FREMONT ENVIRONMENTAL INC.

April 6, 2023

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

Subject: **Excavation Report**
QC A 32-19
API # 05-123-32723
NWNW Sec. 32, T6N, R64W
Weld County, Colorado
Fremont Project No. C022-058
Facility #420814, Remediation #22490

Dear Mr. Peterson:

Enclosed please find a copy of the above referenced Excavation Report for the QC A 32-19 tank battery location in Weld County, Colorado. The enclosed report describes excavation and sampling efforts to remediate impacted soil at the site.

Please contact me at (303) 956-8714 if you require any additional information.

Fremont appreciates the opportunity to provide this service.

Sincerely,
FREMONT ENVIRONMENTAL INC.

Ethan Black for PVH

Paul V. Henehan, P.E.
Senior Consultant

Enclosure

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

EXCAVATION REPORT

NOBLE ENERGY INC.

QC A 32-19

WELD COUNTY, COLORADO

FREMONT PROJECT NO. C022-058

FACILITY # 420814, REMEDIATION # 22490

Prepared by:
Fremont Environmental Inc.
1759 Redwing Lane
Broomfield, CO 80020
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April 6, 2023

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QC A 32-19

WELD COUNTY, COLORADO

FREMONT PROJECT NO. C022-058

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1.0 INTRODUCTION

The purpose of this document is to present information collected during the single-day excavation of soil at the QC A 32-19 (QC A) former tank battery location in Weld County, Colorado. This excavation project was completed on December 7, 2022.

2.0 BACKGROUND INFORMATION

2.1 Site Location

The QC A tank battery is located approximately 0.5 miles south of Alden Colorado in Weld County as shown on Figure 1. The site is located in a rural and agricultural area approximately 0.14 miles east of the intersection of County Road 64 and County Road 51. The location is further described as the NW ¼ of the NW ¼ of Section 32, Township 6N, Range 64W.

2.2 Site History

The site consists of the QC A tank battery which services the QC USX A 32-19 oil well. The QC USX A 32-19 well was drilled in 2011 to a depth of approximately 7,058 feet.

A historical release was discovered at five feet in the floor of the east produced water vault excavation (E PWV) at the QC A tank battery during decommissioning activities in May 2022. A site investigation to determine the extent of soil impacts was undertaken on June 23, 2022 to define the magnitude and extent of soil impacts which were subsequently

removed via excavation. A soil boring was advanced in the former E PWV excavation area to 26 feet below ground surface (bgs) at which point the Geoprobe rig hit refusal on a confining soil layer. The soil boring was completed as a monitoring well which was gauged monthly following its installation. Groundwater was never encountered in the well, which was destroyed during the excavation.

3.0 FIELD ACTIVITIES

3.1 Soil Excavation and Sampling

Soil remediation efforts consisted of the excavation and removal of petroleum impacted soil at and adjacent to the former QC A E PWV location. Generally, the subsurface consists of sand that extends to approximately eight feet bgs. Groundwater was not encountered within the excavation. The excavation extent is illustrated on Figure 2.

The multi-day excavation was completed at the QC A on December 7, 2022. Soil samples were collected as grab samples from the excavation sidewalls at six feet bgs and from the excavation floor at eight feet bgs.

The soil samples were analyzed by Summit Scientific, Inc. in Golden, Colorado for benzene, toluene, ethylbenzene and total xylenes (BTEX), naphthalene, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene (TMB), Total Petroleum Hydrocarbons – Gasoline Range Organics (TPH-GRO) by EPA method 8260B, TPH – Diesel Range Organics (TPH-DRO), Extended Range Organics (TPH-ORO) by EPA method 8015, Polycyclic Aromatic Hydrocarbons (PAH): Acenaphthene, Anthracene, Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Chrysene, Dibenz (a,h) anthracene, Fluoranthene, Fluorene, Indeno (1,2,3-cd) pyrene, Pyrene, 1-Methylnaphthalene, 2-Methylnaphthalene by EPA method 8270D, Total Metals by EPA method 6020B, and Hexavalent Chromium by EPA method 7196, sodium absorption ratio (SAR) by EPA 6020/USDA60 6(2) saturated paste extraction method, specific conductance by EPA

Method 120.1 saturated paste extraction and pH by APHA/ASTM/EPA Methods, Saturated Paste Extraction. The laboratory reports and chain-of-custody documentation are included in Appendix B.

A summary of the laboratory data for the soil samples is included in Tables 1 through 5. The laboratory analyses indicate that organic petroleum constituents in soil samples collected from the sidewalls and floor of the excavation achieved the Colorado Oil and Gas Conservation Commission's (COGCC) Table 915-1 protection of groundwater soil screening levels (PGSSLs). However, arsenic exceeded the COGCC Table 915-1 residential soil screening levels (RSSLs). A background sample collected at a depth of seven feet in native soil off site adjacent to the former QC A tank battery also exceed the COGCC Table 915-1 RSSLs for arsenic. Since elevated levels of arsenic were observed in both the excavation samples and background sample, it is proposed that arsenic concentrations be attributed to native soil conditions. Additionally, Barium exceeded the COGCC Table 915-1 PGSSLs for samples collected in the excavation's west wall at six feet bgs and pH exceeded the COGCC Table 915-1 SSL upper concentration range of 8.3 units for all samples with the highest concentration observed at 8.84 units. These exceedances cannot be attributed to native soil conditions based on the background soil data.

A total of approximately 62 cubic yards of petroleum impacted soil were removed via excavation by 4X Industrial from the location. Impacted soil was disposed of at North Weld Landfill in Ault, CO as non-hazardous waste. The excavation was backfilled with imported clean soil.

4.0 DISCUSSION

As demonstrated by the soil sampling, petroleum impacted soil was removed from the QC A location by excavation. This was confirmed by analysis of soil samples collected

from the exterior sidewalls and the floor, which were below the COGCC Table 915-1 PGSSLs for organic petroleum constituents upon completion of the excavation. Approximately 62 cubic yards of impacted soil were removed and transported to the landfill. The soil data are illustrated and summarized in the attached tables and figures.

Since groundwater was not encountered following the site investigation or during the excavation it is proposed that a pathway for communication with groundwater does not exist between soil impacts previously observed at five and seven feet and groundwater which is located at an unknown depth, greater than 26 feet bgs, beneath a confining soil layer. Therefore, Noble is requesting a no further action designation be granted using the COGCC Table 915-1 RSSLs. Additionally, Noble is requesting inorganic exceedances be left in place since elevated pH concentrations were observed three-to-five feet below the root zone.

5.0 REMARKS

The discussion and conclusions contained in this report represent our professional opinions. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

This report was prepared by **FREMONT ENVIRONMENTAL INC.**

4/6/23

_____ Date_____

Ethan D. Black, P.G.

Geologist

Reviewed by:

4/6/23

_____ Date_____

Paul V. Henehan, P.E.

Senior Consultant

TABLES

TABLE 1
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
QC A 32-19, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-058

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**		
AST-Cen Surface	5/24/2022	0	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<0.50*	*<50*	*<50*
AST-E Surface	5/24/2022	0	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<0.50*	*<50*	*<50*
AST-W Surface	5/24/2022	0	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<0.50*	*<50*	*<50*
PWV-E Floor 5ft	5/24/2022	5	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<0.50*	*<50*	*<50*
PWV-E N Wall 3ft	5/24/2022	3	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<0.50*	*<50*	*<50*
PWV-W Floor 5ft	5/24/2022	5	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<0.50*	*<50*	*<50*
PWV-W N Wall 3ft	5/24/2022	3	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	1.5	120.0	*<50*
SEP-N Surface	5/24/2022	0	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	1.5	*<50*	*<50*
SEP-S Surface	5/24/2022	0	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<0.50*	*<50*	*<50*
MW-1 7 Ft	6/23/2022	7	*<0.0020*	*<0.0050*	*<0.0050*	0.01	*<0.0050*	**0.04**	*<0.0038*	0.89	300	*<50*
MW-1 26 Ft	6/23/2022	26	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<0.50*	*<50*	*<50*
E Wall 6 ft	12/07/2022	6	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<0.50*	*<50*	*<50*
Floor 8 ft	12/07/2022	8	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<0.50*	*<50*	*<50*
N Wall 6 ft	12/07/2022	6	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<0.50*	*<50*	*<50*
S Wall 6 ft	12/07/2022	6	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<0.50*	*<50*	*<50*
W Wall 6 ft	12/07/2022	6	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<0.50*	*<50*	*<50*

Bold faced values exceed the COGCC Table 915-1 concentrations
Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)
* Indicates laboratory minimum detection limit in excess of SSL
** Summation of GRO+DRO+ORO must be less than 500 mg/kg

TABLE 2
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
QC A 32-19, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-058

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
AST-Cen Surface	5/24/2022	0	*<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*
AST-E Surface	5/24/2022	0	*<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*
AST-W Surface	5/24/2022	0	*<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*	0.00666
PWV-E Floor 5ft	5/24/2022	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*	**0.00871**	0.0061
PWV-E N Wall 3ft	5/24/2022	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*
PWV-W Floor 5ft	5/24/2022	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*
PWV-W N Wall 3ft	5/24/2022	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*	0.00575
SEP-N Surface	5/24/2022	0	*<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*
SEP-S Surface	5/24/2022	0	*<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*
MW-1 7 Ft	6/23/2022	7	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	0.00514	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	**0.0125**	0.00555
MW-1 26 Ft	6/23/2022	26	*<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*
E Wall 6 ft	12/07/2022	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*
Floor 8 ft	12/07/2022	8	*<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*
N Wall 6 ft	12/07/2022	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*
S Wall 6 ft	12/07/2022	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*
W Wall 6 ft	12/07/2022	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*

Bold faced values exceed the COGCC Table 915-1 concentrations
Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)
* Indicates laboratory minimum detection limit in excess of SSL

TABLE 3

SUMMARY OF SOIL SUITABILITY FOR RECLAMATION

NOBLE ENERGY INC.

QC A 32-19, WELD COUNTY, COLORADO

FREMONT PROJECT NO. C022-058

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
BKG 7 ft	12/07/2022	7	8.21	0.435	0.578	0.023
E Wall 6 ft	12/07/2022	6	**8.83**	0.182	0.877	0.090
Floor 8 ft	12/07/2022	8	**8.55**	0.192	0.378	0.058
N Wall 6 ft	12/07/2022	6	**8.84**	0.161	0.439	0.055
S Wall 6 ft	12/07/2022	6	**8.53**	0.198	0.349	0.0631
W Wall 6 ft	12/07/2022	6	**8.43**	0.233	0.0718	0.032

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.
QC A 32-19, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-058

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
BKG 7 ft	12/07/2022	7	**1.88**	52	0.095	*<0.30*	3.94	2.97	3.06	*<0.282*	0.0122	12.2
E Wall 6 ft	12/07/2022	6	**1.76**	29	0.093	*<0.30*	2.3	3.38	2.88	*<0.277*	0.00982	9.54
Floor 8 ft	12/07/2022	8	**1.62**	35	0.090	*<0.30*	2.37	2.86	2.6	*<0.281*	0.0104	10.3
N Wall 6 ft	12/07/2022	6	**1.82**	36	0.097	*<0.30*	2.1	3.24	2.63	*<0.282*	0.0104	8.91
S Wall 6 ft	12/07/2022	6	**1.77**	48	0.124	*<0.30*	2.45	4.03	2.97	*<0.279*	0.0133	10.1
W Wall 6 ft	12/07/2022	6	**2.65**	**85.9**	0.192	*<0.30*	3.61	5.51	4.09	*<0.309*	0.0219	14.2

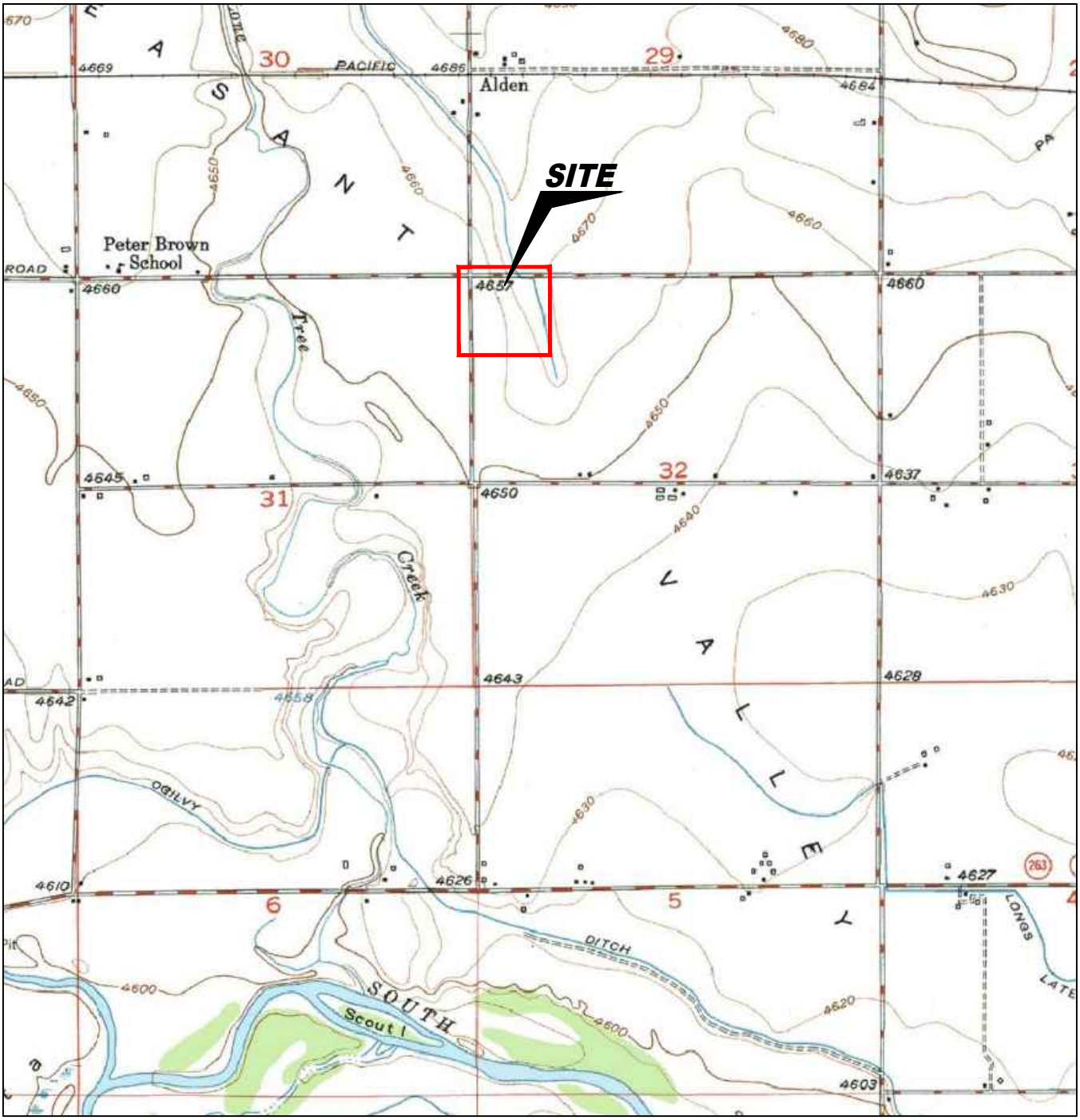
Bold faced values exceed the COGCC Table 915-1 concentrations

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

* Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed

FIGURES



N

Scale (miles)
0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1
0 1000 2000 3000 4000 5000
Scale (feet)

USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

NOBLE ENERGY, INC. ~ QC A 32-19
NWNW Sec. 32, T6N, R64W, 6th PM
Weld County ,Colorado
40.449442°, -104.581212°

Project #	API #	Facility ID
C022-058	**05-123-32723**	**420814**
Date	Remediation #	Filename
4/7/23	**22490**	**22058T**

FREMONT ENVIRONMENTAL

LEGEND

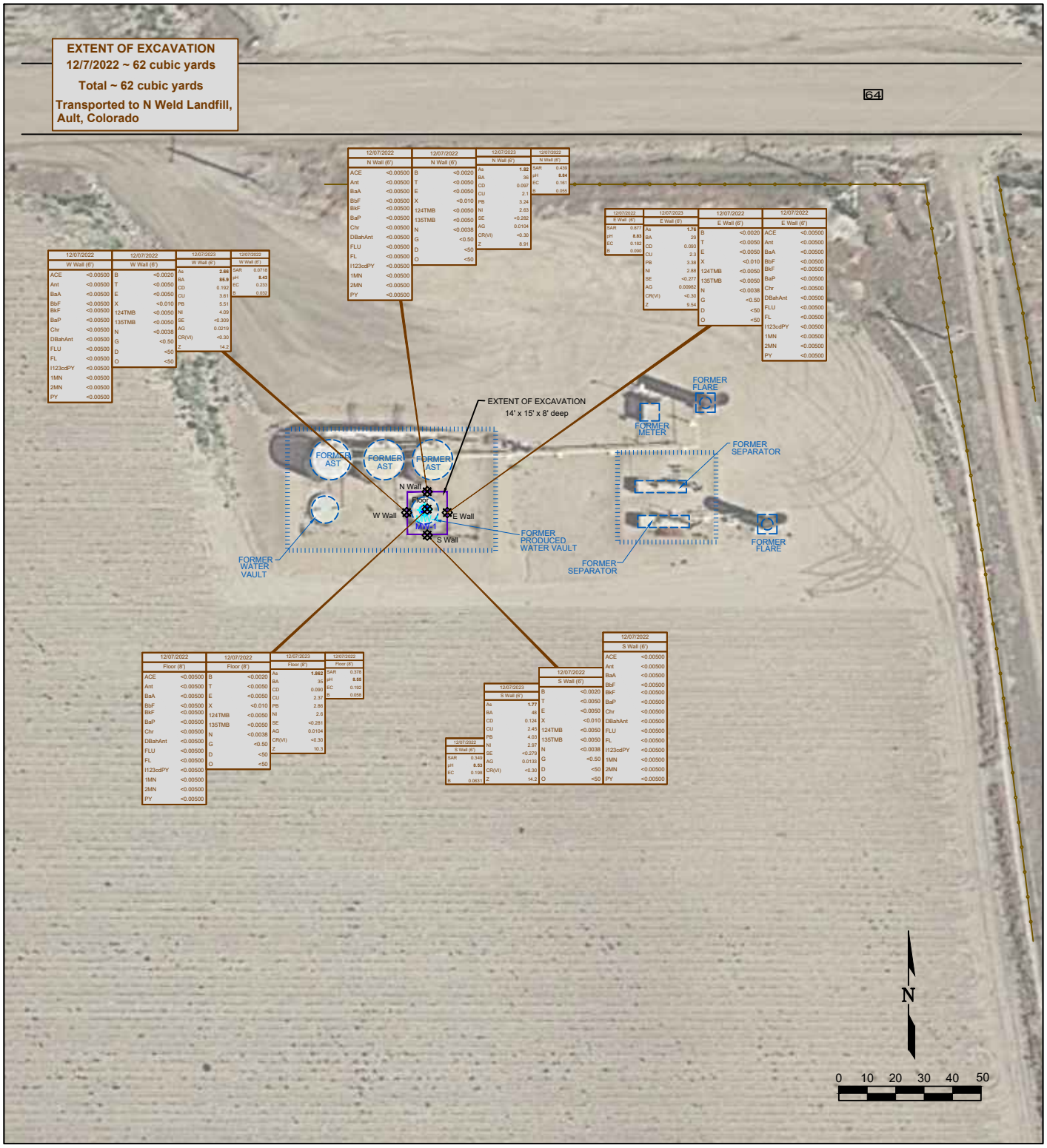
MONITORING WELL LOCATION
DESTROYED MONITORING WELL
ABOVE GROUND STORAGE TANK
FORMER FORMER FACILITY
CONTAINMENT BERM
FENCE LINE
EXTENT OF EXCAVATION

Figure 2
SITE MAP

NOBLE ENERGY, INC. ~ QC A 32-19
NWNW Sec. 32, T6N, R64W, 6th PM
Weld County ,Colorado
40.449442°, -104.581212°

Project No.	API #	Facility #
C022-058	**05-123-32723**	**420814**
Date	Remediation #	Filename
4/7/23	**22490**	**22058Q**

FREMONT ENVIRONMENTAL



LEGEND

- MONITORING WELL LOCATION
- DESTROYED MONITORING WELL
- SOIL SAMPLE LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- CONTAINMENT BERM
- FENCE LINE
- EXTENT OF EXCAVATION

DATE SAMPLED
SAMPLE ID and DEPTH (ft)
ACENAPHTHENE (mg/kg)
ANTHRACENE (mg/kg)
BENZO (A) ANTHRACENE (mg/kg)
BENZO (B) FLUORANTHENE (mg/kg)
BENZO (K) FLUORANTHENE(mg/kg)
BENZO (A) PYRENE (mg/kg)
CHRYSENE (mg/kg)
DIBENZ (A,H) ANTHRACENE (mg/kg)
FLUORANTHENE (mg/kg)
FLUORENE (mg/kg)
INDENO (1,2,3-CD) PYRENE(mg/kg)
1-METHYLNAPHTHALENE (mg/kg)
2-METHYLNAPHTHALENE (mg/kg)
PYRENE (mg/kg)

[NA] NOT ANALYZED

DATE SAMPLED
SAMPLE ID and DEPTH (ft)
BENZENE (mg/kg)
TOLUENE (mg/kg)
ETHYLBENZENE (mg/kg)
TOTAL XYLENES (mg/kg)
1,2,4-TRIMETHYLBENZENE (mg/kg)
1,3,5-TRIMETHYLBENZENE (mg/kg)
NAPHTHALENE (mg/kg)
TPH-GRO (mg/kg)
TPH-DRO (mg/kg)
TPH-ORO (mg/kg)

DATE SAMPLED
SAMPLE ID & DEPTH (ft)
SAR (units)
pH (pH units)
EC (mmhos/cm)
BORON (mg/L)

DATE SAMPLED
SAMPLE ID & DEPTH (ft)
ARSENIC (mg/kg)
BARIUM (mg/kg)
CADMIUM (mg/kg)
COPPER (mg/kg)
LEAD (mg/kg)
NICKEL (mg/kg)
SELENIUM (mg/kg)
SILVER (mg/kg)
HEXAVALENT CHROMIUM (mg/kg)
ZINC (mg/kg)

Figure 3
SOIL CHEMISTRY MAP

NOBLE ENERGY, INC. ~ QC A 32-19
NWNW Sec. 32, T6N, R64W, 6th PM
Weld County ,Colorado
40.449442°, -104.581212°

Project No.	API #	Facility #
C022-058	**05-123-32723**	**420814**
Date	Remediation #	Filename
4/7/23	**22490**	**22058Q**

FREMONT ENVIRONMENTAL

APPENDIX A

PHOTO LOG

Photo Log

Description:

1 - QC A excavation extent; looking SE

Photo Log

FREMONT ENVIRONMENTAL

Description:

2 - QC A excavation extent floor; destroyed MW visible (left)

APPENDIX B

LABORATORY DOCUMENTATION

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

December 12, 2022

Paul Henehan
Fremont Environmental
PO Box 1289
Wellington, CO 80549

RE: Noble - QC A
Work Order #2212161

Enclosed are the results of analyses for samples received by Summit Scientific on 12/07/22 17:30. 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 - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N Wall 6 ft	2212161-01	Soil	12/07/22 00:00	12/07/22 17:30
S Wall 6 ft	2212161-02	Soil	12/07/22 00:00	12/07/22 17:30
E Wall 6 ft	2212161-03	Soil	12/07/22 00:00	12/07/22 17:30
W Wall 6 ft	2212161-04	Soil	12/07/22 00:00	12/07/22 17:30
Floor 8 ft	2212161-05	Soil	12/07/22 00:00	12/07/22 17:30
BKG 7 ft	2212161-06	Soil	12/07/22 00:00	12/07/22 17:30

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.

22/2/61

Summit Scientific

S2

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

Page 1 of 1

Client: Fremont
Address:
City/State/Zip:
Phone:
Sampler Name: EB

Project Manager: Henehan
E-Mail: Fremont Dist List
Bill To: Noble - Dan
Project Name: Noble - QC A
Project Number:

					Preservative				Matrix				Analysis Requested								Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	N BTEX/NAPS	TPH	PAH	SAR/EC/pH	Boron	915 Metals			
1	N WALL 6FT	12/7/22		2			X			X			X	X	X	X	X	X			
2	S WALL 6FT	↓		↓			↓			↓			↓	↓	↓	↓	↓	↓			
3	E WALL 6FT	↓		↓			↓			↓			↓	↓	↓	↓	↓	↓			
4	W WALL 6FT	↓		↓			↓			↓			↓	↓	↓	↓	↓	↓			
5	FLOOR 8FT	↓		↓			↓			↓			↓	↓	↓	↓	↓	↓			
6	BKG 7FT	↓		↓			↓			↓						X	X	X			
7																					
8																					
9																					
10																					

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)	Notes:
[signature]	12/7/22	[signature]	12/7/22 1730	Same Day ✓ / 72 hours ___	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours ___ / Standard ___	
				48 hours ___	
Temperature Upon Receipt: 8.4		Corrected Temperature: 0	HNO3 lot #	Sample Integrity:	
IR gun correction: 0		IR gun #: 1		Samples Intact: (Yes) No	

www.s2scientific.com

S2

Sample Receipt Checklist

S2 Work Order# 221216

Client: Fremont Client Project ID: Noble - QC A

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

[ ] [–] [ ] [ ] [ ]

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

Temp (°C) 8.4 Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? (1) **NOTE:** If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	–			ON ICE
If custody seals are present, are they intact? (1)	–			
Are samples due within 48 hours present?	–			Same day
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe^{2+}), Hexavalent Chromium (Cr^{6+}, Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen			–	
Is a chain-of-custody (COC) form present and filled out Completely? (1)	–			
Is the COC properly relinquished by the client w/ date and time recorded? (1)		–		
Were all samples received intact? (1)	–			
Was adequate sample volume provided? (1)	–			
Does the COC agree with the number and type of sample bottles received? (1)	–			
Do the sample IDs on the bottle labels match the COC? (1)	–			
For volatiles in water – is there headspace present? **If yes, contact client and note in narrative.**			–	
Are samples preserved that require preservation **(excluding cooling)?** (1) Note the type of preservative in the comments column – HCl, H_2SO_4, NaOH, HNO_3, etc.			–	
If samples are acid preserved for metals, is the pH ≤ 2? (1) Record the pH in Comments.			–	
If dissolved metals are requested, were samples field filtered?			/	
Additional Comments (if any):				

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

Custodian Printed Name

12.7.22
Date/Time

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

N Wall 6 ft

2212161-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFL0197	12/07/22	12/08/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0385	*96.2 %*	*50-150*		"	"	"	"	
Surrogate: Toluene-d8	0.0440	*110 %*	*50-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0453	*113 %*	*50-150*		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFL0199	12/07/22	12/08/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.7	*110 %*	*30-150*		"	"	"	"	

PAH by EPA Method 8270D SIM

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

N Wall 6 ft

2212161-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFL0202	12/08/22	12/09/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0156	*46.8 %*	*40-150*		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0212	*63.7 %*	*40-150*		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	**0.0548**	0.0100	mg/L	1	BFL0216	12/08/22	12/09/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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 - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

N Wall 6 ft

2212161-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	**1.82**	0.217	mg/kg dry	1	BFL0200	12/07/22	12/08/22	EPA 6020B	
Barium	**35.5**	0.434	"	"	"	"	"	"	
Cadmium	**0.0971**	0.217	"	"	"	"	"	"	
Copper	**2.10**	0.434	"	"	"	"	"	"	
Lead	**3.24**	0.217	"	"	"	"	"	"	
Nickel	**2.63**	0.434	"	"	"	"	"	"	
Selenium	ND	0.282	"	"	"	"	"	"	
Silver	**0.0104**	0.0217	"	"	"	"	"	"	
Zinc	**8.91**	0.434	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFL0261	12/09/22	12/09/22	EPA 7196A	

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

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	**114**	0.0542	mg/L dry	1	BFL0190	12/07/22	12/09/22	EPA 6020B	
Magnesium	**8.10**	0.0542	"	"	"	"	"	"	
Sodium	**18.0**	0.0542	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	**0.439**	0.00100	units	1	BFL0262	12/09/22	12/09/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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 - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

N Wall 6 ft

2212161-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	**92.2**		%	1	BFL0224	12/08/22	12/09/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	**0.161**	0.0100	mmhos/cm	1	BFL0223	12/08/22	12/08/22	EPA 120.1	

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

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	**8.84**		pH Units	1	BFL0222	12/08/22	12/08/22	EPA 9045D	

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

S Wall 6 ft

2212161-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFL0197	12/07/22	12/08/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0379	*94.8 %*	*50-150*		"	"	"	"	
Surrogate: Toluene-d8	0.0440	*110 %*	*50-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0451	*113 %*	*50-150*		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFL0199	12/07/22	12/08/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/07/22 00:00**

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

PAH by EPA Method 8270D SIM

S2

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

S Wall 6 ft

2212161-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFL0202	12/08/22	12/09/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0143	*43.0 %*	*40-150*		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0212	*63.7 %*	*40-150*		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	**0.0631**	0.0100	mg/L	1	BFL0216	12/08/22	12/09/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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 - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

S Wall 6 ft

2212161-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	**1.77**	0.215	mg/kg dry	1	BFL0200	12/07/22	12/08/22	EPA 6020B	
Barium	**48.0**	0.430	"	"	"	"	"	"	
Cadmium	**0.124**	0.215	"	"	"	"	"	"	
Copper	**2.45**	0.430	"	"	"	"	"	"	
Lead	**4.03**	0.215	"	"	"	"	"	"	
Nickel	**2.97**	0.430	"	"	"	"	"	"	
Selenium	ND	0.279	"	"	"	"	"	"	
Silver	**0.0133**	0.0215	"	"	"	"	"	"	
Zinc	**10.1**	0.430	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFL0261	12/09/22	12/09/22	EPA 7196A	

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

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	**50.2**	0.0537	mg/L dry	1	BFL0190	12/07/22	12/09/22	EPA 6020B	
Magnesium	**8.05**	0.0537	"	"	"	"	"	"	
Sodium	**10.1**	0.0537	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	**0.349**	0.00100	units	1	BFL0262	12/09/22	12/09/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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 - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

S Wall 6 ft

2212161-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	**93.1**		%	1	BFL0224	12/08/22	12/09/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	**0.198**	0.0100	mmhos/cm	1	BFL0223	12/08/22	12/08/22	EPA 120.1	

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

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	**8.53**		pH Units	1	BFL0222	12/08/22	12/08/22	EPA 9045D	

E Wall 6 ft

2212161-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFL0197	12/07/22	12/08/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0372	*92.9 %*	*50-150*		"	"	"	"	
Surrogate: Toluene-d8	0.0450	*112 %*	*50-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0450	*112 %*	*50-150*		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFL0199	12/07/22	12/08/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.1	*105 %*	*30-150*		"	"	"	"	

PAH by EPA Method 8270D SIM

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

E Wall 6 ft

2212161-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFL0202	12/08/22	12/09/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0159	*47.6 %*	*40-150*		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0232	*69.5 %*	*40-150*		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	**0.0899**	0.0100	mg/L	1	BFL0216	12/08/22	12/09/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

E Wall 6 ft

2212161-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	**1.76**	0.213	mg/kg dry	1	BFL0200	12/07/22	12/08/22	EPA 6020B	
Barium	**28.7**	0.427	"	"	"	"	"	"	
Cadmium	**0.0931**	0.213	"	"	"	"	"	"	
Copper	**2.26**	0.427	"	"	"	"	"	"	
Lead	**3.38**	0.213	"	"	"	"	"	"	
Nickel	**2.88**	0.427	"	"	"	"	"	"	
Selenium	ND	0.277	"	"	"	"	"	"	
Silver	**0.00982**	0.0213	"	"	"	"	"	"	
Zinc	**9.54**	0.427	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFL0261	12/09/22	12/09/22	EPA 7196A	

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

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	**64.3**	0.0534	mg/L dry	1	BFL0190	12/07/22	12/09/22	EPA 6020B	
Magnesium	**12.7**	0.0534	"	"	"	"	"	"	
Sodium	**29.4**	0.0534	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	**0.877**	0.00100	units	1	BFL0262	12/09/22	12/09/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

E Wall 6 ft

2212161-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	**93.7**		%	1	BFL0224	12/08/22	12/09/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	**0.182**	0.0100	mmhos/cm	1	BFL0223	12/08/22	12/08/22	EPA 120.1	

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

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	**8.83**		pH Units	1	BFL0222	12/08/22	12/08/22	EPA 9045D	

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

W Wall 6 ft

2212161-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFL0197	12/07/22	12/08/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0365	*91.3 %*	*50-150*		"	"	"	"	
Surrogate: Toluene-d8	0.0443	*111 %*	*50-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0449	*112 %*	*50-150*		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFL0199	12/07/22	12/08/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.3	*98.6 %*	*30-150*		"	"	"	"	

PAH by EPA Method 8270D SIM

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

W Wall 6 ft

2212161-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFL0202	12/08/22	12/09/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0182	*54.7 %*	*40-150*		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0264	*79.2 %*	*40-150*		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	**0.0320**	0.0100	mg/L	1	BFL0216	12/08/22	12/09/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

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Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

W Wall 6 ft

2212161-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	**2.65**	0.238	mg/kg dry	1	BFL0200	12/07/22	12/08/22	EPA 6020B	
Barium	**85.9**	0.476	"	"	"	"	"	"	
Cadmium	**0.192**	0.238	"	"	"	"	"	"	
Copper	**3.61**	0.476	"	"	"	"	"	"	
Lead	**5.51**	0.238	"	"	"	"	"	"	
Nickel	**4.09**	0.476	"	"	"	"	"	"	
Selenium	ND	0.309	"	"	"	"	"	"	
Silver	**0.0219**	0.0238	"	"	"	"	"	"	
Zinc	**14.2**	0.476	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFL0261	12/09/22	12/09/22	EPA 7196A	

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

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	**49.7**	0.0595	mg/L dry	1	BFL0190	12/07/22	12/09/22	EPA 6020B	
Magnesium	**8.81**	0.0595	"	"	"	"	"	"	
Sodium	**2.09**	0.0595	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	**0.0718**	0.00100	units	1	BFL0262	12/09/22	12/09/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

W Wall 6 ft

2212161-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	**84.1**		%	1	BFL0224	12/08/22	12/09/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	**0.233**	0.0100	mmhos/cm	1	BFL0223	12/08/22	12/08/22	EPA 120.1	

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

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	**8.43**		pH Units	1	BFL0222	12/08/22	12/08/22	EPA 9045D	

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

Floor 8 ft

2212161-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFL0197	12/07/22	12/08/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0377	*94.3 %*	*50-150*		"	"	"	"	
Surrogate: Toluene-d8	0.0447	*112 %*	*50-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0455	*114 %*	*50-150*		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFL0199	12/07/22	12/08/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.7	*101 %*	*30-150*		"	"	"	"	

PAH by EPA Method 8270D SIM

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

Floor 8 ft

2212161-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFL0202	12/08/22	12/09/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0173	*52.0 %*	*40-150*		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0245	*73.6 %*	*40-150*		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	**0.0584**	0.0100	mg/L	1	BFL0216	12/08/22	12/09/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

Floor 8 ft

2212161-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	**1.62**	0.216	mg/kg dry	1	BFL0200	12/07/22	12/08/22	EPA 6020B	
Barium	**35.0**	0.432	"	"	"	"	"	"	
Cadmium	**0.0903**	0.216	"	"	"	"	"	"	
Copper	**2.37**	0.432	"	"	"	"	"	"	
Lead	**2.86**	0.216	"	"	"	"	"	"	
Nickel	**2.55**	0.432	"	"	"	"	"	"	
Selenium	ND	0.281	"	"	"	"	"	"	
Silver	**0.0104**	0.0216	"	"	"	"	"	"	
Zinc	**10.3**	0.432	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFL0261	12/09/22	12/09/22	EPA 7196A	

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

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	**108**	0.0540	mg/L dry	1	BFL0190	12/07/22	12/09/22	EPA 6020B	
Magnesium	**7.87**	0.0540	"	"	"	"	"	"	
Sodium	**15.1**	0.0540	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	**0.378**	0.00100	units	1	BFL0262	12/09/22	12/09/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific

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Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

Floor 8 ft

2212161-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	**92.6**		%	1	BFL0224	12/08/22	12/09/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	**0.192**	0.0100	mmhos/cm	1	BFL0223	12/08/22	12/08/22	EPA 120.1	

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

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	**8.55**		pH Units	1	BFL0222	12/08/22	12/08/22	EPA 9045D	

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

BKG 7 ft

2212161-06 (Soil)

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Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	**0.0233**	0.0100	mg/L	1	BFL0216	12/08/22	12/09/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	**1.88**	0.217	mg/kg dry	1	BFL0200	12/07/22	12/08/22	EPA 6020B	
Barium	**52.4**	0.435	"	"	"	"	"	"	
Cadmium	**0.0952**	0.217	"	"	"	"	"	"	
Copper	**3.94**	0.435	"	"	"	"	"	"	
Lead	**2.97**	0.217	"	"	"	"	"	"	
Nickel	**3.06**	0.435	"	"	"	"	"	"	
Selenium	ND	0.282	"	"	"	"	"	"	
Silver	**0.0122**	0.0217	"	"	"	"	"	"	
Zinc	**12.2**	0.435	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFL0261	12/09/22	12/09/22	EPA 7196A	

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

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	**38.8**	0.0543	mg/L dry	1	BFL0190	12/07/22	12/09/22	EPA 6020B	
Magnesium	**13.1**	0.0543	"	"	"	"	"	"	
Sodium	**16.3**	0.0543	"	"	"	"	"	"	

Calculated Analysis

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

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

BKG 7 ft

2212161-06 (Soil)

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Calculated Analysis

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	**0.578**	0.00100	units	1	BFL0262	12/09/22	12/09/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	**92.0**		%	1	BFL0224	12/08/22	12/09/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	**0.435**	0.0100	mmhos/cm	1	BFL0223	12/08/22	12/08/22	EPA 120.1	

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

Date Sampled: **12/07/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	**8.21**		pH Units	1	BFL0222	12/08/22	12/08/22	EPA 9045D	

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BFL0197 - EPA 5030 Soil MS										
Blank (BFL0197-BLK1)				Prepared: 12/07/22 Analyzed: 12/08/22						
Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	*0.0457*		*"*	*0.0400*		*114*	*50-150*			
Surrogate: Toluene-d8	*0.0410*		*"*	*0.0400*		*103*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0385*		*"*	*0.0400*		*96.2*	*50-150*			
LCS (BFL0197-BS1)				Prepared: 12/07/22 Analyzed: 12/08/22						
Benzene	0.0702	0.0020	mg/kg	0.0750		93.6	70-130			
Toluene	0.0706	0.0050	"	0.0750		94.1	70-130			
Ethylbenzene	0.0734	0.0050	"	0.0750		97.9	70-130			
m,p-Xylene	0.141	0.010	"	0.150		93.9	70-130			
o-Xylene	0.0716	0.0050	"	0.0750		95.5	70-130			
1,2,4-Trimethylbenzene	0.0720	0.0050	"	0.0750		96.0	70-130			
1,3,5-Trimethylbenzene	0.0716	0.0050	"	0.0750		95.4	70-130			
Naphthalene	0.0615	0.0038	"	0.0750		82.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0410*		*"*	*0.0400*		*103*	*50-150*			
Surrogate: Toluene-d8	*0.0408*		*"*	*0.0400*		*102*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0416*		*"*	*0.0400*		*104*	*50-150*			
Matrix Spike (BFL0197-MS1)	**Source: 2212156-01**			Prepared: 12/07/22 Analyzed: 12/08/22						
Benzene	0.0730	0.0020	mg/kg	0.0750	ND	97.4	70-130			
Toluene	0.0742	0.0050	"	0.0750	ND	98.9	70-130			
Ethylbenzene	0.0749	0.0050	"	0.0750	ND	99.9	70-130			
m,p-Xylene	0.142	0.010	"	0.150	ND	94.6	70-130			
o-Xylene	0.0715	0.0050	"	0.0750	ND	95.3	70-130			
1,2,4-Trimethylbenzene	0.0746	0.0050	"	0.0750	ND	99.5	70-130			
1,3,5-Trimethylbenzene	0.0735	0.0050	"	0.0750	ND	98.0	70-130			
Naphthalene	0.0685	0.0038	"	0.0750	ND	91.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0438*		*"*	*0.0400*		*109*	*50-150*			
Surrogate: Toluene-d8	*0.0406*		*"*	*0.0400*		*101*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0402*		*"*	*0.0400*		*100*	*50-150*			

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BFL0197 - EPA 5030 Soil MS										
Matrix Spike Dup (BFL0197-MSD1)		**Source: 2212156-01**		Prepared: 12/07/22 Analyzed: 12/08/22						
Benzene	0.0711	0.0020	mg/kg	0.0750	ND	94.8	70-130	2.62	30	
Toluene	0.0740	0.0050	"	0.0750	ND	98.6	70-130	0.284	30	
Ethylbenzene	0.0779	0.0050	"	0.0750	ND	104	70-130	3.92	30	
m,p-Xylene	0.147	0.010	"	0.150	ND	98.3	70-130	3.82	30	
o-Xylene	0.0753	0.0050	"	0.0750	ND	100	70-130	5.15	30	
1,2,4-Trimethylbenzene	0.0766	0.0050	"	0.0750	ND	102	70-130	2.58	30	
1,3,5-Trimethylbenzene	0.0756	0.0050	"	0.0750	ND	101	70-130	2.82	30	
Naphthalene	0.0729	0.0038	"	0.0750	ND	97.2	70-130	6.19	30	
Surrogate: 1,2-Dichloroethane-d4	*0.0420*		"	*0.0400*		*105*	*50-150*			
Surrogate: Toluene-d8	*0.0402*		"	*0.0400*		*100*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0392*		"	*0.0400*		*97.9*	*50-150*			

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

Extractable Petroleum Hydrocarbons by 8015 - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BFL0199 - EPA 3550A										
Blank (BFL0199-BLK1)				Prepared: 12/07/22 Analyzed: 12/08/22						
C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	*13.2*		*"*	*12.5*		*106*	*30-150*			
LCS (BFL0199-BS1)				Prepared: 12/07/22 Analyzed: 12/08/22						
C10-C28 (DRO)	542	50	mg/kg	500		108	70-130			
Surrogate: o-Terphenyl	*13.5*		*"*	*12.5*		*108*	*30-150*			
Matrix Spike (BFL0199-MS1)	**Source: 2212156-01**			Prepared: 12/07/22 Analyzed: 12/08/22						
C10-C28 (DRO)	374	50	mg/kg	500	10.6	72.7	70-130			
Surrogate: o-Terphenyl	*12.5*		*"*	*12.5*		*100*	*30-150*			
Matrix Spike Dup (BFL0199-MSD1)	**Source: 2212156-01**			Prepared: 12/07/22 Analyzed: 12/08/22						
C10-C28 (DRO)	384	50	mg/kg	500	10.6	74.6	70-130	2.56	20	
Surrogate: o-Terphenyl	*12.4*		*"*	*12.5*		*99.3*	*30-150*			

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BFL0202 - EPA 5030 Soil MS										
Blank (BFL0202-BLK1)				Prepared & Analyzed: 12/08/22						
Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	*0.0238*		*"*	*0.0333*		*71.5*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0310*		*"*	*0.0333*		*93.0*	*40-150*			
LCS (BFL0202-BS1)				Prepared & Analyzed: 12/08/22						
Acenaphthene	0.0357	0.00500	mg/kg	0.0333		107	31-137			
Anthracene	0.0341	0.00500	"	0.0333		102	30-120			
Benzo (a) anthracene	0.0309	0.00500	"	0.0333		92.6	30-120			
Benzo (a) pyrene	0.0307	0.00500	"	0.0333		92.0	30-120			
Benzo (b) fluoranthene	0.0322	0.00500	"	0.0333		96.7	30-120			
Benzo (k) fluoranthene	0.0370	0.00500	"	0.0333		111	30-120			
Chrysene	0.0376	0.00500	"	0.0333		113	30-120			
Dibenz (a,h) anthracene	0.0256	0.00500	"	0.0333		76.9	30-120			
Fluoranthene	0.0342	0.00500	"	0.0333		103	30-120			
Fluorene	0.0343	0.00500	"	0.0333		103	30-120			
Indeno (1,2,3-cd) pyrene	0.0236	0.00500	"	0.0333		70.7	30-120			
Pyrene	0.0362	0.00500	"	0.0333		109	35-142			
1-Methylnaphthalene	0.0269	0.00500	"	0.0333		80.6	35-142			
2-Methylnaphthalene	0.0228	0.00500	"	0.0333		68.3	35-142			
Surrogate: 2-Methylnaphthalene-d10	*0.0271*		*"*	*0.0333*		*81.3*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0336*		*"*	*0.0333*		*101*	*40-150*			

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

PAH by EPA Method 8270D SIM - Quality Control

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BFL0202 - EPA 5030 Soil MS										
Matrix Spike (BFL0202-MS1)	**Source: 2212094-02**			Prepared & Analyzed: 12/08/22						
Acenaphthene	0.0185	0.00500	mg/kg	0.0333	ND	55.4	31-137			
Anthracene	0.0179	0.00500	"	0.0333	ND	53.8	30-120			
Benzo (a) anthracene	0.0199	0.00500	"	0.0333	ND	59.6	30-120			
Benzo (a) pyrene	0.0173	0.00500	"	0.0333	ND	51.8	30-120			
Benzo (b) fluoranthene	0.0172	0.00500	"	0.0333	ND	51.7	30-120			
Benzo (k) fluoranthene	0.0183	0.00500	"	0.0333	ND	54.9	30-120			
Chrysene	0.0203	0.00500	"	0.0333	ND	60.8	30-120			
Dibenz (a,h) anthracene	0.0168	0.00500	"	0.0333	ND	50.4	30-120			
Fluoranthene	0.0181	0.00500	"	0.0333	ND	54.3	30-120			
Fluorene	0.0179	0.00500	"	0.0333	ND	53.7	30-120			
Indeno (1,2,3-cd) pyrene	0.0166	0.00500	"	0.0333	ND	49.9	30-120			
Pyrene	0.0194	0.00500	"	0.0333	ND	58.1	35-142			
1-Methylnaphthalene	0.0190	0.00500	"	0.0333	ND	56.9	15-130			
2-Methylnaphthalene	0.0154	0.00500	"	0.0333	ND	46.2	15-130			
Surrogate: 2-Methylnaphthalene-d10	*0.0196*		*"*	*0.0333*		*58.8*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0199*		*"*	*0.0333*		*59.6*	*40-150*			
Matrix Spike Dup (BFL0202-MSD1)	**Source: 2212094-02**			Prepared & Analyzed: 12/08/22						
Acenaphthene	0.0145	0.00500	mg/kg	0.0333	ND	43.5	31-137	23.9	30	
Anthracene	0.0140	0.00500	"	0.0333	ND	42.0	30-120	24.8	30	
Benzo (a) anthracene	0.0157	0.00500	"	0.0333	ND	47.1	30-120	23.4	30	
Benzo (a) pyrene	0.0166	0.00500	"	0.0333	ND	49.8	30-120	3.88	30	
Benzo (b) fluoranthene	0.0151	0.00500	"	0.0333	ND	45.2	30-120	13.5	30	
Benzo (k) fluoranthene	0.0150	0.00500	"	0.0333	ND	44.9	30-120	20.2	30	
Chrysene	0.0160	0.00500	"	0.0333	ND	47.9	30-120	23.9	30	
Dibenz (a,h) anthracene	0.0137	0.00500	"	0.0333	ND	41.1	30-120	20.4	30	
Fluoranthene	0.0144	0.00500	"	0.0333	ND	43.1	30-120	23.0	30	
Fluorene	0.0143	0.00500	"	0.0333	ND	42.8	30-120	22.6	30	
Indeno (1,2,3-cd) pyrene	0.0135	0.00500	"	0.0333	ND	40.4	30-120	21.0	30	
Pyrene	0.0149	0.00500	"	0.0333	ND	44.6	35-142	26.2	30	
1-Methylnaphthalene	0.0153	0.00500	"	0.0333	ND	45.9	15-130	21.5	50	
2-Methylnaphthalene	0.0152	0.00500	"	0.0333	ND	45.6	15-130	1.37	50	
Surrogate: 2-Methylnaphthalene-d10	*0.0155*		*"*	*0.0333*		*46.5*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0158*		*"*	*0.0333*		*47.3*	*40-150*			

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

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

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BFL0216 - EPA 3050B										
Blank (BFL0216-BLK1)				Prepared: 12/08/22 Analyzed: 12/09/22						
Boron	ND	0.0100	mg/L							
LCS (BFL0216-BS1)				Prepared: 12/08/22 Analyzed: 12/09/22						
Boron	4.24	0.0100	mg/L	5.00		84.7	80-120			
Duplicate (BFL0216-DUP1)		**Source: 2212122-01**		Prepared: 12/08/22 Analyzed: 12/09/22						
Boron	0.0261	0.0100	mg/L		0.0311			17.6	20	
Matrix Spike (BFL0216-MS1)		**Source: 2212122-01**		Prepared: 12/08/22 Analyzed: 12/09/22						
Boron	3.83	0.0100	mg/L	5.00	0.0311	75.9	75-125			
Matrix Spike Dup (BFL0216-MSD1)		**Source: 2212122-01**		Prepared: 12/08/22 Analyzed: 12/09/22						
Boron	4.55	0.0100	mg/L	5.00	0.0311	90.4	75-125	17.2	25	

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

Total Metals by EPA 6020B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BFL0200 - EPA 3050B										
Blank (BFL0200-BLK1)				Prepared: 12/07/22 Analyzed: 12/08/22						
Arsenic	ND	0.200	mg/kg wet							
Barium	ND	0.400	"							
Cadmium	ND	0.200	"							
Copper	0.0596	0.400	"							
Lead	ND	0.200	"							
Nickel	ND	0.400	"							
Selenium	ND	0.260	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							
LCS (BFL0200-BS1)				Prepared: 12/07/22 Analyzed: 12/08/22						
Arsenic	35.2	0.200	mg/kg wet	40.0		87.9	80-120			
Barium	33.2	0.400	"	40.0		83.0	80-120			
Cadmium	1.84	0.200	"	2.00		91.8	80-120			
Copper	37.0	0.400	"	40.0		92.6	80-120			
Lead	16.9	0.200	"	20.0		84.6	80-120			
Nickel	35.8	0.400	"	40.0		89.6	80-120			
Selenium	3.60	0.260	"	4.00		89.9	80-120			
Silver	1.90	0.0200	"	2.00		95.1	80-120			
Zinc	36.2	0.400	"	40.0		90.4	80-120			
Duplicate (BFL0200-DUP1)	**Source: 2212157-01**			Prepared: 12/07/22 Analyzed: 12/08/22						
Arsenic	0.642	0.216	mg/kg dry		0.652			1.60	20	
Barium	7.19	0.432	"		7.26			0.956	20	
Cadmium	0.0359	0.216	"		0.0367			2.38	20	
Copper	1.05	0.432	"		1.08			3.57	20	
Lead	1.12	0.216	"		1.14			1.87	20	
Nickel	0.725	0.432	"		0.726			0.119	20	
Selenium	ND	0.281	"		ND				20	
Silver	0.00605	0.0216	"		0.00605			0.00	20	
Zinc	3.78	0.432	"		3.90			3.20	20	

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

Total Metals by EPA 6020B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BFL0200 - EPA 3050B										
Matrix Spike (BFL0200-MS1)	**Source: 2212157-01**			Prepared: 12/07/22 Analyzed: 12/08/22						
Arsenic	39.0	0.216	mg/kg dry	43.2	0.652	88.7	75-125			
Barium	42.2	0.432	"	43.2	7.26	80.9	75-125			
Cadmium	1.59	0.216	"	2.16	0.0367	71.9	75-125			QM-05
Copper	36.5	0.432	"	43.2	1.08	82.1	75-125			
Lead	18.0	0.216	"	21.6	1.14	78.2	75-125			
Nickel	35.8	0.432	"	43.2	0.726	81.1	75-125			
Selenium	3.76	0.281	"	4.32	ND	86.9	75-125			
Silver	1.61	0.0216	"	2.16	0.00605	74.1	75-125			QM-05
Zinc	40.2	0.432	"	43.2	3.90	84.0	75-125			
Matrix Spike Dup (BFL0200-MSD1)	**Source: 2212157-01**			Prepared: 12/07/22 Analyzed: 12/08/22						
Arsenic	39.3	0.216	mg/kg dry	43.2	0.652	89.3	75-125	0.741	25	
Barium	43.2	0.432	"	43.2	7.26	83.2	75-125	2.34	25	
Cadmium	1.63	0.216	"	2.16	0.0367	73.8	75-125	2.60	25	QM-05
Copper	37.7	0.432	"	43.2	1.08	84.7	75-125	3.10	25	
Lead	18.2	0.216	"	21.6	1.14	78.9	75-125	0.911	25	
Nickel	36.8	0.432	"	43.2	0.726	83.5	75-125	2.77	25	
Selenium	3.89	0.281	"	4.32	ND	90.1	75-125	3.63	25	
Silver	1.63	0.0216	"	2.16	0.00605	74.9	75-125	1.15	25	QM-05
Zinc	40.9	0.432	"	43.2	3.90	85.7	75-125	1.82	25	

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

Hexavalent Chromium by EPA Method 7196 - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BFL0261 - 3060A_Mod										
Blank (BFL0261-BLK1)				Prepared & Analyzed: 12/09/22						
Chromium, Hexavalent	ND	0.30	mg/kg wet							
LCS (BFL0261-BS1)				Prepared & Analyzed: 12/09/22						
Chromium, Hexavalent	25.6	0.30	mg/kg wet	25.0		103	80-120			
Duplicate (BFL0261-DUP1)	**Source: 2212161-03**			Prepared & Analyzed: 12/09/22						
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND				20	
Matrix Spike (BFL0261-MS1)	**Source: 2212161-03**			Prepared & Analyzed: 12/09/22						
Chromium, Hexavalent	25.6	0.30	mg/kg dry	26.7	ND	96.0	75-125			
Matrix Spike Dup (BFL0261-MSD1)	**Source: 2212161-03**			Prepared & Analyzed: 12/09/22						
Chromium, Hexavalent	28.1	0.30	mg/kg dry	26.7	ND	105	75-125	9.33	20	

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

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

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BFL0190 - General Preparation										
Blank (BFL0190-BLK1)				Prepared: 12/07/22 Analyzed: 12/08/22						
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							
LCS (BFL0190-BS1)				Prepared: 12/07/22 Analyzed: 12/08/22						
Calcium	3.59	0.0500	mg/L wet	5.00		71.9	70-130			
Magnesium	3.77	0.0500	"	5.00		75.4	70-130			
Sodium	3.78	0.0500	"	5.00		75.6	70-130			

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

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

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BFL0224 - General Preparation										
Duplicate (BFL0224-DUP1)		**Source: 2212157-01**		Prepared: 12/08/22 Analyzed: 12/09/22						
% Solids	92.2		%		92.6			0.380	20	

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

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BFL0223 - General Preparation										
Blank (BFL0223-BLK1)				Prepared & Analyzed: 12/08/22						
Specific Conductance (EC)	ND	0.0100	mmhos/cm							
LCS (BFL0223-BS1)				Prepared & Analyzed: 12/08/22						
Specific Conductance (EC)	0.144	0.0100	mmhos/cm	0.150		96.0	95-105			
Duplicate (BFL0223-DUP1)		**Source: 2212052-21**		Prepared & Analyzed: 12/08/22						
Specific Conductance (EC)	1.08	0.0100	mmhos/cm		1.09			1.01	20	

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

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

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BFL0222 - General Preparation										
LCS (BFL0222-BS1)				Prepared & Analyzed: 12/08/22						
pH	9.12		pH Units	9.18		99.3	95-105			
Duplicate (BFL0222-DUP1)		**Source: 2212052-21**		Prepared & Analyzed: 12/08/22						
pH	9.03		pH Units		9.04			0.111	20	

Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - QC A Project Number: [none] Project Manager: Paul Henehan	**Reported:** 12/12/22 10:00

Notes and Definitions

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.
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