Benzene	0.109	0.0020	mg/kg	0.125		87.1	70-130			
Toluene	0.136	0.0050	"	0.125		109	70-130			
Ethylbenzene	0.141	0.0050	"	0.125		113	70-130			
m,p-Xylene	0.278	0.010	"	0.250		111	70-130			
o-Xylene	0.134	0.0050	"	0.125		107	70-130			
1,2,4-Trimethylbenzene	0.148	0.0050	"	0.125		118	70-130			
1,3,5-Trimethylbenzene	0.151	0.0050	"	0.125		121	70-130			
Naphthalene	0.0919	0.0038	"	0.125		73.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0346		"	0.0400		86.6	50-150			
Surrogate: Toluene-d8	0.0426		"	0.0400		107	50-150			
Surrogate: 4-Bromofluorobenzene	0.0425		"	0.0400		106	50-150			

Matrix Spike (BGB0195-MS1)

Source: 2302120-21

Prepared: 02/08/23 Analyzed: 02/09/23

Benzene	0.109	0.0020	mg/kg	0.125	ND	86.9	70-130			
Toluene	0.139	0.0050	"	0.125	ND	111	70-130			
Ethylbenzene	0.141	0.0050	"	0.125	ND	113	70-130			
m,p-Xylene	0.281	0.010	"	0.250	ND	112	70-130			
o-Xylene	0.134	0.0050	"	0.125	ND	107	70-130			
1,2,4-Trimethylbenzene	0.150	0.0050	"	0.125	ND	120	70-130			
1,3,5-Trimethylbenzene	0.153	0.0050	"	0.125	ND	122	70-130			
Naphthalene	0.104	0.0038	"	0.125	ND	82.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0356		"	0.0400		89.1	50-150			
Surrogate: Toluene-d8	0.0424		"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene	0.0426		"	0.0400		106	50-150			

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 02/16/23 12:32

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

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

Batch BGB0195 - EPA 5030 Soil MS

Matrix Spike Dup (BGB0195-MSD1)	Source: 2302120-21			Prepared: 02/08/23 Analyzed: 02/09/23					
Benzene	0.110	0.0020	mg/kg	0.125	ND	87.9	70-130	1.13	30
Toluene	0.142	0.0050	"	0.125	ND	113	70-130	2.14	30
Ethylbenzene	0.142	0.0050	"	0.125	ND	113	70-130	0.786	30
m,p-Xylene	0.284	0.010	"	0.250	ND	113	70-130	1.12	30
o-Xylene	0.137	0.0050	"	0.125	ND	109	70-130	2.35	30
1,2,4-Trimethylbenzene	0.153	0.0050	"	0.125	ND	122	70-130	2.03	30
1,3,5-Trimethylbenzene	0.156	0.0050	"	0.125	ND	125	70-130	2.00	30
Naphthalene	0.113	0.0038	"	0.125	ND	90.7	70-130	9.04	30
Surrogate: 1,2-Dichloroethane-d4	0.0369		"	0.0400		92.3	50-150		
Surrogate: Toluene-d8	0.0419		"	0.0400		105	50-150		
Surrogate: 4-Bromofluorobenzene	0.0427		"	0.0400		107	50-150		

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 02/16/23 12:32

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGB0197 - EPA 3550A

Blank (BGB0197-BLK1)

Prepared & Analyzed: 02/08/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	14.5		"	12.5	116	30-150					

LCS (BGB0197-BS1)

Prepared & Analyzed: 02/08/23

C10-C28 (DRO)	423	50	mg/kg	500	84.6	70-130					
Surrogate: <i>o</i> -Terphenyl	11.9		"	12.5	95.1	30-150					

Matrix Spike (BGB0197-MS1)

Source: 2302120-21

Prepared & Analyzed: 02/08/23

C10-C28 (DRO)	435	50	mg/kg	500	13.3	84.4	70-130				
Surrogate: <i>o</i> -Terphenyl	11.9		"	12.5	95.0	30-150					

Matrix Spike Dup (BGB0197-MSD1)

Source: 2302120-21

Prepared & Analyzed: 02/08/23

C10-C28 (DRO)	401	50	mg/kg	500	13.3	77.6	70-130	8.09	20		
Surrogate: <i>o</i> -Terphenyl	11.9		"	12.5	95.5	30-150					

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 PO Box 1289
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Project: Noble - Booth CC 31-17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 02/16/23 12:32

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGB0297 - EPA 5030 Soil MS

Blank (BGB0297-BLK1)

Prepared: 02/10/23 Analyzed: 02/11/23

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	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0221</i>		"	<i>0.0333</i>		<i>66.4</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0294</i>		"	<i>0.0333</i>		<i>88.3</i>	<i>40-150</i>			

LCS (BGB0297-BS1)

Prepared: 02/10/23 Analyzed: 02/11/23

Acenaphthene	0.0299	0.00500	mg/kg	0.0333	89.8	31-137
Anthracene	0.0299	0.00500	"	0.0333	89.8	30-120
Benzo (a) anthracene	0.0269	0.00500	"	0.0333	80.8	30-120
Benzo (a) pyrene	0.0254	0.00500	"	0.0333	76.1	30-120
Benzo (b) fluoranthene	0.0258	0.00500	"	0.0333	77.4	30-120
Benzo (k) fluoranthene	0.0272	0.00500	"	0.0333	81.6	30-120
Chrysene	0.0307	0.00500	"	0.0333	92.0	30-120
Dibenz (a,h) anthracene	0.0188	0.00500	"	0.0333	56.4	30-120
Fluoranthene	0.0304	0.00500	"	0.0333	91.1	30-120
Fluorene	0.0310	0.00500	"	0.0333	93.1	30-120
Indeno (1,2,3-cd) pyrene	0.0194	0.00500	"	0.0333	58.3	30-120
Pyrene	0.0323	0.00500	"	0.0333	96.9	35-142
1-Methylnaphthalene	0.0266	0.00500	"	0.0333	79.9	35-142
2-Methylnaphthalene	0.0212	0.00500	"	0.0333	63.5	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0286</i>		"	<i>0.0333</i>	<i>85.9</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0302</i>		"	<i>0.0333</i>	<i>90.7</i>	<i>40-150</i>

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
02/16/23 12:32

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGB0297 - EPA 5030 Soil MS

Matrix Spike (BGB0297-MS1)	Source: 2302124-01			Prepared: 02/10/23 Analyzed: 02/11/23						
Acenaphthene	0.0225	0.00500	mg/kg	0.0333	ND	67.4	31-137			
Anthracene	0.0228	0.00500	"	0.0333	0.00180	62.9	30-120			
Benzo (a) anthracene	0.0253	0.00500	"	0.0333	ND	76.0	30-120			
Benzo (a) pyrene	0.0200	0.00500	"	0.0333	ND	59.9	30-120			
Benzo (b) fluoranthene	0.0185	0.00500	"	0.0333	ND	55.5	30-120			
Benzo (k) fluoranthene	0.0178	0.00500	"	0.0333	ND	53.5	30-120			
Chrysene	0.0217	0.00500	"	0.0333	ND	65.2	30-120			
Dibenz (a,h) anthracene	0.0182	0.00500	"	0.0333	ND	54.7	30-120			
Fluoranthene	0.0258	0.00500	"	0.0333	ND	77.5	30-120			
Fluorene	0.0238	0.00500	"	0.0333	ND	71.3	30-120			
Indeno (1,2,3-cd) pyrene	0.0187	0.00500	"	0.0333	ND	56.1	30-120			
Pyrene	0.0260	0.00500	"	0.0333	ND	77.9	35-142			
1-Methylnaphthalene	0.0222	0.00500	"	0.0333	ND	66.7	15-130			
2-Methylnaphthalene	0.0181	0.00500	"	0.0333	ND	54.4	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0250</i>		<i>"</i>	<i>0.0333</i>		<i>75.0</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0259</i>		<i>"</i>	<i>0.0333</i>		<i>77.7</i>	<i>40-150</i>			

Matrix Spike Dup (BGB0297-MSD1)	Source: 2302124-01			Prepared: 02/10/23 Analyzed: 02/11/23						
Acenaphthene	0.0233	0.00500	mg/kg	0.0333	ND	69.9	31-137	3.59	30	
Anthracene	0.0243	0.00500	"	0.0333	0.00180	67.5	30-120	6.47	30	
Benzo (a) anthracene	0.0256	0.00500	"	0.0333	ND	76.9	30-120	1.19	30	
Benzo (a) pyrene	0.0195	0.00500	"	0.0333	ND	58.6	30-120	2.10	30	
Benzo (b) fluoranthene	0.0177	0.00500	"	0.0333	ND	53.0	30-120	4.61	30	
Benzo (k) fluoranthene	0.0166	0.00500	"	0.0333	ND	49.9	30-120	6.94	30	
Chrysene	0.0212	0.00500	"	0.0333	ND	63.5	30-120	2.68	30	
Dibenz (a,h) anthracene	0.0193	0.00500	"	0.0333	ND	57.9	30-120	5.70	30	
Fluoranthene	0.0254	0.00500	"	0.0333	ND	76.1	30-120	1.89	30	
Fluorene	0.0247	0.00500	"	0.0333	ND	74.1	30-120	3.82	30	
Indeno (1,2,3-cd) pyrene	0.0206	0.00500	"	0.0333	ND	61.7	30-120	9.50	30	
Pyrene	0.0240	0.00500	"	0.0333	ND	72.0	35-142	7.86	30	
1-Methylnaphthalene	0.0265	0.00500	"	0.0333	ND	79.4	15-130	17.3	50	
2-Methylnaphthalene	0.0208	0.00500	"	0.0333	ND	62.5	15-130	13.9	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0290</i>		<i>"</i>	<i>0.0333</i>		<i>87.0</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0251</i>		<i>"</i>	<i>0.0333</i>		<i>75.3</i>	<i>40-150</i>			

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 02/16/23 12:32

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

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

Batch BGB0312 - EPA 3050B

Blank (BGB0312-BLK1)

Prepared: 02/10/23 Analyzed: 02/12/23

Boron ND 0.0100 mg/L

LCS (BGB0312-BS1)

Prepared: 02/10/23 Analyzed: 02/12/23

Boron 5.75 0.0100 mg/L 5.00 115 80-120

Duplicate (BGB0312-DUP1)

Source: 2302124-01

Prepared: 02/10/23 Analyzed: 02/12/23

Boron 0.146 0.0100 mg/L 0.183 22.1 20 QR-03

Matrix Spike (BGB0312-MS1)

Source: 2302124-01

Prepared: 02/10/23 Analyzed: 02/12/23

Boron 6.22 0.0100 mg/L 5.00 0.183 121 75-125

Matrix Spike Dup (BGB0312-MSD1)

Source: 2302124-01

Prepared: 02/10/23 Analyzed: 02/12/23

Boron 6.59 0.0100 mg/L 5.00 0.183 128 75-125 5.79 25 QM-07

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
02/16/23 12:32

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGB0440 - EPA 3050B

Blank (BGB0440-BLK1)

Prepared: 02/14/23 Analyzed: 02/15/23

Arsenic	ND	0.200	mg/kg wet						
Barium	ND	0.400	"						
Cadmium	ND	0.200	"						
Copper	ND	0.400	"						
Lead	ND	0.200	"						
Nickel	ND	0.400	"						
Selenium	ND	0.260	"						
Silver	ND	0.0200	"						
Zinc	ND	0.400	"						

LCS (BGB0440-BS1)

Prepared: 02/14/23 Analyzed: 02/15/23

Arsenic	39.2	0.200	mg/kg wet	40.0	98.1	80-120
Barium	35.6	0.400	"	40.0	88.9	80-120
Cadmium	1.74	0.200	"	2.00	86.9	80-120
Copper	40.5	0.400	"	40.0	101	80-120
Lead	20.0	0.200	"	20.0	100	80-120
Nickel	39.3	0.400	"	40.0	98.3	80-120
Selenium	3.74	0.260	"	4.00	93.5	80-120
Silver	1.79	0.0200	"	2.00	89.5	80-120
Zinc	39.6	0.400	"	40.0	98.9	80-120

Duplicate (BGB0440-DUP1)

Source: 2302283-01

Prepared: 02/14/23 Analyzed: 02/15/23

Arsenic	3.66	0.247	mg/kg dry	3.65	0.432	20
Barium	308	0.493	"	323	4.89	20
Cadmium	0.342	0.247	"	0.349	2.00	20
Copper	20.1	0.493	"	20.1	0.201	20
Lead	12.1	0.247	"	11.8	2.58	20
Nickel	4.52	0.493	"	4.49	0.537	20
Selenium	ND	0.260	"	ND		20
Silver	0.0410	0.0247	"	0.0434	5.85	20
Zinc	17.0	0.493	"	16.9	0.585	20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 02/16/23 12:32

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGB0440 - EPA 3050B

Matrix Spike (BGB0440-MS1)

Source: 2302283-01

Prepared: 02/14/23 Analyzed: 02/15/23

Arsenic	51.6	0.247	mg/kg dry	49.3	3.65	97.3	75-125			
Barium	289	0.493	"	49.3	323	NR	75-125			QM-02
Cadmium	2.47	0.247	"	2.47	0.349	86.0	75-125			
Copper	55.2	0.493	"	49.3	20.1	71.0	75-125			QM-05
Lead	32.0	0.247	"	24.7	11.8	81.7	75-125			
Nickel	36.9	0.493	"	49.3	4.49	65.6	75-125			QM-05
Selenium	4.15	0.260	"	4.93	ND	84.2	75-125			
Silver	2.24	0.0247	"	2.47	0.0434	89.2	75-125			
Zinc	51.6	0.493	"	49.3	16.9	70.2	75-125			QM-05

Matrix Spike Dup (BGB0440-MSD1)

Source: 2302283-01

Prepared: 02/14/23 Analyzed: 02/15/23

Arsenic	52.0	0.247	mg/kg dry	49.3	3.65	98.0	75-125	0.677	25	
Barium	325	0.493	"	49.3	323	3.29	75-125	11.6	25	QM-02
Cadmium	2.80	0.247	"	2.47	0.349	99.2	75-125	12.4	25	
Copper	56.6	0.493	"	49.3	20.1	73.8	75-125	2.46	25	QM-05
Lead	35.5	0.247	"	24.7	11.8	96.0	75-125	10.4	25	
Nickel	37.5	0.493	"	49.3	4.49	66.8	75-125	1.61	25	QM-05
Selenium	4.25	0.260	"	4.93	ND	86.1	75-125	2.17	25	
Silver	2.49	0.0247	"	2.47	0.0434	99.1	75-125	10.3	25	
Zinc	52.7	0.493	"	49.3	16.9	72.6	75-125	2.27	25	QM-05

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 02/16/23 12:32

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BGB0465 - 3060A Mod

Blank (BGB0465-BLK1)

Prepared & Analyzed: 02/15/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGB0465-BS1)

Prepared & Analyzed: 02/15/23

Chromium, Hexavalent 23.7 0.30 mg/kg wet 25.0 94.8 80-120

Duplicate (BGB0465-DUP1)

Source: 2302284-01

Prepared & Analyzed: 02/15/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGB0465-MS1)

Source: 2302284-01

Prepared & Analyzed: 02/15/23

Chromium, Hexavalent 27.4 0.30 mg/kg dry 30.4 ND 90.2 75-125

Matrix Spike Dup (BGB0465-MSD1)

Source: 2302284-01

Prepared & Analyzed: 02/15/23

Chromium, Hexavalent 26.5 0.30 mg/kg dry 30.4 ND 87.2 75-125 3.38 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 02/16/23 12:32

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

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

Batch BGB0225 - General Preparation

Blank (BGB0225-BLK1)

Prepared: 02/08/23 Analyzed: 02/10/23

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

LCS (BGB0225-BS1)

Prepared: 02/08/23 Analyzed: 02/10/23

Calcium	4.59	0.0500	mg/L wet	5.00	91.8	70-130
Magnesium	5.25	0.0500	"	5.00	105	70-130
Sodium	5.05	0.0500	"	5.00	101	70-130

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 02/16/23 12:32

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

Summit Scientific

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

Batch BGB0351 - General Preparation

Duplicate (BGB0351-DUP1)

Source: 2211388-01

Prepared & Analyzed: 02/13/23

% Solids	97.1		%		97.2			0.0648		20	
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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 - Booth CC 31-17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 02/16/23 12:32

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

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

Batch BGB0274 - General Preparation

Blank (BGB0274-BLK1)

Prepared & Analyzed: 02/09/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGB0274-BS1)

Prepared & Analyzed: 02/09/23

Specific Conductance (EC) 0.155 0.0100 mmhos/cm 0.150 103 95-105

Duplicate (BGB0274-DUP1)

Source: 2302121-01

Prepared & Analyzed: 02/09/23

Specific Conductance (EC) 0.366 0.0100 mmhos/cm 0.374 2.30 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 - Booth CC 31-17

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 02/16/23 12:32

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

Summit Scientific

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

Batch BGB0275 - General Preparation

LCS (BGB0275-BS1)

Prepared & Analyzed: 02/09/23

pH	9.13	pH Units	9.18	99.5	95-105
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Duplicate (BGB0275-DUP1)

Source: 2302121-01

Prepared & Analyzed: 02/09/23

pH	6.71	pH Units	6.46	3.80	20
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth CC 31-17

Project Number: [none]
Project Manager: Paul Henehan

Reported:
02/16/23 12:32

Notes and Definitions

- Z-01 Sample could not be brought to final volume due to matrix interference.
- S-01 The surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference's.
- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
- QM-02 The RPD and/or percent recovery for this QC sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
- 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

2302123

Summit Scientific

S₂

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: Benth 31-17

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, TMBs, Naph	PAH (915)	EC, SAR, pH, Boron	Metals (915)	TDS, Chloride, Sulfate	HOLD			
1	31-17 FL @ 5'	2/6/23		2			X			X				X	X	X					
2	31-31 FL @ 6'	2/6/23		2			X			X				X	X	X					
3	SEPT 31 FL @ 4.5'	2/6/23		2			X			X				X	X	X					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: <u>Chris Lattes</u>	Date/Time: <u>2/7/23 10:40</u>	Received by: <u>SL</u>	Date/Time: <u>2/7/23 10:40</u>	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: <u>8.7</u> Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Notes: <u>Flowlines</u> <u>31-17</u> <u>31-31</u>
Relinquished by: <u>SL</u>	Date/Time: <u>2/7/23 10:30</u>	Received by: <u>[Signature]</u>	Date/Time: <u>2/7/23 10:30</u>		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S₂

Sample Receipt Checklist

S2 Work Order# 2302123

Client: Fremont Client Project ID: Booth 31-17

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

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

Temp (°C)

Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>on ice</i>
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.

AS
Custodian Printed Name

2/7/23
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth 31-17

Project Number: [none]
Project Manager: Paul Henchan

Reported:
02/14/23 16:04

31-17 FL01@5'
2302123-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGB0195	02/08/23	02/09/23	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: **02/06/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0343	85.6 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0422	106 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0457	114 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGB0197	02/08/23	02/08/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	6.51	52.1 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth 31-17

Project Number: [none]
Project Manager: Paul Henchan

Reported:
02/14/23 16:04

31-17 FL01@5'
2302123-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGB0240	02/09/23	02/10/23	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: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0279	83.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0218	65.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.210	0.0100	mg/L	1	BGB0262	02/09/23	02/11/23	EPA 6020B	

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

Date Sampled: **02/06/23 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 - Booth 31-17

Project Number: [none]
Project Manager: Paul Henchan

Reported:
02/14/23 16:04

31-17 FL01@5'
2302123-01 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	29.8	0.0564	mg/L dry	1	BGB0225	02/08/23	02/10/23	EPA 6020B	
Magnesium	6.86	0.0564	"	"	"	"	"	"	
Sodium	7.66	0.0564	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.329	0.00100	units	1	BGB0377	02/13/23	02/13/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.6		%	1	BGB0366	02/13/23	02/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.250	0.0100	mmhos/cm	1	BGB0274	02/09/23	02/09/23	EPA 120.1	

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

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.79		pH Units	1	BGB0275	02/09/23	02/09/23	EPA 9045D	

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PO Box 1289
Wellington CO, 80549

Project: Noble - Booth 31-17

Project Number: [none]
Project Manager: Paul Henchan

Reported:
02/14/23 16:04

31-31 FL01@6'
2302123-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGB0195	02/08/23	02/09/23	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: **02/06/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0334	83.6 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0415	104 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0460	115 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGB0197	02/08/23	02/08/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.7	93.4 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth 31-17

Project Number: [none]
Project Manager: Paul Henchan

Reported:
02/14/23 16:04

31-31 FL01@6'
2302123-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGB0240	02/09/23	02/10/23	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: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0237	71.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0191	57.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0481	0.0100	mg/L	1	BGB0262	02/09/23	02/11/23	EPA 6020B	

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

Date Sampled: **02/06/23 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 - Booth 31-17

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 02/14/23 16:04

31-31 FL01@6'
2302123-02 (Soil)

Summit Scientific

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

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	37.1	0.0520	mg/L dry	1	BGB0225	02/08/23	02/10/23	EPA 6020B	
Magnesium	8.12	0.0520	"	"	"	"	"	"	
Sodium	4.01	0.0520	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.155	0.00100	units	1	BGB0377	02/13/23	02/13/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.1		%	1	BGB0366	02/13/23	02/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.274	0.0100	mmhos/cm	1	BGB0274	02/09/23	02/09/23	EPA 120.1	

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

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.68		pH Units	1	BGB0275	02/09/23	02/09/23	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth 31-17

Project Number: [none]
Project Manager: Paul Henchan

Reported:
02/14/23 16:04

SEP03/FL@4.5'
2302123-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGB0195	02/08/23	02/09/23	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: **02/06/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0326	81.6 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0420	105 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0452	113 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGB0197	02/08/23	02/08/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	12.2	97.2 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth 31-17

Project Number: [none]
Project Manager: Paul Henchan

Reported:
02/14/23 16:04

SEP03/FL@4.5'
2302123-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGB0240	02/09/23	02/11/23	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: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0286	85.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0226	67.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0802	0.0100	mg/L	1	BGB0262	02/09/23	02/11/23	EPA 6020B	

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

Date Sampled: **02/06/23 00:00**

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

Project: Noble - Booth 31-17

Project Number: [none]
Project Manager: Paul Henchan

Reported:
02/14/23 16:04

SEP03/FL@4.5'
2302123-03 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	44.7	0.0538	mg/L dry	1	BGB0225	02/08/23	02/10/23	EPA 6020B	
Magnesium	9.75	0.0538	"	"	"	"	"	"	
Sodium	4.96	0.0538	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.175	0.00100	units	1	BGB0377	02/13/23	02/13/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.0		%	1	BGB0366	02/13/23	02/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.429	0.0100	mmhos/cm	1	BGB0274	02/09/23	02/09/23	EPA 120.1	

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

Date Sampled: **02/06/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.75		pH Units	1	BGB0275	02/09/23	02/09/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Booth 31-17

Project Number: [none]
Project Manager: Paul Henchan

Reported:
02/14/23 16:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGB0195 - EPA 5030 Soil MS

Blank (BGB0195-BLK1)

Prepared: 02/08/23 Analyzed: 02/09/23

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	0.0330		"	0.0400		82.4	50-150			
Surrogate: Toluene-d8	0.0414		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0463		"	0.0400		116	50-150			

LCS (BGB0195-BS1)

Prepared: 02/08/23 Analyzed: 02/09/23

Benzene	0.109	0.0020	mg/kg	0.125		87.1	70-130			
Toluene	0.136	0.0050	"	0.125		109	70-130			
Ethylbenzene	0.141	0.0050	"	0.125		113	70-130			
m,p-Xylene	0.278	0.010	"	0.250		111	70-130			
o-Xylene	0.134	0.0050	"	0.125		107	70-130			
1,2,4-Trimethylbenzene	0.148	0.0050	"	0.125		118	70-130			
1,3,5-Trimethylbenzene	0.151	0.0050	"	0.125		121	70-130			
Naphthalene	0.0919	0.0038	"	0.125		73.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0346		"	0.0400		86.6	50-150			
Surrogate: Toluene-d8	0.0426		"	0.0400		107	50-150			
Surrogate: 4-Bromofluorobenzene	0.0425		"	0.0400		106	50-150			

Matrix Spike (BGB0195-MS1)

Source: 2302120-21

Prepared: 02/08/23 Analyzed: 02/09/23

Benzene	0.109	0.0020	mg/kg	0.125	ND	86.9	70-130			
Toluene	0.139	0.0050	"	0.125	ND	111	70-130			
Ethylbenzene	0.141	0.0050	"	0.125	ND	113	70-130			
m,p-Xylene	0.281	0.010	"	0.250	ND	112	70-130			
o-Xylene	0.134	0.0050	"	0.125	ND	107	70-130			
1,2,4-Trimethylbenzene	0.150	0.0050	"	0.125	ND	120	70-130			
1,3,5-Trimethylbenzene	0.153	0.0050	"	0.125	ND	122	70-130			
Naphthalene	0.104	0.0038	"	0.125	ND	82.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0356		"	0.0400		89.1	50-150			
Surrogate: Toluene-d8	0.0424		"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene	0.0426		"	0.0400		106	50-150			

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Booth 31-17

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 02/14/23 16:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGB0195 - EPA 5030 Soil MS

Matrix Spike Dup (BGB0195-MSD1)	Source: 2302120-21			Prepared: 02/08/23 Analyzed: 02/09/23						
Benzene	0.110	0.0020	mg/kg	0.125	ND	87.9	70-130	1.13	30	
Toluene	0.142	0.0050	"	0.125	ND	113	70-130	2.14	30	
Ethylbenzene	0.142	0.0050	"	0.125	ND	113	70-130	0.786	30	
m,p-Xylene	0.284	0.010	"	0.250	ND	113	70-130	1.12	30	
o-Xylene	0.137	0.0050	"	0.125	ND	109	70-130	2.35	30	
1,2,4-Trimethylbenzene	0.153	0.0050	"	0.125	ND	122	70-130	2.03	30	
1,3,5-Trimethylbenzene	0.156	0.0050	"	0.125	ND	125	70-130	2.00	30	
Naphthalene	0.113	0.0038	"	0.125	ND	90.7	70-130	9.04	30	
Surrogate: 1,2-Dichloroethane-d4	0.0369		"	0.0400		92.3	50-150			
Surrogate: Toluene-d8	0.0419		"	0.0400		105	50-150			
Surrogate: 4-Bromofluorobenzene	0.0427		"	0.0400		107	50-150			

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 PO Box 1289
 Wellington CO, 80549

Project: Noble - Booth 31-17

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 02/14/23 16:04

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGB0197 - EPA 3550A

Blank (BGB0197-BLK1)

Prepared & Analyzed: 02/08/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	14.5		"	12.5		116		30-150			

LCS (BGB0197-BS1)

Prepared & Analyzed: 02/08/23

C10-C28 (DRO)	423	50	mg/kg	500		84.6		70-130			
Surrogate: <i>o</i> -Terphenyl	11.9		"	12.5		95.1		30-150			

Matrix Spike (BGB0197-MS1)

Source: 2302120-21

Prepared & Analyzed: 02/08/23

C10-C28 (DRO)	435	50	mg/kg	500	13.3	84.4		70-130			
Surrogate: <i>o</i> -Terphenyl	11.9		"	12.5		95.0		30-150			

Matrix Spike Dup (BGB0197-MSD1)

Source: 2302120-21

Prepared & Analyzed: 02/08/23

C10-C28 (DRO)	401	50	mg/kg	500	13.3	77.6		70-130	8.09	20	
Surrogate: <i>o</i> -Terphenyl	11.9		"	12.5		95.5		30-150			

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Project: Noble - Booth 31-17

Project Number: [none]
Project Manager: Paul Henchan

Reported:
02/14/23 16:04

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGB0240 - EPA 5030 Soil MS

Blank (BGB0240-BLK1)

Prepared: 02/09/23 Analyzed: 02/10/23

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	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0342</i>		"	<i>0.0333</i>		<i>103</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0315</i>		"	<i>0.0333</i>		<i>94.5</i>		<i>40-150</i>		

LCS (BGB0240-BS1)

Prepared: 02/09/23 Analyzed: 02/10/23

Acenaphthene	0.0395	0.00500	mg/kg	0.0333	118	31-137
Anthracene	0.0284	0.00500	"	0.0333	85.2	30-120
Benzo (a) anthracene	0.0247	0.00500	"	0.0333	74.0	30-120
Benzo (a) pyrene	0.0291	0.00500	"	0.0333	87.4	30-120
Benzo (b) fluoranthene	0.0266	0.00500	"	0.0333	79.9	30-120
Benzo (k) fluoranthene	0.0353	0.00500	"	0.0333	106	30-120
Chrysene	0.0308	0.00500	"	0.0333	92.4	30-120
Dibenz (a,h) anthracene	0.0286	0.00500	"	0.0333	85.9	30-120
Fluoranthene	0.0335	0.00500	"	0.0333	100	30-120
Fluorene	0.0307	0.00500	"	0.0333	92.0	30-120
Indeno (1,2,3-cd) pyrene	0.0283	0.00500	"	0.0333	84.8	30-120
Pyrene	0.0312	0.00500	"	0.0333	93.7	35-142
1-Methylnaphthalene	0.0296	0.00500	"	0.0333	88.8	35-142
2-Methylnaphthalene	0.0308	0.00500	"	0.0333	92.4	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0303</i>		"	<i>0.0333</i>	<i>90.9</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0330</i>		"	<i>0.0333</i>	<i>99.0</i>	<i>40-150</i>

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Project: Noble - Booth 31-17

Project Number: [none]
Project Manager: Paul Henchan

Reported:
02/14/23 16:04

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGB0240 - EPA 5030 Soil MS

Matrix Spike (BGB0240-MS1)

Source: 2302122-01

Prepared: 02/09/23 Analyzed: 02/10/23

Acenaphthene	0.0219	0.00500	mg/kg	0.0333	ND	65.6	31-137			
Anthracene	0.0164	0.00500	"	0.0333	ND	49.3	30-120			
Benzo (a) anthracene	0.0141	0.00500	"	0.0333	ND	42.2	30-120			
Benzo (a) pyrene	0.0169	0.00500	"	0.0333	ND	50.6	30-120			
Benzo (b) fluoranthene	0.0145	0.00500	"	0.0333	ND	43.6	30-120			
Benzo (k) fluoranthene	0.0172	0.00500	"	0.0333	ND	51.6	30-120			
Chrysene	0.0138	0.00500	"	0.0333	ND	41.5	30-120			
Dibenz (a,h) anthracene	0.0163	0.00500	"	0.0333	ND	48.9	30-120			
Fluoranthene	0.0151	0.00500	"	0.0333	ND	45.3	30-120			
Fluorene	0.0135	0.00500	"	0.0333	ND	40.4	30-120			
Indeno (1,2,3-cd) pyrene	0.0146	0.00500	"	0.0333	ND	43.9	30-120			
Pyrene	0.0149	0.00500	"	0.0333	ND	44.7	35-142			
1-Methylnaphthalene	0.0164	0.00500	"	0.0333	ND	49.3	15-130			
2-Methylnaphthalene	0.0187	0.00500	"	0.0333	ND	56.0	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0164		"	0.0333		49.1	40-150			
Surrogate: Fluoranthene-d10	0.0140		"	0.0333		41.9	40-150			

Matrix Spike Dup (BGB0240-MSD1)

Source: 2302122-01

Prepared: 02/09/23 Analyzed: 02/10/23

Acenaphthene	0.0173	0.00500	mg/kg	0.0333	ND	51.9	31-137	23.3	30	
Anthracene	0.0135	0.00500	"	0.0333	ND	40.6	30-120	19.3	30	
Benzo (a) anthracene	0.0133	0.00500	"	0.0333	ND	40.0	30-120	5.32	30	
Benzo (a) pyrene	0.0136	0.00500	"	0.0333	ND	40.7	30-120	21.5	30	
Benzo (b) fluoranthene	0.0134	0.00500	"	0.0333	ND	40.2	30-120	8.06	30	
Benzo (k) fluoranthene	0.0157	0.00500	"	0.0333	ND	47.1	30-120	9.08	30	
Chrysene	0.0142	0.00500	"	0.0333	ND	42.6	30-120	2.67	30	
Dibenz (a,h) anthracene	0.0151	0.00500	"	0.0333	ND	45.3	30-120	7.48	30	
Fluoranthene	0.0148	0.00500	"	0.0333	ND	44.5	30-120	1.78	30	
Fluorene	0.0160	0.00500	"	0.0333	ND	48.1	30-120	17.4	30	
Indeno (1,2,3-cd) pyrene	0.0135	0.00500	"	0.0333	ND	40.5	30-120	8.09	30	
Pyrene	0.0181	0.00500	"	0.0333	ND	54.4	35-142	19.6	30	
1-Methylnaphthalene	0.0153	0.00500	"	0.0333	ND	45.9	15-130	7.17	50	
2-Methylnaphthalene	0.0168	0.00500	"	0.0333	ND	50.3	15-130	10.7	50	
Surrogate: 2-Methylnaphthalene-d10	0.0169		"	0.0333		50.7	40-150			
Surrogate: Fluoranthene-d10	0.0157		"	0.0333		47.0	40-150			

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Fremont Environmental
 PO Box 1289
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Project: Noble - Booth 31-17

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 02/14/23 16:04

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

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

Batch BGB0262 - EPA 3050B

Blank (BGB0262-BLK1)

Prepared: 02/09/23 Analyzed: 02/10/23

Boron ND 0.0100 mg/L

LCS (BGB0262-BS1)

Prepared: 02/09/23 Analyzed: 02/10/23

Boron 5.03 0.0100 mg/L 5.00 101 80-120

Duplicate (BGB0262-DUP1)

Source: 2302057-01

Prepared: 02/09/23 Analyzed: 02/10/23

Boron 0.421 0.0100 mg/L 0.407 3.50 20

Matrix Spike (BGB0262-MS1)

Source: 2302057-01

Prepared: 02/09/23 Analyzed: 02/10/23

Boron 5.14 0.0100 mg/L 5.00 0.407 94.7 75-125

Matrix Spike Dup (BGB0262-MSD1)

Source: 2302057-01

Prepared: 02/09/23 Analyzed: 02/10/23

Boron 5.14 0.0100 mg/L 5.00 0.407 94.7 75-125 0.0204 25

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Project: Noble - Booth 31-17

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 02/14/23 16:04

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

Summit Scientific

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

Batch BGB0225 - General Preparation

Blank (BGB0225-BLK1)

Prepared: 02/08/23 Analyzed: 02/10/23

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

LCS (BGB0225-BS1)

Prepared: 02/08/23 Analyzed: 02/10/23

Calcium	4.59	0.0500	mg/L wet	5.00	91.8	70-130				
Magnesium	5.25	0.0500	"	5.00	105	70-130				
Sodium	5.05	0.0500	"	5.00	101	70-130				

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Project: Noble - Booth 31-17

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 02/14/23 16:04

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

Summit Scientific

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

Batch BGB0366 - General Preparation

Duplicate (BGB0366-DUP1)

Source: 2302121-01

Prepared & Analyzed: 02/13/23

% Solids	98.4		%		86.9			12.4	20	
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Fremont Environmental
 PO Box 1289
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Project: Noble - Booth 31-17

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 02/14/23 16:04

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

Summit Scientific

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

Batch BGB0274 - General Preparation

Blank (BGB0274-BLK1)

Prepared & Analyzed: 02/09/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGB0274-BS1)

Prepared & Analyzed: 02/09/23

Specific Conductance (EC) 0.155 0.0100 mmhos/cm 0.150 103 95-105

Duplicate (BGB0274-DUP1)

Source: 2302121-01

Prepared & Analyzed: 02/09/23

Specific Conductance (EC) 0.366 0.0100 mmhos/cm 0.374 2.30 20

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Fremont Environmental
 PO Box 1289
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Project: Noble - Booth 31-17

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 02/14/23 16:04

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

Summit Scientific

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

Batch BGB0275 - General Preparation

LCS (BGB0275-BS1)

Prepared & Analyzed: 02/09/23

pH 9.13 pH Units 9.18 99.5 95-105

Duplicate (BGB0275-DUP1)

Source: 2302121-01

Prepared & Analyzed: 02/09/23

pH 6.71 pH Units 6.46 3.80 20

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Project: Noble - Booth 31-17

Project Number: [none]
Project Manager: Paul Henchan

Reported:
02/14/23 16:04

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