

FREMONT ENVIRONMENTAL INC.

February 9, 2024

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

Subject: **Excavation Report**
 20-4N-64W SESE Balboa Hanscome TB LOC
 SESE Sec. 20, T4N, R64W
 Weld County, Colorado
 Fremont Project No. C023-091
 Facility #481074, Remediation #25550

Dear Mr. Peterson:

Enclosed please find a copy of the above referenced Excavation Report for the 20-4N-64W SESE Balboa Hanscome TB LOC release site in Weld County, Colorado. The enclosed report describes excavation and sampling efforts to remediate impacted soil at the site.

Please contact me at (603) 477-6907 if you require any additional information.

Fremont appreciates the opportunity to provide this service.

Sincerely,
FREMONT ENVIRONMENTAL INC.



Jeff T. Griggs
Consultant

Enclosure

EXCAVATION REPORT

NOBLE ENERGY INC.

20-4N-64W SESE BALBOA HANSCOME TB LOC

WELD COUNTY, COLORADO

FREMONT PROJECT NO. C023-091

FACILITY #481074, REMEDIATION #25550

**Prepared by:
Fremont Environmental Inc.
1759 Redwing Lane
Broomfield, CO 80020
(303) 956-8714**

February 9, 2024

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EXCAVATION REPORT
NOBLE ENERGY INC.
20-4N-64W SESE BALBOA HANSCOME TB LOC
WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-091
FACILITY #481074, REMEDIATION #25550

1.0 INTRODUCTION

The purpose of this document is to present information collected during the excavation of petroleum-impacted soil at the 20-4N-64W SESE Balboa Hanscome TB LOC location in Weld County, Colorado. This excavation project was completed on November 20, 2023.

2.0 BACKGROUND INFORMATION

2.1 Site Location

The 20-4N-64W SESE Balboa Hanscome TB LOC is located approximately 6.61 miles south of Kersey, Colorado in Weld County as shown on Figure 1. The site is located in an agricultural area approximately 0.09 miles west of the intersection of County Road 53 and County Road 42. The location is further described as the SE $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 20, Township 4N, Range 64W.

2.2 Site History

The site consisted of the 20-4N-64W SESE Balboa Hanscome TB LOC tank battery which serviced the Balboa 20-1, Hanscome C 28-30D and Hanscome C 29-27D natural gas wells. The Balboa 20-1 natural gas well was drilled in 1986 to a depth of approximately 7,113 feet. The Hanscome C 28-30D natural gas well was drilled in 2009 to a depth of approximately 7,183 feet. The Hanscome C 29-27D natural gas well was drilled in 2009 to a depth of approximately 7,193 feet.

A historical release was discovered adjacent to one of the 20-4N-64W SESE Balboa Hanscome TB LOC produced water vaults and separators during decommissioning activities in March of 2023. Groundwater was not encountered at that time.

3.0 FIELD ACTIVITIES

3.1 Soil Excavation and Sampling

Soil remediation efforts consisted of the excavation and removal of petroleum impacted soil directly adjacent to one of the former 20-4N-64W SESE Balboa Hanscome TB LOC produced water vaults, and at one of the former separators. The excavation extent measured approximately 10 feet x 10 feet, with a maximum depth of three feet for both excavations. The soil consisted of well-graded sand to each of the excavation's maximum depth of approximately three feet. Groundwater was not encountered in either excavation. Each excavation extent is illustrated on Figures 2 through 4.

The excavation of impacts adjacent to the former 20-4N-64W SESE Balboa Hanscome TB LOC produced water vault and separator was completed on November 20, 2023. Soil samples were collected, as grab samples, from each of the excavation's sidewalls at 2.5 feet and at the floor of each excavation at three feet below ground surface.

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, 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, specific conductance (EC) by EPA Method 120.1 saturated paste

extraction, saturated paste extraction of soluble nutrients by EPA method 6020/USDA60 6(2) for calculated analysis of sodium absorption ratio (SAR), pH by saturated paste extraction APHA/ASTM/EPA methods, Total Metals by EPA method 6020B, and Hexavalent Chromium by EPA method 7196. The laboratory reports and chain-of-custody documentation are included in Appendix B.

A summary of the soil laboratory data is included in Tables 1 through 4. The laboratory analyses indicate that organic petroleum constituents in soil samples collected from the sidewalls and floor of each excavation achieved the ECMC Table 915-1 Protection of Groundwater Soil Screening Levels (PGSSLs). However, three samples ((PWV) S01@2.5', (PWV) E01@2.5' and (PWV) W01@2.5') exceeded ECMC Table 915-1 Soil Suitability Limits for pH.

Additionally, all samples exceeded ECMC Table 915-1 residential soil screening levels for arsenic. Local background samples collected adjacent to both excavations, in native soil at a similar depth of three feet, also exceeded the ECMC Table 915-1 standards for arsenic. Therefore, it is proposed that these exceedances be attributed to native soil conditions.

A total of approximately 14 tons (~ 10 cubic yards) of petroleum impacted soil was removed from each excavation by Tasman during remediation efforts. Impacted soil was disposed of at Buffalo Ridge Landfill in Keenesburg, Colorado as non-hazardous waste, and the excavation was backfilled using clean fill dirt.

4.0 DISCUSSION

As demonstrated by the soil sampling, petroleum impacted soil was removed at the 20-4N-64W SESE Balboa Hanscome TB LOC produced water vault and separator via excavation. This was confirmed by analysis of soil samples collected from the exterior

sidewalls and floor of each excavation which were below the ECMC Table 915-1 PGSSLs for organic petroleum constituents. Approximately 20 cubic yards of impacted soil were removed and transported to the landfill. The soil data for the excavation is illustrated and summarized in the attached tables and figures.

Elevated concentrations of arsenic are proposed to be attributed to native soil conditions, based on concentrations observed in local background samples collected adjacent to the site's excavations.

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.**

Prepared By:

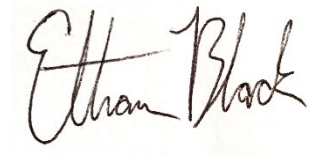


Jeff T. Griggs
Geologist

2/9/24

Date _____

Reviewed by:

A handwritten signature in black ink that reads "Ethan Black". The signature is written in a cursive style with a large initial "E".

2/9/24

Date _____

Ethan D. Black, P.G.

Senior Consultant

TABLES

TABLE 1
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
20-4N-64W SESE BALBOA HANSCOME TB LOC, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-091

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)
ECMC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500**		
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500**		
(PWV) B01@3.0'	11/20/2023	3.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
(PWV) N01@2.5'	11/20/2023	2.5 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
(PWV) S01@2.5'	11/20/2023	2.5 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
(PWV) E01@2.5'	11/20/2023	2.5 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
(PWV) W01@2.5'	11/20/2023	2.5 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
(SEP) B01@3.0'	11/20/2023	3.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
(SEP) N01@2.5'	11/20/2023	2.5 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
(SEP) S01@2.5'	11/20/2023	2.5 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
(SEP) E01@2.5'	11/20/2023	2.5 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
(SEP) W01@2.5'	11/20/2023	2.5 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50

Bold faced values exceed the ECMC Table 915-1 concentrations

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

Green highlighted cells indicate soil removed via excavation

* Indicates laboratory minimum detection limit in excess of SSL

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

NA - Not analyzed

TABLE 2
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
20-4N-64W SESE BALBOA HANSCOME TB LOC, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-091

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)
ECMC 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
ECMC 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
(PWV) B01@3.0'	11/20/2023	3.0 Ft	<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) N01@2.5'	11/20/2023	2.5 Ft	<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) S01@2.5'	11/20/2023	2.5 Ft	<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) E01@2.5'	11/20/2023	2.5 Ft	<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) W01@2.5'	11/20/2023	2.5 Ft	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00636	<0.00500	<0.00500	0.00586	<0.00500	<0.00500
(SEP) B01@3.0'	11/20/2023	3.0 Ft	<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) N01@2.5'	11/20/2023	2.5 Ft	<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) S01@2.5'	11/20/2023	2.5 Ft	<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) E01@2.5'	11/20/2023	2.5 Ft	<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) W01@2.5'	11/20/2023	2.5 Ft	<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 ECMC 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

Green highlighted cells indicate soil removed via excavation

TABLE 3
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE ENERGY INC.
20-4N-64W SESE BALBOA HANSCOME TB LOC, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-091

Sample ID	Sample Date	Depth (ft)	pH	EC (mmhos/cm)	SAR	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
Max. Background Concentration (or Concentration Range)			7.82	-	-	-
(PWV) B01@3.0'	11/20/2023	3.0 Ft	8.02	0.202	0.173	<2.00
(PWV) N01@2.5'	11/20/2023	2.5 Ft	7.66	0.0524	0.248	<2.00
(PWV) S01@2.5'	11/20/2023	2.5 Ft	8.35	0.148	0.137	<2.00
(PWV) E01@2.5'	11/20/2023	2.5 Ft	8.35	0.172	0.444	<2.00
(PWV) W01@2.5'	11/20/2023	2.5 Ft	8.58	0.160	0.364	<2.00
(SEP) B01@3.0'	11/20/2023	3.0 Ft	7.25	0.0548	0.0215	<2.00
(SEP) N01@2.5'	11/20/2023	2.5 Ft	7.36	0.0251	0.0153	<2.00
(SEP) S01@2.5'	11/20/2023	2.5 Ft	7.07	0.0798	0.109	<2.00
(SEP) E01@2.5'	11/20/2023	2.5 Ft	7.97	0.0576	0.0310	<2.00
(SEP) W01@2.5'	11/20/2023	2.5 Ft	7.85	0.0373	0.0157	<2.00
BKG01@3.0'	11/20/2023	3.0 Ft	7.82	0.0555	0.0253	<2.00
BKG02@3.0'	11/20/2023	3.0 Ft	7.06	0.0667	0.193	<2.00
BKG03@3.0'	11/20/2023	3.0 Ft	7.00	0.0612	0.212	<2.00
BKG04@3.0'	11/20/2023	3.0 Ft	7.52	0.0527	0.0438	<2.00
BKG05@3.0'	11/20/2023	3.0 Ft	7.79	0.0427	0.0446	<2.00

Bold faced, yellow highlighted values exceed the ECMC Table 915-1 concentrations

Green highlighted cells indicate soil removed via excavation

Orange highlighted cells exceed of the maximum background concentration, or concentration range

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

NA - Not analyzed

Local Background Samples (BKG01, BKG02, BKG03, BKG04, BKG05)

TABLE 4
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
20-4N-64W SESE BALBOA HANSCOME TB LOC, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-091

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)
ECMC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
125% Max. Background Concentration			4.05	-	-	-	-	-	-	-	-	-
(PWV) B01@3.0'	11/20/2023	3.0 Ft	3.59	35.1	0.355	<0.30	4.88	5.25	4.28	<0.260	0.199	10.8
(PWV) N01@2.5'	11/20/2023	2.5 Ft	3.37	31.4	0.340	<0.30	4.06	3.25	3.92	<0.260	0.189	9.67
(PWV) S01@2.5'	11/20/2023	2.5 Ft	3.35	33.3	0.369	<0.30	3.99	3.97	4.06	<0.260	0.202	9.68
(PWV) E01@2.5'	11/20/2023	2.5 Ft	3.55	31.8	0.369	<0.30	4.19	3.89	4.17	<0.260	0.206	10.2
(PWV) W01@2.5'	11/20/2023	2.5 Ft	3.32	59.3	<0.200	<0.30	5.03	5.91	4.15	<0.260	0.213	11.9
(SEP) B01@3.0'	11/20/2023	3.0 Ft	3.80	35.9	<0.200	<0.30	4.10	3.32	4.17	<0.260	0.324	9.59
(SEP) N01@2.5'	11/20/2023	2.5 Ft	3.45	32.2	0.374	<0.30	4.01	3.80	4.09	<0.260	0.196	9.67
(SEP) S01@2.5'	11/20/2023	2.5 Ft	3.48	31.5	0.337	<0.30	4.00	3.49	3.98	<0.260	0.198	9.34
(SEP) E01@2.5'	11/20/2023	2.5 Ft	3.54	28.9	0.346	<0.30	4.04	3.54	4.01	<0.260	0.206	9.67
(SEP) W01@2.5'	11/20/2023	2.5 Ft	3.42	28.9	0.336	<0.30	4.00	3.21	4.02	<0.260	0.200	9.20
BKG01@3.0'	11/20/2023	3.0 Ft	3.22	32.4	0.335	<0.30	3.77	3.83	3.81	<0.260	0.186	9.05
BKG02@3.0'	11/20/2023	3.0 Ft	3.03	39.3	0.353	<0.30	3.70	3.89	4.08	<0.260	0.190	9.12
BKG03@3.0'	11/20/2023	3.0 Ft	3.24	33.1	0.350	<0.30	3.84	3.67	3.79	<0.260	0.193	9.26
BKG04@3.0'	11/20/2023	3.0 Ft	2.92	33.1	0.346	<0.30	3.55	4.26	3.63	<0.260	0.200	8.99
BKG05@3.0'	11/20/2023	3.0 Ft	3.24	33.3	0.354	<0.30	3.98	3.80	3.95	<0.260	0.190	9.72

Bold faced values exceed the ECMC Table 915-1 concentrations

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

Orange highlighted cells exceed 125% of the maximum background concentration

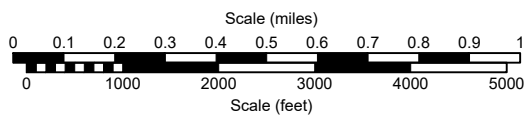
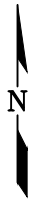
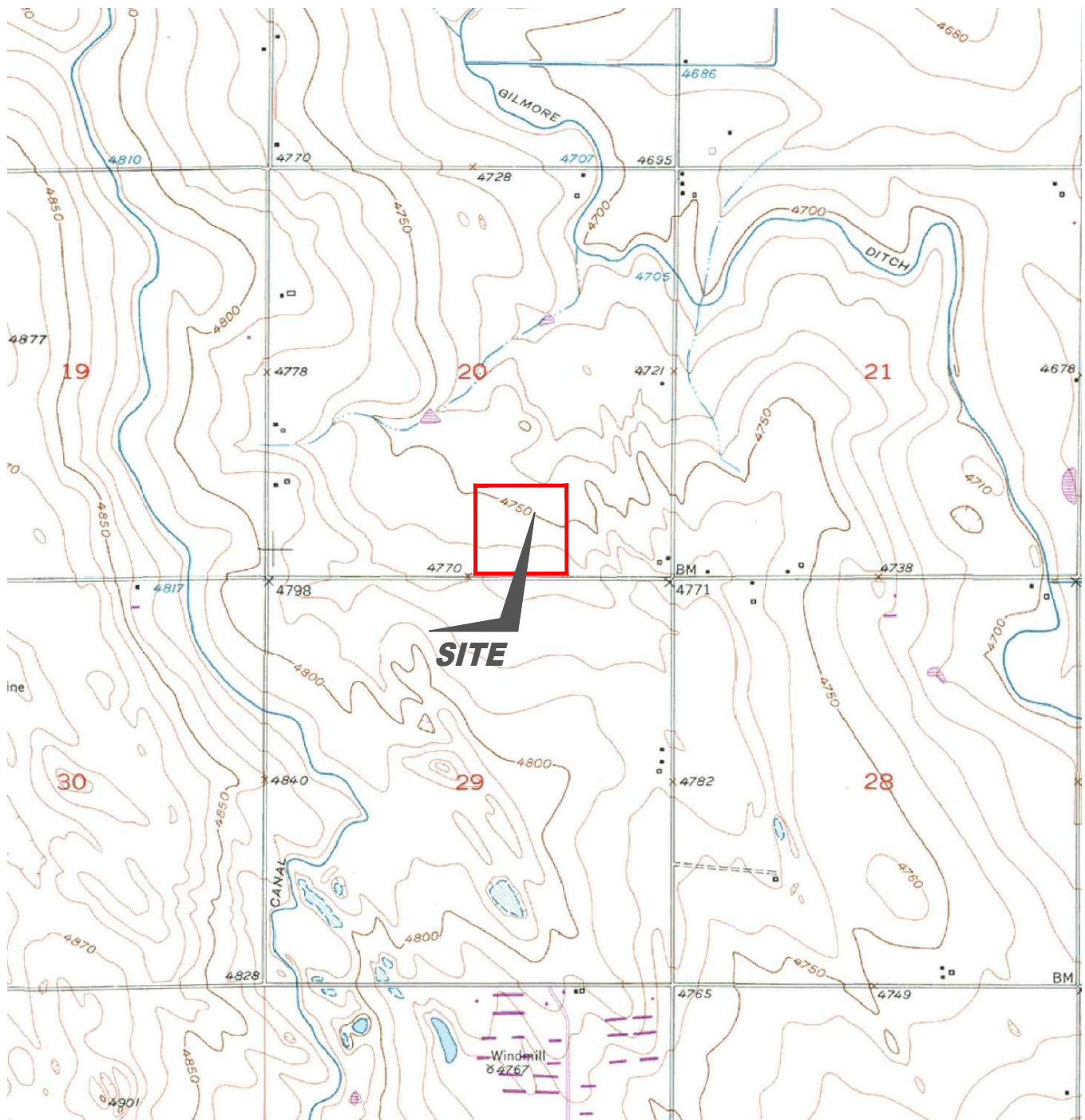
* Indicates laboratory minimum detection limit in excess of SSL

Green highlighted cells indicate soil removed via excavation

NA - Not analyzed

Local Background Samples (BKG01, BKG02, BKG03, BKG04, BKG05)

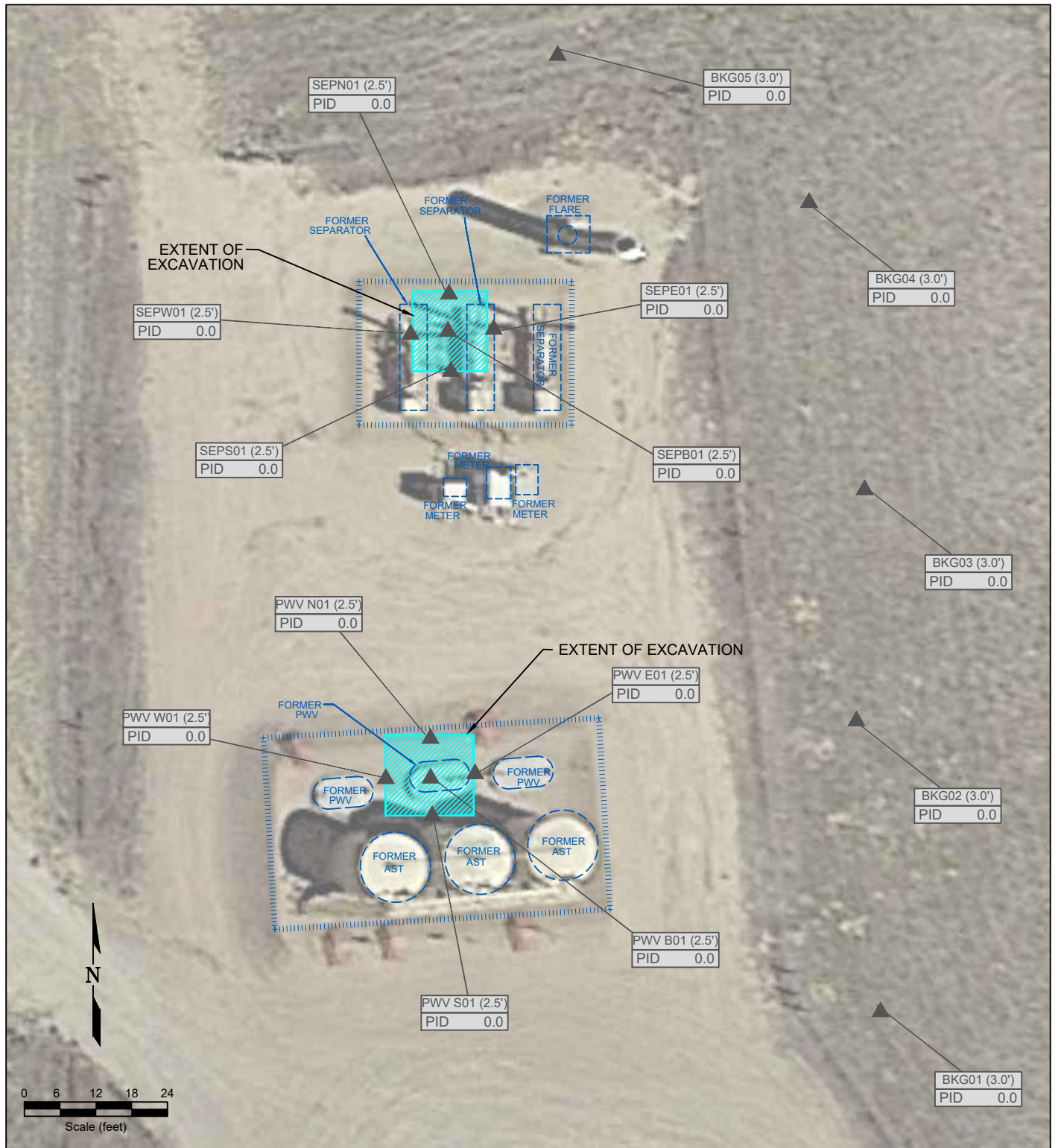
FIGURES



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP
NOBLE ENERGY, INC.
20-4N-64W SESE BALBOA HANSCOME TB LOC
 SESE Sec. 20, T4N, R64W, 6th PM
 Weld County, Colorado
 40.291220°, -104.567100°

Project # CO23-091	API #	Facility # 481074	
Date 2/2/24	Remediation # 25550	Filename 23091T1	



LEGEND

- WELLHEAD LOCATION
 - ▲ PID READING SAMPLE LOCATION
 - ABOVE GROUND STORAGE TANK
 - FORMER FORMER FACILITY
 - AREA EXCAVATED
 - FLOW LINE
 - CONTAINMENT BERM
 - FENCE LINE
 - EXTENT OF EXCAVATION
- PWV S01 (2.5') SAMPLE IDENTIFICATION AND DEPTH (ft)
 PID 0.0 PHOTO IONIZATION DETECTION / PARTS PER MILLION

Figure 2

SITE MAP

NOBLE ENERGY, INC.

20-4N-64W SESE BALBOA HANSCOME TB LOC

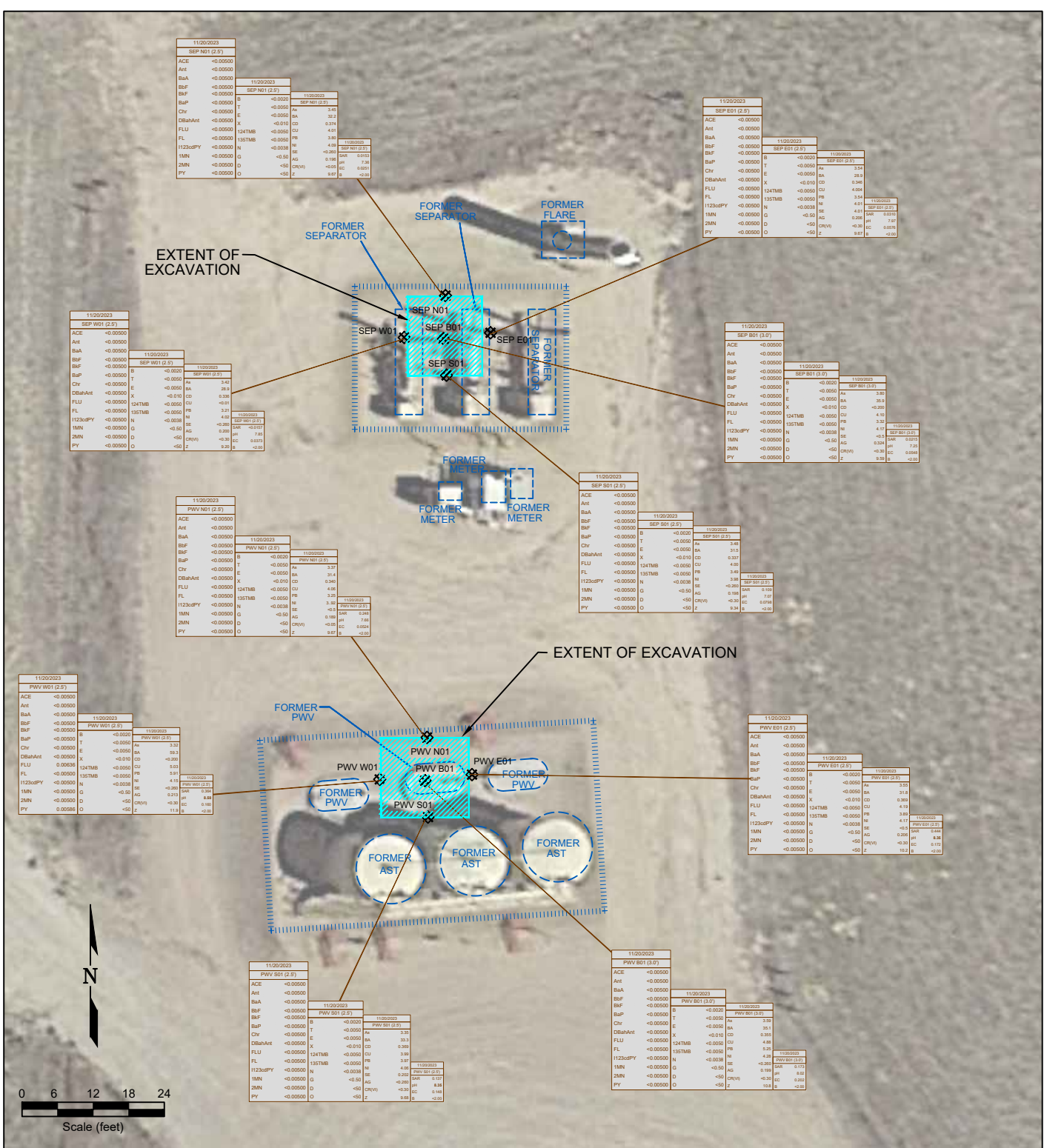
SESE Sec. 20, T4N, R64W, 6th PM

Weld County, Colorado

40.291220°, -104.567100°

Project # CO23-091	API #	Facility # 481074
Date 2/2/24	Remediation # 25550	Filename 23091Q1





LEGEND

- WELLHEAD LOCATION
- SOIL SAMPLE LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- AREA EXCAVATED
- FLOW LINE
- CONTAINMENT BERM
- FENCE LINE
- EXTENT OF EXCAVATION

11/20/2023	DATE SAMPLED	11/20/2023	DATE SAMPLED	11/20/2023	DATE SAMPLED
PWW N01 (2.5')	SAMPLE ID and DEPTH (ft)	PWW N01 (2.5')	SAMPLE ID and DEPTH (ft)	PWW N01 (2.5')	SAMPLE ID and DEPTH (ft)
ACE	ACE NAPHTHENE (mg/kg)	B	BENZENE (mg/kg)	Na	ARSENIC (mg/kg)
Ant	ANTHRACENE (mg/kg)	T	TOLUENE (mg/kg)	Ca	CADMIUM (mg/kg)
BaA	BENZO (A) ANTHRACENE (mg/kg)	X	ETHYLBENZENE (mg/kg)	Co	COPPER (mg/kg)
BaP	BENZO (B) FLUORANTHENE (mg/kg)	FLU	TOTAL XYLENES (mg/kg)	Pb	LEAD (mg/kg)
BbF	BENZO (K) FLUORANTHENE (mg/kg)	124TMB	1,2,4-TRIMETHYLBENZENE (mg/kg)	Ni	NICKEL (mg/kg)
BkF	BENZO (A) PYRENE (mg/kg)	157TMB	1,3,5-TRIMETHYLBENZENE (mg/kg)	Ag	SILVER (mg/kg)
Chr	CHRYSENE (mg/kg)	N	TPH-GRO (mg/kg)	Cd	HEXAVALENT CHROMIUM (mg/kg)
DBaAnt	DIBENZ (A,H) ANTHRACENE (mg/kg)	1123aPPY	TPH-DRO (mg/kg)	Zn	ZINC (mg/kg)
FLU	FLUORANTHENE (mg/kg)	1MN			
1123aPPY	FLUORENE (mg/kg)	1MN			
124TMB	INDENO (1,2,3-CD) PYRENE (mg/kg)	1MN			
157TMB	1-METHYLNAPHTHALENE (mg/kg)	1MN			
N	2-METHYLNAPHTHALENE (mg/kg)	1MN			
Na	PYRENE (mg/kg)	1MN			
Ca		1MN			
Co		1MN			
Cu		1MN			
Pb		1MN			
Ni		1MN			
Ag		1MN			
Cd		1MN			
Cr(VI)		1MN			
Zn		1MN			

Figure 3
SOIL CHEMISTRY MAP
NOBLE ENERGY, INC.
20-4N-64W SESE BALBOA HANSCOME TB LOC
 SESE Sec. 20, T4N, R64W, 6th PM
 Weld County, Colorado
 40.291220° , -104.567100°

Project # CO23-091	API #	Facility # 481074
Date 2/2/24	Remediation # 25550	Filename 23091Q1



LEGEND

- WELLHEAD LOCATION
- ⊗ SOIL SAMPLE LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- AREA EXCAVATED
- CONTAINMENT BERM
- FENCE LINE
- EXTENT OF EXCAVATION
- FLOW LINE
- NOT ANALYZED

11/09/2003 PWV NBST (3.5')	DATE SAMPLED SAMPLE ID and DEPTH (ft)	11/09/2003 PWV NBST (3.5')	DATE SAMPLED SAMPLE ID and DEPTH (ft)	11/09/2003 PWV NBST (3.5')	DATE SAMPLED SAMPLE ID & DEPTH (ft)
ACE	ACENAPHTHENE (mg/kg)	B	BENZENE (mg/kg)	NA	ARSENIC (mg/kg)
AN	ANTHRACENE (mg/kg)	F	TOLUENE (mg/kg)	NA	SARILUM (mg/kg)
BA	BENZO (A) ANTHRACENE (mg/kg)	K	TOTAL XYLENES (mg/kg)	NA	CADMIUM (mg/kg)
BF	BENZO (B) FLUORANTHENE (mg/kg)	NA	1,2,4-TRIMETHYLBENZENE (mg/kg)	NA	COPPER (mg/kg)
BP	BENZO (K) FLUORANTHENE (mg/kg)	NA	1,3,5-TRIMETHYLBENZENE (mg/kg)	NA	LEAD (mg/kg)
BP	BENZO (A) PYRENE (mg/kg)	NA	NAPHTHALENE (mg/kg)	NA	NICKEL (mg/kg)
Ch	CHRYSENE (mg/kg)	G	TPH-GRO (mg/kg)	NA	SELENIUM (mg/kg)
DBA/BA	DIBENZO (A,H) ANTHRACENE (mg/kg)	H	TPH-ORO (mg/kg)	NA	SILVER (mg/kg)
FLU	FLUORANTHENE (mg/kg)	D	TPH-ORD (mg/kg)	NA	HEXAVALENT CHROMIUM (mg/kg)
FL	FLUORENE (mg/kg)	NA		NA	ZINC (mg/kg)
INDEN	INDENO (1,2,3-CD) PYRENE (mg/kg)				
1,2,3,4-PPY	1-METHYLNAPHTHALENE (mg/kg)				
MAN	2-METHYLNAPHTHALENE (mg/kg)				
MAN	PYRENE (mg/kg)				
11/09/2003 PWV NBST (3.5') <td>DATE SAMPLED SAMPLE ID & DEPTH (ft)</td> <td>11/09/2003 PWV NBST (3.5') <td>DATE SAMPLED SAMPLE ID & DEPTH (ft)</td> <td>11/09/2003 PWV NBST (3.5') <td>DATE SAMPLED SAMPLE ID & DEPTH (ft)</td> </td></td>	DATE SAMPLED SAMPLE ID & DEPTH (ft)	11/09/2003 PWV NBST (3.5') <td>DATE SAMPLED SAMPLE ID & DEPTH (ft)</td> <td>11/09/2003 PWV NBST (3.5') <td>DATE SAMPLED SAMPLE ID & DEPTH (ft)</td> </td>	DATE SAMPLED SAMPLE ID & DEPTH (ft)	11/09/2003 PWV NBST (3.5') <td>DATE SAMPLED SAMPLE ID & DEPTH (ft)</td>	DATE SAMPLED SAMPLE ID & DEPTH (ft)
Ag	SAR (units)	Ag	ARSENIC (mg/kg)	Ag	ARSENIC (mg/kg)
pH	pH (pH units)	BA	SARILUM (mg/kg)	BA	SARILUM (mg/kg)
EC	EC (mmhos/cm)	CD	CADMIUM (mg/kg)	CD	CADMIUM (mg/kg)
CR(VI)	CR(VI) (mg/kg)	CU	COPPER (mg/kg)	CU	COPPER (mg/kg)
Z	ZINC (mg/kg)	PB	LEAD (mg/kg)	PB	LEAD (mg/kg)
		NI	NICKEL (mg/kg)	NI	NICKEL (mg/kg)
		SE	SELENIUM (mg/kg)	SE	SELENIUM (mg/kg)
		SI	SILVER (mg/kg)	SI	SILVER (mg/kg)
		CR(VI)	HEXAVALENT CHROMIUM (mg/kg)	CR(VI)	HEXAVALENT CHROMIUM (mg/kg)
		Z	ZINC (mg/kg)	Z	ZINC (mg/kg)

**Figure 4
BACKGROUND SAMPLE SOIL CHEMISTRY MAP
NOBLE ENERGY, INC.
20-4N-64W SESE BALBOA HANSCOME TB LOC
SESE Sec. 20, T4N, R64W, 6th PM
Weld County, Colorado
40.291220°, -104.567100°**

Project # CO23-091	API #	Facility # 481074
Date 2/2/24	Remediation # 25550	Filename 23091Q1

APPENDIX A

PHOTO LOG

Photo Log



Description:

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Photo Log



Description:

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Photo Log



Description:

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Photo Log



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APPENDIX B

LABORATORY DOCUMENTATION

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

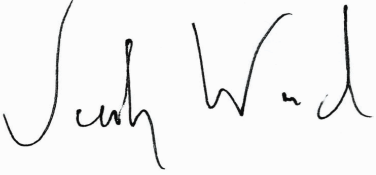
January 15, 2024

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549

RE: Noble - 20-4N-64W SESE Balboa Hanscome TB
Work Order #2311412

Enclosed are the results of analyses for samples received by Summit Scientific on 11/20/23 11:52. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large, stylized "J" and "W".

Jacob Wood For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
(PWV) B01@3.0'	2311412-01	Soil	11/20/23 00:00	11/20/23 11:52
(PWV) N01@2.5'	2311412-02	Soil	11/20/23 00:00	11/20/23 11:52
(PWV) S01@2.5'	2311412-03	Soil	11/20/23 00:00	11/20/23 11:52
(PWV) E01@2.5'	2311412-04	Soil	11/20/23 00:00	11/20/23 11:52
(PWV) W01@2.5'	2311412-05	Soil	11/20/23 00:00	11/20/23 11:52
(SEP) B01@3.0'	2311412-06	Soil	11/20/23 00:00	11/20/23 11:52
(SEP) N01@2.5'	2311412-07	Soil	11/20/23 00:00	11/20/23 11:52
(SEP) S01@2.5'	2311412-08	Soil	11/20/23 00:00	11/20/23 11:52
(SEP) E01@2.5'	2311412-09	Soil	11/20/23 00:00	11/20/23 11:52
(SEP) W01@2.5'	2311412-10	Soil	11/20/23 00:00	11/20/23 11:52
BKG01@3.0'	2311412-11	Soil	11/20/23 00:00	11/20/23 11:52
BKG02@3.0'	2311412-12	Soil	11/20/23 00:00	11/20/23 11:52
BKG03@3.0'	2311412-13	Soil	11/20/23 00:00	11/20/23 11:52
BKG04@3.0'	2311412-14	Soil	11/20/23 00:00	11/20/23 11:52
BKG05@3.0'	2311412-15	Soil	11/20/23 00:00	11/20/23 11:52

Summit Scientific

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

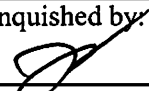
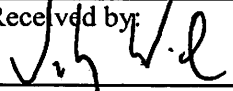
SUMMIT SCIENTIFIC

4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID
2311412
Page **1** of **1**

Send Data To:		Send Invoice To:	
Client: Fremont Env	Project Manager: Paul Henchen	Company: Noble	
Address:	E-Mail: Paulh@fremontenv.com	Project Name/Location:	
City/State/Zip:	jeffg@fremontenv.com Ethemb@fremontenv.com	AFE#:	
Phone:	Project Name: 20-4N-64W SESE Balboa Hansen TB	PO/Billing Codes:	
Sampler Name: J6	Project Number:	Contact:	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested						Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX+N	TMS (915)	PRD, ORD, GRO	PAHs (915)		EC, PH, SAR, <small>Boron</small>
1	(PUV) B01@3.0'	11/20/23		2			X			X			X	X	X	X		
2	(PUV) N01@2.5'																	
3	(PUV) S01@2.5'																	
4	(PUV) E01@2.5'																	
5	(PUV) W01@2.5'																	
6	(SEP) B01@3.0'																	
7	(SEP) N01@2.5'																	
8	(SEP) S01@2.5'																	
9	(SEP) E01@2.5'																	
10	(SEP) W01@2.5'			2									X	X	X	X		
11	BK601@3.0'			1														
12	BK602@3.0'			1														
13	BK603@3.0'			1														
14	BK604@3.0'			1														
15	BK605@3.0'			1												X	X	

Relinquished by: 	Date/Time: 11/20/23 11:52	Received by: 	Date/Time: 11/20/23 11:52	TAT Business Days	Field DO	Notes: Bill to Noble
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day <input type="checkbox"/>	Field ORP	
Relinquished by:	Date/Time:	Received by:	Date/Time:	2 Days <input type="checkbox"/>	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days <input type="checkbox"/>	Field Temp.	
Temperature Upon Receipt: <u>16.9</u>	Corrected Temperature	IR gun #: <u>2</u>	HNO3 lot #:	Standard <input type="checkbox"/>	Field Turb.	

S₂

Sample Receipt Checklist

S2 Work Order# 2311412

Client: Noble Fremont Client Project ID: 20-4N-64W SESE Ballboa Hanscome TB LOC

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

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

Temp (°C) 16.9 Thermometer # 2

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on file
If custody seals are present, are they intact? ⁽¹⁾	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely? ⁽¹⁾	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	no sample times
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"/>	
<u>Additional Comments (if any):</u>				

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

John Wild
Custodian Printed Name

11/20/23 11:52
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(PWV) B01@3.0'
2311412-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BGK0781	11/20/23	11/20/23	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: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0410	102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0423	106 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0409	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BGK0782	11/20/23	11/20/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	10.4	83.4 %	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 - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(PWV) B01@3.0'
2311412-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGK0785	11/21/23	11/22/23	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: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0159	47.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0169	50.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGK0800	11/21/23	11/23/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(PWV) B01@3.0'
2311412-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.59	0.200	mg/kg dry	1	BGK0810	11/21/23	11/22/23	EPA 6020B	
Barium	35.1	0.400	"	"	"	"	"	"	
Cadmium	0.355	0.200	"	"	"	"	"	"	
Copper	4.88	0.400	"	"	"	"	"	"	
Lead	5.25	0.200	"	"	"	"	"	"	
Nickel	4.28	0.400	"	"	"	"	"	"	
Silver	0.199	0.0200	"	"	"	"	"	"	
Zinc	10.8	0.400	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGK0813	11/21/23	11/22/23	EPA 7196A	

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

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	27.5	0.0500	mg/L dry	1	BGK0784	11/20/23	11/22/23	EPA 6020B	
Magnesium	4.60	0.0500	"	"	"	"	"	"	
Sodium	3.73	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.173	0.00100	units	1	BGK0872	11/22/23	11/22/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.0		%	1	BGK0798	11/21/23	11/21/23	Calculation	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(PWV) B01@3.0'
2311412-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/20/23 00:00**

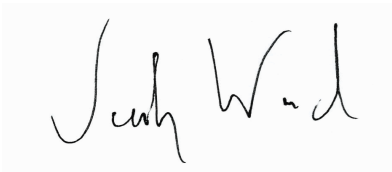
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.202	0.0100	mmhos/cm	1	BGK0793	11/21/23	11/21/23	EPA 120.1	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.02		pH Units	1	BGK0794	11/21/23	11/21/23	EPA 9045D	

Summit Scientific



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



Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(PWV) B01@3.0'
2311412-01 (Soil)


Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Selenium	ND	0.260	mg/kg dry	1	BGL0976	11/21/23	01/02/24	EPA 6020B	

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 - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(PWV) N01@2.5'
2311412-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BGK0781	11/20/23	11/20/23	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: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0439	110 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0433	108 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0407	102 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BGK0782	11/20/23	11/20/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	10.4	83.5 %	30-150	"	"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(PWV) N01@2.5'
2311412-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGK0785	11/21/23	11/22/23	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: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0158	47.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0155	46.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGK0800	11/21/23	11/23/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(PWV) N01@2.5'
2311412-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.37	0.200	mg/kg dry	1	BGK0810	11/21/23	11/22/23	EPA 6020B	
Barium	31.4	0.400	"	"	"	"	"	"	
Cadmium	0.340	0.200	"	"	"	"	"	"	
Copper	4.06	0.400	"	"	"	"	"	"	
Lead	3.25	0.200	"	"	"	"	"	"	
Nickel	3.92	0.400	"	"	"	"	"	"	
Silver	0.189	0.0200	"	"	"	"	"	"	
Zinc	9.67	0.400	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGK0813	11/21/23	11/22/23	EPA 7196A	

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

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	111	0.0500	mg/L dry	1	BGK0784	11/20/23	11/22/23	EPA 6020B	
Magnesium	23.2	0.0500	"	"	"	"	"	"	
Sodium	11.0	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.248	0.00100	units	1	BGK0872	11/22/23	11/22/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.6		%	1	BGK0798	11/21/23	11/21/23	Calculation	

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 - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(PWV) N01@2.5'
2311412-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/20/23 00:00**

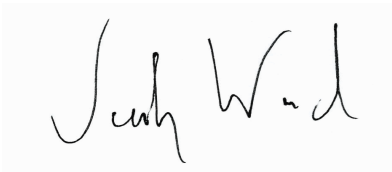
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0524	0.0100	mmhos/cm	1	BGK0793	11/21/23	11/21/23	EPA 120.1	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.66		pH Units	1	BGK0794	11/21/23	11/21/23	EPA 9045D	

Summit Scientific



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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(PWV) N01@2.5'
2311412-02 (Soil)


Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Selenium	ND	0.260	mg/kg dry	1	BGL0976	11/21/23	01/02/24	EPA 6020B	

Summit Scientific



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(PWV) S01@2.5'
2311412-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BGK0781	11/20/23	11/20/23	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: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0424	106 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0420	105 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0408	102 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BGK0782	11/20/23	11/20/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	8.14	65.2 %	30-150	"	"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(PWV) S01@2.5'
2311412-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGK0785	11/21/23	11/22/23	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: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0155	46.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0155	46.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGK0800	11/21/23	11/23/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(PWV) S01@2.5'
2311412-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.35	0.200	mg/kg dry	1	BGK0810	11/21/23	11/22/23	EPA 6020B	
Barium	33.3	0.400	"	"	"	"	"	"	
Cadmium	0.369	0.200	"	"	"	"	"	"	
Copper	3.99	0.400	"	"	"	"	"	"	
Lead	3.97	0.200	"	"	"	"	"	"	
Nickel	4.06	0.400	"	"	"	"	"	"	
Silver	0.202	0.0200	"	"	"	"	"	"	
Zinc	9.68	0.400	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGK0813	11/21/23	11/22/23	EPA 7196A	

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

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	30.0	0.0500	mg/L dry	1	BGK0784	11/20/23	11/22/23	EPA 6020B	
Magnesium	5.44	0.0500	"	"	"	"	"	"	
Sodium	3.11	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.137	0.00100	units	1	BGK0872	11/22/23	11/22/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.0		%	1	BGK0798	11/21/23	11/21/23	Calculation	

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 - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(PWV) S01@2.5'
2311412-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/20/23 00:00**

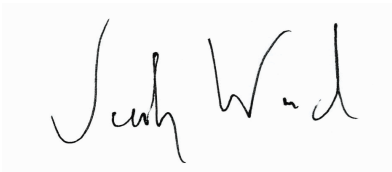
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.148	0.0100	mmhos/cm	1	BGK0793	11/21/23	11/21/23	EPA 120.1	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.35		pH Units	1	BGK0794	11/21/23	11/21/23	EPA 9045D	

Summit Scientific



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



Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(PWV) S01@2.5'
2311412-03 (Soil)


Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Selenium	ND	0.260	mg/kg dry	1	BGL0976	11/21/23	01/02/24	EPA 6020B	

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 - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(PWV) E01@2.5'
2311412-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGK0781	11/20/23	11/20/23	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: **11/20/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0412	103 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0429	107 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0408	102 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGK0782	11/20/23	11/20/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.5	84.0 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(PWV) E01@2.5'
2311412-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGK0785	11/21/23	11/22/23	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: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0234	70.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0232	69.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGK0800	11/21/23	11/23/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(PWV) E01@2.5'
2311412-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.55	0.200	mg/kg dry	1	BGK0810	11/21/23	11/22/23	EPA 6020B	
Barium	31.8	0.400	"	"	"	"	"	"	
Cadmium	0.369	0.200	"	"	"	"	"	"	
Copper	4.19	0.400	"	"	"	"	"	"	
Lead	3.89	0.200	"	"	"	"	"	"	
Nickel	4.17	0.400	"	"	"	"	"	"	
Silver	0.206	0.0200	"	"	"	"	"	"	
Zinc	10.2	0.400	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGK0813	11/21/23	11/22/23	EPA 7196A	

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

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	36.4	0.0500	mg/L dry	1	BGK0784	11/20/23	11/22/23	EPA 6020B	
Magnesium	7.70	0.0500	"	"	"	"	"	"	
Sodium	11.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.444	0.00100	units	1	BGK0872	11/22/23	11/22/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.1		%	1	BGK0798	11/21/23	11/21/23	Calculation	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(PWV) E01@2.5'
2311412-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/20/23 00:00**

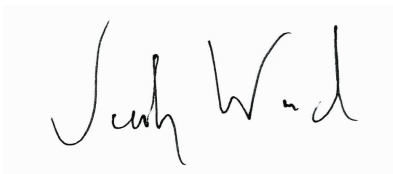
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.172	0.0100	mmhos/cm	1	BGK0793	11/21/23	11/21/23	EPA 120.1	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.35		pH Units	1	BGK0794	11/21/23	11/21/23	EPA 9045D	

Summit Scientific



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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(PWV) E01@2.5'
2311412-04 (Soil)


Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Selenium	ND	0.260	mg/kg dry	1	BGL0976	11/21/23	01/02/24	EPA 6020B	

Summit Scientific



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(PWV) W01@2.5'
2311412-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BGK0781	11/20/23	11/20/23	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: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0429	107 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0424	106 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0416	104 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BGK0782	11/20/23	11/20/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	8.88	71.1 %	30-150	"	"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(PWV) W01@2.5'
2311412-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGK0785	11/21/23	11/22/23	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	0.00636	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00586	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0210	62.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0210	63.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGK0800	11/21/23	11/23/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(PWV) W01@2.5'
2311412-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.32	0.200	mg/kg dry	1	BGK0810	11/21/23	11/22/23	EPA 6020B	
Barium	59.3	0.400	"	"	"	"	"	"	
Copper	5.03	0.400	"	"	"	"	"	"	
Lead	5.91	0.200	"	"	"	"	"	"	
Nickel	4.15	0.400	"	"	"	"	"	"	
Silver	0.213	0.0200	"	"	"	"	"	"	
Zinc	11.9	0.400	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGK0813	11/21/23	11/22/23	EPA 7196A	

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

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	60.7	0.0500	mg/L dry	1	BGK0784	11/20/23	11/22/23	EPA 6020B	
Magnesium	9.85	0.0500	"	"	"	"	"	"	
Sodium	11.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.364	0.00100	units	1	BGK0872	11/22/23	11/22/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.8		%	1	BGK0798	11/21/23	11/21/23	Calculation	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(PWV) W01@2.5'
2311412-05 (Soil)

Summit Scientific

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/20/23 00:00**


Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.160	0.0100		mmhos/cm	1	BGK0793	11/21/23	11/21/23	EPA 120.1	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.58			pH Units	1	BGK0794	11/21/23	11/21/23	EPA 9045D	

Summit Scientific



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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(PWV) W01@2.5'
2311412-05 (Soil)


Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Cadmium	ND	0.200	mg/kg dry	1	BGL0976	11/21/23	01/02/24	EPA 6020B	
Selenium	ND	0.260	"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(SEP) B01@3.0'
2311412-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGK0781	11/20/23	11/20/23	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: **11/20/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0416	104 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0415	104 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGK0782	11/20/23	11/20/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.91	71.3 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(SEP) B01@3.0'
2311412-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGK0785	11/21/23	11/22/23	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: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0207	62.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0224	67.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGK0800	11/21/23	11/23/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(SEP) B01@3.0'
2311412-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.80	0.200	mg/kg dry	1	BGK0810	11/21/23	11/22/23	EPA 6020B	
Barium	35.9	0.400	"	"	"	"	"	"	
Copper	4.10	0.400	"	"	"	"	"	"	
Lead	3.32	0.200	"	"	"	"	"	"	
Nickel	4.17	0.400	"	"	"	"	"	"	
Silver	0.324	0.0200	"	"	"	"	"	"	
Zinc	9.59	0.400	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGK0813	11/21/23	11/22/23	EPA 7196A	

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

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	86.0	0.0500	mg/L dry	1	BGK0784	11/20/23	11/22/23	EPA 6020B	
Magnesium	17.1	0.0500	"	"	"	"	"	"	
Sodium	0.833	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0215	0.00100	units	1	BGK0872	11/22/23	11/22/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.0		%	1	BGK0798	11/21/23	11/21/23	Calculation	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(SEP) B01@3.0'
2311412-06 (Soil)

Summit Scientific

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/20/23 00:00**


Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.0548	0.0100		mmhos/cm	1	BGK0793	11/21/23	11/21/23	EPA 120.1	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.25			pH Units	1	BGK0794	11/21/23	11/21/23	EPA 9045D	

Summit Scientific



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



Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(SEP) B01@3.0'
2311412-06 (Soil)


Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Cadmium	ND	0.200	mg/kg dry	1	BGL0976	11/21/23	01/02/24	EPA 6020B	
Selenium	ND	0.260	"	"	"	"	"	"	

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 - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(SEP) N01@2.5'
2311412-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BGK0781	11/20/23	11/20/23	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: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0416	104 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.8 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0409	102 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BGK0782	11/20/23	11/20/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	10.9	87.0 %	30-150	"	"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(SEP) N01@2.5'
2311412-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGK0785	11/21/23	11/22/23	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: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0203	61.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0220	66.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGK0800	11/21/23	11/23/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(SEP) N01@2.5'
2311412-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.45	0.200	mg/kg dry	1	BGK0810	11/21/23	11/22/23	EPA 6020B	
Barium	32.2	0.400	"	"	"	"	"	"	
Cadmium	0.374	0.200	"	"	"	"	"	"	
Copper	4.01	0.400	"	"	"	"	"	"	
Lead	3.80	0.200	"	"	"	"	"	"	
Nickel	4.09	0.400	"	"	"	"	"	"	
Silver	0.196	0.0200	"	"	"	"	"	"	
Zinc	9.67	0.400	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGK0813	11/21/23	11/22/23	EPA 7196A	

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

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	98.6	0.0500	mg/L dry	1	BGK0784	11/20/23	11/22/23	EPA 6020B	
Magnesium	18.1	0.0500	"	"	"	"	"	"	
Sodium	0.630	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0153	0.00100	units	1	BGK0872	11/22/23	11/22/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.3		%	1	BGK0798	11/21/23	11/21/23	Calculation	

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 - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(SEP) N01@2.5'
2311412-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/20/23 00:00**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0251	0.0100	mmhos/cm	1	BGK0793	11/21/23	11/21/23	EPA 120.1	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.36		pH Units	1	BGK0794	11/21/23	11/21/23	EPA 9045D	

Summit Scientific



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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(SEP) N01@2.5'
2311412-07 (Soil)


Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Selenium	ND	0.260	mg/kg dry	1	BGL0976	11/21/23	01/02/24	EPA 6020B	

Summit Scientific



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(SEP) S01@2.5'
2311412-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BGK0781	11/20/23	11/20/23	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: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0422	106 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0408	102 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0409	102 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BGK0782	11/20/23	11/20/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	12.5	99.8 %	30-150	"	"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(SEP) S01@2.5'
2311412-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGK0785	11/21/23	11/22/23	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: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0235	70.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0235	70.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGK0800	11/21/23	11/23/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(SEP) S01@2.5'
2311412-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.48	0.200	mg/kg dry	1	BGK0810	11/21/23	11/22/23	EPA 6020B	
Barium	31.5	0.400	"	"	"	"	"	"	
Cadmium	0.337	0.200	"	"	"	"	"	"	
Copper	4.00	0.400	"	"	"	"	"	"	
Lead	3.49	0.200	"	"	"	"	"	"	
Nickel	3.98	0.400	"	"	"	"	"	"	
Silver	0.198	0.0200	"	"	"	"	"	"	
Zinc	9.34	0.400	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGK0813	11/21/23	11/22/23	EPA 7196A	

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

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	117	0.0500	mg/L dry	1	BGK0784	11/20/23	11/22/23	EPA 6020B	
Magnesium	22.7	0.0500	"	"	"	"	"	"	
Sodium	4.90	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.109	0.00100	units	1	BGK0872	11/22/23	11/22/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.3		%	1	BGK0798	11/21/23	11/21/23	Calculation	

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 - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(SEP) S01@2.5'
2311412-08 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/20/23 00:00**

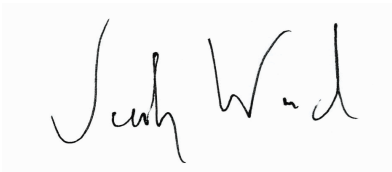
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0798	0.0100	mmhos/cm	1	BGK0793	11/21/23	11/21/23	EPA 120.1	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.07		pH Units	1	BGK0794	11/21/23	11/21/23	EPA 9045D	

Summit Scientific



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



Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(SEP) S01@2.5'
2311412-08 (Soil)


Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Selenium	ND	0.260	mg/kg dry	1	BGL0976	11/21/23	01/02/24	EPA 6020B	

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 - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(SEP) E01@2.5'
2311412-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BGK0781	11/20/23	11/20/23	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: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0427	107 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0405	101 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0418	105 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BGK0782	11/20/23	11/20/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	10.6	84.5 %	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 - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(SEP) E01@2.5'
2311412-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGK0785	11/21/23	11/22/23	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: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0189	56.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0188	56.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGK0800	11/21/23	11/23/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(SEP) E01@2.5'
2311412-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.54	0.200	mg/kg dry	1	BGK0810	11/21/23	11/22/23	EPA 6020B	
Barium	28.9	0.400	"	"	"	"	"	"	
Cadmium	0.346	0.200	"	"	"	"	"	"	
Copper	4.04	0.400	"	"	"	"	"	"	
Lead	3.54	0.200	"	"	"	"	"	"	
Nickel	4.01	0.400	"	"	"	"	"	"	
Silver	0.206	0.0200	"	"	"	"	"	"	
Zinc	9.67	0.400	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGK0813	11/21/23	11/22/23	EPA 7196A	

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

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	155	0.0500	mg/L dry	1	BGK0784	11/20/23	11/22/23	EPA 6020B	
Magnesium	23.6	0.0500	"	"	"	"	"	"	
Sodium	1.57	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0310	0.00100	units	1	BGK0872	11/22/23	11/22/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.9		%	1	BGK0798	11/21/23	11/21/23	Calculation	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(SEP) E01@2.5'
2311412-09 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/20/23 00:00**

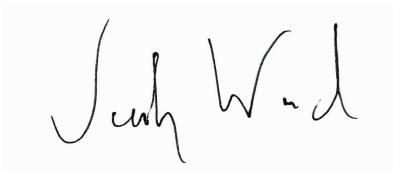
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0576	0.0100	mmhos/cm	1	BGK0793	11/21/23	11/21/23	EPA 120.1	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.97		pH Units	1	BGK0794	11/21/23	11/21/23	EPA 9045D	

Summit Scientific



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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(SEP) E01@2.5'
2311412-09 (Soil)


Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Selenium	ND	0.260	mg/kg dry	1	BGL0976	11/21/23	01/02/24	EPA 6020B	

Summit Scientific



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(SEP) W01@2.5'
2311412-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BGK0781	11/20/23	11/20/23	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: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0419	105 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0405	101 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0409	102 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BGK0782	11/20/23	11/20/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/20/23 00:00**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(SEP) W01@2.5'
2311412-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGK0785	11/21/23	11/22/23	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: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0166	49.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0168	50.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGK0800	11/21/23	11/23/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/20/23 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 - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

(SEP) W01@2.5'
2311412-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.42	0.200	mg/kg dry	1	BGK0810	11/21/23	11/22/23	EPA 6020B	
Barium	28.9	0.400	"	"	"	"	"	"	
Cadmium	0.336	0.200	"	"	"	"	"	"	
Copper	4.00	0.400	"	"	"	"	"	"	
Lead	3.21	0.200	"	"	"	"	"	"	
Nickel	4.02	0.400	"	"	"	"	"	"	
Silver	0.200	0.0200	"	"	"	"	"	"	
Zinc	9.20	0.400	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGK0813	11/21/23	11/22/23	EPA 7196A	

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

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	88.8	0.0500	mg/L dry	1	BGK0784	11/20/23	11/22/23	EPA 6020B	
Magnesium	17.9	0.0500	"	"	"	"	"	"	
Sodium	0.620	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0157	0.00100	units	1	BGK0872	11/22/23	11/22/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 11/20/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.9		%	1	BGK0798	11/21/23	11/21/23	Calculation	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(SEP) W01@2.5'
2311412-10 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/20/23 00:00**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0373	0.0100	mmhos/cm	1	BGK0793	11/21/23	11/21/23	EPA 120.1	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.85		pH Units	1	BGK0794	11/21/23	11/21/23	EPA 9045D	

Summit Scientific



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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

(SEP) W01@2.5'
2311412-10 (Soil)


Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Selenium	ND	0.260	mg/kg dry	1	BGL0976	11/21/23	01/02/24	EPA 6020B	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

BKG01@3.0'
2311412-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BGK0800	11/21/23	11/23/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.22	0.200	mg/kg dry	1	BGK0810	11/21/23	11/22/23	EPA 6020B	
Barium	32.4	0.400	"	"	"	"	"	"	
Copper	3.77	0.400	"	"	"	"	"	"	
Lead	3.83	0.200	"	"	"	"	"	"	
Nickel	3.81	0.400	"	"	"	"	"	"	
Silver	0.186	0.0200	"	"	"	"	"	"	
Zinc	9.05	0.400	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGK0813	11/21/23	11/22/23	EPA 7196A	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	76.9	0.0500	mg/L dry	1	BGK0784	11/20/23	11/22/23	EPA 6020B	
Magnesium	14.5	0.0500	"	"	"	"	"	"	
Sodium	0.923	0.0500	"	"	"	"	"	"	

Calculated Analysis

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

BKG01@3.0'
2311412-11 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0253	0.00100	units	1	BGK0872	11/22/23	11/22/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	98.4		%	1	BGK0798	11/21/23	11/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0555	0.0100	mmhos/cm	1	BGK0793	11/21/23	11/21/23	EPA 120.1	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.82		pH Units	1	BGK0794	11/21/23	11/21/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

BKG01@3.0'
2311412-11 (Soil)


Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Cadmium	ND	0.200	mg/kg dry	1	BGL0976	11/21/23	01/02/24	EPA 6020B	
Selenium	ND	0.260	"	"	"	"	"	"	

Summit Scientific



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

BKG02@3.0'
2311412-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BGK0800	11/21/23	11/23/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.03	0.200	mg/kg dry	1	BGK0810	11/21/23	11/22/23	EPA 6020B	
Barium	39.3	0.400	"	"	"	"	"	"	
Copper	3.70	0.400	"	"	"	"	"	"	
Lead	3.89	0.200	"	"	"	"	"	"	
Nickel	4.08	0.400	"	"	"	"	"	"	
Silver	0.190	0.0200	"	"	"	"	"	"	
Zinc	9.12	0.400	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGK0813	11/21/23	11/22/23	EPA 7196A	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	78.5	0.0500	mg/L dry	1	BGK0784	11/20/23	11/22/23	EPA 6020B	
Magnesium	17.7	0.0500	"	"	"	"	"	"	
Sodium	7.28	0.0500	"	"	"	"	"	"	

Calculated Analysis

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

BKG02@3.0'
2311412-12 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.193	0.00100	units	1	BGK0872	11/22/23	11/22/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	98.3		%	1	BGK0798	11/21/23	11/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0667	0.0100	mmhos/cm	1	BGK0793	11/21/23	11/21/23	EPA 120.1	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.06		pH Units	1	BGK0794	11/21/23	11/21/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

BKG02@3.0'
2311412-12 (Soil)

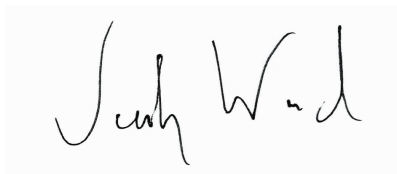
Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Cadmium	ND	0.200	mg/kg dry	1	BGL0976	11/21/23	01/02/24	EPA 6020B	
Selenium	ND	0.260	"	"	"	"	"	"	

Summit Scientific



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

BKG03@3.0'
2311412-13 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BGK0800	11/21/23	11/23/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	3.24	0.200		mg/kg dry	1	BGK0810	11/21/23	11/22/23	EPA 6020B	
Barium	33.1	0.400		"	"	"	"	"	"	
Copper	3.84	0.400		"	"	"	"	"	"	
Lead	3.67	0.200		"	"	"	"	"	"	
Nickel	3.79	0.400		"	"	"	"	"	"	
Silver	0.193	0.0200		"	"	"	"	"	"	
Zinc	9.26	0.400		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGK0813	11/21/23	11/22/23	EPA 7196A	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	84.6	0.0500		mg/L dry	1	BGK0784	11/20/23	11/22/23	EPA 6020B	
Magnesium	19.0	0.0500		"	"	"	"	"	"	
Sodium	8.29	0.0500		"	"	"	"	"	"	

Calculated Analysis

Summit Scientific

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Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

BKG03@3.0'
2311412-13 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.212	0.00100	units	1	BGK0872	11/22/23	11/22/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	98.2		%	1	BGK0798	11/21/23	11/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0612	0.0100	mmhos/cm	1	BGK0793	11/21/23	11/21/23	EPA 120.1	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.00		pH Units	1	BGK0794	11/21/23	11/21/23	EPA 9045D	

Summit Scientific

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 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

BKG03@3.0'
2311412-13 (Soil)


Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Cadmium	ND	0.200	mg/kg dry	1	BGL0976	11/21/23	01/02/24	EPA 6020B	
Selenium	ND	0.260	"	"	"	"	"	"	

Summit Scientific



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

BKG04@3.0'
2311412-14 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BGK0800	11/21/23	11/23/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	2.92	0.200		mg/kg dry	1	BGK0810	11/21/23	11/22/23	EPA 6020B	
Barium	33.1	0.400		"	"	"	"	"	"	
Copper	3.55	0.400		"	"	"	"	"	"	
Lead	4.26	0.200		"	"	"	"	"	"	
Nickel	3.63	0.400		"	"	"	"	"	"	
Silver	0.200	0.0200		"	"	"	"	"	"	
Zinc	8.99	0.400		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGK0813	11/21/23	11/22/23	EPA 7196A	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	69.2	0.0500		mg/L dry	1	BGK0784	11/20/23	11/22/23	EPA 6020B	
Magnesium	17.0	0.0500		"	"	"	"	"	"	
Sodium	1.57	0.0500		"	"	"	"	"	"	

Calculated Analysis

Summit Scientific

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Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

BKG04@3.0'
2311412-14 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0438	0.00100	units	1	BGK0872	11/22/23	11/22/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.9		%	1	BGK0798	11/21/23	11/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0527	0.0100	mmhos/cm	1	BGK0793	11/21/23	11/21/23	EPA 120.1	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.52		pH Units	1	BGK0794	11/21/23	11/21/23	EPA 9045D	

Summit Scientific

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 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

BKG04@3.0'
2311412-14 (Soil)


Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Cadmium	ND	0.200	mg/kg dry	1	BGL0976	11/21/23	01/02/24	EPA 6020B	
Selenium	ND	0.260	"	"	"	"	"	"	

Summit Scientific



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Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

BKG05@3.0'
2311412-15 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BGK0800	11/21/23	11/23/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.24	0.200	mg/kg dry	1	BGK0810	11/21/23	11/22/23	EPA 6020B	
Barium	33.3	0.400	"	"	"	"	"	"	
Copper	3.98	0.400	"	"	"	"	"	"	
Lead	3.80	0.200	"	"	"	"	"	"	
Nickel	3.95	0.400	"	"	"	"	"	"	
Silver	0.190	0.0200	"	"	"	"	"	"	
Zinc	9.72	0.400	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGK0813	11/21/23	11/22/23	EPA 7196A	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	65.1	0.0500	mg/L dry	1	BGK0784	11/20/23	11/22/23	EPA 6020B	
Magnesium	11.9	0.0500	"	"	"	"	"	"	
Sodium	1.49	0.0500	"	"	"	"	"	"	

Calculated Analysis

Summit Scientific

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Fremont Environmental
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Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

BKG05@3.0'
2311412-15 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0446	0.00100	units	1	BGK0872	11/22/23	11/22/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	98.2		%	1	BGK0798	11/21/23	11/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0427	0.0100	mmhos/cm	1	BGK0793	11/21/23	11/21/23	EPA 120.1	

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

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.79		pH Units	1	BGK0794	11/21/23	11/21/23	EPA 9045D	

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 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

BKG05@3.0'
2311412-15 (Soil)


Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **11/20/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Cadmium	ND	0.200	mg/kg dry	1	BGL0976	11/21/23	01/02/24	EPA 6020B	
Selenium	ND	0.260	"	"	"	"	"	"	

Summit Scientific



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Fremont Environmental
PO Box 1289
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Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

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 BGK0781 - EPA 5030 Soil MS

Blank (BGK0781-BLK1)

Prepared: 11/20/23 Analyzed: 11/21/23

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0410		"	0.0400		102	50-150			
<i>Surrogate: Toluene-d8</i>	0.0408		"	0.0400		102	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0414		"	0.0400		103	50-150			

LCS (BGK0781-BS1)

Prepared: 11/20/23 Analyzed: 11/21/23

Benzene	0.105	0.0020	mg/kg	0.100		105	70-130			
Toluene	0.101	0.0050	"	0.100		101	70-130			
Ethylbenzene	0.0990	0.0050	"	0.100		99.0	70-130			
m,p-Xylene	0.190	0.010	"	0.200		95.0	70-130			
o-Xylene	0.0932	0.0050	"	0.100		93.2	70-130			
1,2,4-Trimethylbenzene	0.0957	0.0050	"	0.100		95.7	70-130			
1,3,5-Trimethylbenzene	0.0945	0.0050	"	0.100		94.5	70-130			
Naphthalene	0.0856	0.0038	"	0.100		85.6	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0402		"	0.0400		100	50-150			
<i>Surrogate: Toluene-d8</i>	0.0411		"	0.0400		103	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0407		"	0.0400		102	50-150			

Matrix Spike (BGK0781-MS1)

Source: 2311412-01

Prepared: 11/20/23 Analyzed: 11/21/23

Benzene	0.107	0.0020	mg/kg	0.100	ND	107	70-130			
Toluene	0.104	0.0050	"	0.100	ND	104	70-130			
Ethylbenzene	0.103	0.0050	"	0.100	ND	103	70-130			
m,p-Xylene	0.199	0.010	"	0.200	ND	99.6	70-130			
o-Xylene	0.0948	0.0050	"	0.100	ND	94.8	70-130			
1,2,4-Trimethylbenzene	0.0965	0.0050	"	0.100	ND	96.5	70-130			
1,3,5-Trimethylbenzene	0.0982	0.0050	"	0.100	ND	98.2	70-130			
Naphthalene	0.0840	0.0038	"	0.100	ND	84.0	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0400		"	0.0400		100	50-150			
<i>Surrogate: Toluene-d8</i>	0.0412		"	0.0400		103	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0405		"	0.0400		101	50-150			

Summit Scientific

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Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGK0781 - EPA 5030 Soil MS

Matrix Spike Dup (BGK0781-MSD1)	Source: 2311412-01			Prepared: 11/20/23 Analyzed: 11/21/23					
Benzene	0.0977	0.0020	mg/kg	0.100	ND	97.7	70-130	9.39	30
Toluene	0.0946	0.0050	"	0.100	ND	94.6	70-130	9.57	30
Ethylbenzene	0.0959	0.0050	"	0.100	ND	95.9	70-130	7.59	30
m,p-Xylene	0.186	0.010	"	0.200	ND	92.8	70-130	7.00	30
o-Xylene	0.0871	0.0050	"	0.100	ND	87.1	70-130	8.41	30
1,2,4-Trimethylbenzene	0.0898	0.0050	"	0.100	ND	89.8	70-130	7.25	30
1,3,5-Trimethylbenzene	0.0913	0.0050	"	0.100	ND	91.3	70-130	7.25	30
Naphthalene	0.0778	0.0038	"	0.100	ND	77.8	70-130	7.68	30
Surrogate: 1,2-Dichloroethane-d4	0.0393		"	0.0400		98.2	50-150		
Surrogate: Toluene-d8	0.0411		"	0.0400		103	50-150		
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150		

Summit Scientific

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Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

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 BGK0782 - EPA 3550A

Blank (BGK0782-BLK1)

Prepared & Analyzed: 11/20/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	12.9		"	12.5	103		30-150				

LCS (BGK0782-BS1)

Prepared & Analyzed: 11/20/23

C10-C28 (DRO)	570	50	mg/kg	500	114		70-130				
Surrogate: <i>o</i> -Terphenyl	11.6		"	12.5	92.7		30-150				

Matrix Spike (BGK0782-MS1)

Source: 2311412-01

Prepared & Analyzed: 11/20/23

C10-C28 (DRO)	720	50	mg/kg	500	24.3	139	70-130				QM-07
Surrogate: <i>o</i> -Terphenyl	9.75		"	12.5		78.0	30-150				

Matrix Spike Dup (BGK0782-MSD1)

Source: 2311412-01

Prepared & Analyzed: 11/20/23

C10-C28 (DRO)	821	50	mg/kg	500	24.3	159	70-130	13.1	20		QM-07
Surrogate: <i>o</i> -Terphenyl	9.51		"	12.5		76.1	30-150				

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

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 BGK0785 - EPA 5030 Soil MS

Blank (BGK0785-BLK1)

Prepared & Analyzed: 11/21/23

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>	0.0243		"	0.0333		72.8	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0243		"	0.0333		73.0	40-150			

LCS (BGK0785-BS1)

Prepared & Analyzed: 11/21/23

Acenaphthene	0.0326	0.00500	mg/kg	0.0333		97.9	31-137			
Anthracene	0.0282	0.00500	"	0.0333		84.5	30-120			
Benzo (a) anthracene	0.0283	0.00500	"	0.0333		84.9	30-120			
Benzo (a) pyrene	0.0281	0.00500	"	0.0333		84.3	30-120			
Benzo (b) fluoranthene	0.0280	0.00500	"	0.0333		83.9	30-120			
Benzo (k) fluoranthene	0.0291	0.00500	"	0.0333		87.4	30-120			
Chrysene	0.0288	0.00500	"	0.0333		86.4	30-120			
Dibenz (a,h) anthracene	0.0267	0.00500	"	0.0333		80.0	30-120			
Fluoranthene	0.0291	0.00500	"	0.0333		87.3	30-120			
Fluorene	0.0299	0.00500	"	0.0333		89.6	30-120			
Indeno (1,2,3-cd) pyrene	0.0183	0.00500	"	0.0333		54.9	30-120			
Pyrene	0.0284	0.00500	"	0.0333		85.3	35-142			
1-Methylnaphthalene	0.0285	0.00500	"	0.0333		85.4	35-142			
2-Methylnaphthalene	0.0282	0.00500	"	0.0333		84.5	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0290		"	0.0333		87.1	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0282		"	0.0333		84.7	40-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

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 BGK0785 - EPA 5030 Soil MS

Matrix Spike (BGK0785-MS1)	Source: 2309536-01			Prepared & Analyzed: 11/21/23						
Acenaphthene	0.0246	0.00500	mg/kg	0.0333	ND	73.9	31-137			
Anthracene	0.0234	0.00500	"	0.0333	ND	70.3	30-120			
Benzo (a) anthracene	0.0243	0.00500	"	0.0333	ND	72.9	30-120			
Benzo (a) pyrene	0.0240	0.00500	"	0.0333	ND	72.1	30-120			
Benzo (b) fluoranthene	0.0241	0.00500	"	0.0333	ND	72.4	30-120			
Benzo (k) fluoranthene	0.0235	0.00500	"	0.0333	ND	70.5	30-120			
Chrysene	0.0248	0.00500	"	0.0333	ND	74.4	30-120			
Dibenz (a,h) anthracene	0.0209	0.00500	"	0.0333	ND	62.8	30-120			
Fluoranthene	0.0269	0.00500	"	0.0333	ND	80.6	30-120			
Fluorene	0.0231	0.00500	"	0.0333	ND	69.3	30-120			
Indeno (1,2,3-cd) pyrene	0.0150	0.00500	"	0.0333	ND	44.9	30-120			
Pyrene	0.0266	0.00500	"	0.0333	ND	79.9	35-142			
1-Methylnaphthalene	0.0238	0.00500	"	0.0333	ND	71.3	15-130			
2-Methylnaphthalene	0.0234	0.00500	"	0.0333	ND	70.2	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0237</i>		<i>"</i>	<i>0.0333</i>		<i>71.0</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0232</i>		<i>"</i>	<i>0.0333</i>		<i>69.6</i>	<i>40-150</i>			

Matrix Spike Dup (BGK0785-MSD1)	Source: 2309536-01			Prepared & Analyzed: 11/21/23						
Acenaphthene	0.0189	0.00500	mg/kg	0.0333	ND	56.7	31-137	26.4	30	
Anthracene	0.0188	0.00500	"	0.0333	ND	56.3	30-120	22.2	30	
Benzo (a) anthracene	0.0189	0.00500	"	0.0333	ND	56.7	30-120	25.0	30	
Benzo (a) pyrene	0.0187	0.00500	"	0.0333	ND	56.0	30-120	25.1	30	
Benzo (b) fluoranthene	0.0187	0.00500	"	0.0333	ND	56.0	30-120	25.6	30	
Benzo (k) fluoranthene	0.0187	0.00500	"	0.0333	ND	56.0	30-120	22.8	30	
Chrysene	0.0191	0.00500	"	0.0333	ND	57.3	30-120	25.9	30	
Dibenz (a,h) anthracene	0.0170	0.00500	"	0.0333	ND	50.9	30-120	20.9	30	
Fluoranthene	0.0191	0.00500	"	0.0333	ND	57.2	30-120	33.9	30	QR-02
Fluorene	0.0192	0.00500	"	0.0333	ND	57.7	30-120	18.3	30	
Indeno (1,2,3-cd) pyrene	0.0144	0.00500	"	0.0333	ND	43.3	30-120	3.64	30	
Pyrene	0.0206	0.00500	"	0.0333	ND	61.9	35-142	25.4	30	
1-Methylnaphthalene	0.0184	0.00500	"	0.0333	ND	55.3	15-130	25.4	50	
2-Methylnaphthalene	0.0188	0.00500	"	0.0333	ND	56.3	15-130	22.0	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0187</i>		<i>"</i>	<i>0.0333</i>		<i>56.0</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0189</i>		<i>"</i>	<i>0.0333</i>		<i>56.6</i>	<i>40-150</i>			

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

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

Summit Scientific

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

Batch BGK0800 - EPA 3050B

Blank (BGK0800-BLK1)

Prepared: 11/21/23 Analyzed: 11/22/23

Boron ND 2.00 mg/L

LCS (BGK0800-BS1)

Prepared: 11/21/23 Analyzed: 11/22/23

Boron 5.90 2.00 mg/L 5.00 118 80-120

Duplicate (BGK0800-DUP1)

Source: 2310584-01

Prepared: 11/21/23 Analyzed: 11/22/23

Boron 0.291 2.00 mg/L 0.300 3.07 20

Matrix Spike (BGK0800-MS1)

Source: 2310584-01

Prepared: 11/21/23 Analyzed: 11/22/23

Boron 6.07 2.00 mg/L 5.00 0.300 115 75-125

Matrix Spike Dup (BGK0800-MSD1)

Source: 2310584-01

Prepared: 11/21/23 Analyzed: 11/23/23

Boron 6.19 2.00 mg/L 5.00 0.300 118 75-125 2.01 25

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGK0810 - EPA 3050B

Blank (BGK0810-BLK1)

Prepared: 11/21/23 Analyzed: 11/22/23

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	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							
Selenium	ND	0.260	"							

LCS (BGK0810-BS1)

Prepared: 11/21/23 Analyzed: 11/22/23

Arsenic	43.9	0.200	mg/kg wet	40.0		110	80-120			
Barium	42.0	0.400	"	40.0		105	80-120			
Cadmium	2.11	0.200	"	2.00		106	80-120			
Copper	44.5	0.400	"	40.0		111	80-120			
Lead	21.4	0.200	"	20.0		107	80-120			
Nickel	43.8	0.400	"	40.0		109	80-120			
Silver	2.08	0.0200	"	2.00		104	80-120			
Zinc	44.3	0.400	"	40.0		111	80-120			
Selenium	4.28	0.260	"	4.00		107	80-120			

Duplicate (BGK0810-DUP1)

Source: 2310619-49

Prepared: 11/21/23 Analyzed: 11/22/23

Arsenic	1.53	0.200	mg/kg dry	1.57		2.87	20			
Barium	122	0.400	"	116		4.50	20			
Cadmium	0.174	0.200	"	0.166		4.68	20			
Copper	3.60	0.400	"	3.64		1.15	20			
Lead	28.8	0.200	"	33.1		13.8	20			
Nickel	3.33	0.400	"	3.49		4.53	20			
Silver	0.0583	0.0200	"	0.0596		2.25	20			
Zinc	17.8	0.400	"	16.6		6.68	20			
Selenium	0.413	0.260	"	0.429		3.88	20			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

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 BGK0810 - EPA 3050B

Matrix Spike (BGK0810-MS1)

Source: 2310619-49

Prepared: 11/21/23 Analyzed: 11/22/23

Arsenic	15.0	0.200	mg/kg dry	44.1	1.57	30.5	75-125				QM-07
Barium	170	0.400	"	44.1	116	121	75-125				
Cadmium	2.56	0.200	"	2.21	0.166	109	75-125				
Copper	16.7	0.400	"	44.1	3.64	29.6	75-125				QM-07
Lead	43.9	0.200	"	22.1	33.1	48.6	75-125				QM-07
Nickel	16.4	0.400	"	44.1	3.49	29.3	75-125				QM-07
Silver	2.39	0.0200	"	2.21	0.0596	106	75-125				
Zinc	29.7	0.400	"	44.1	16.6	29.7	75-125				QM-07
Selenium	5.16	0.260	"	4.41	0.429	107	75-125				

Matrix Spike Dup (BGK0810-MSD1)

Source: 2310619-49

Prepared: 11/21/23 Analyzed: 11/22/23

Arsenic	15.1	0.200	mg/kg dry	44.1	1.57	30.7	75-125	0.474	25		QM-07
Barium	166	0.400	"	44.1	116	113	75-125	2.18	25		
Cadmium	2.56	0.200	"	2.21	0.166	108	75-125	0.138	25		
Copper	16.7	0.400	"	44.1	3.64	29.6	75-125	0.103	25		QM-07
Lead	42.8	0.200	"	22.1	33.1	43.7	75-125	2.50	25		QM-07
Nickel	16.4	0.400	"	44.1	3.49	29.2	75-125	0.398	25		QM-07
Silver	2.31	0.0200	"	2.21	0.0596	102	75-125	3.54	25		
Zinc	30.0	0.400	"	44.1	16.6	30.3	75-125	0.886	25		QM-07
Selenium	5.56	0.260	"	4.41	0.429	116	75-125	7.45	25		

Batch BGL0976 - EPA 3050B

Blank (BGL0976-BLK1)

Prepared: 12/28/23 Analyzed: 01/02/24

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	"								
Silver	ND	0.0200	"								
Zinc	ND	0.400	"								
Selenium	ND	0.260	"								

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

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 BGL0976 - EPA 3050B

LCS (BGL0976-BS1)

Prepared: 12/28/23 Analyzed: 01/02/24

Arsenic	36.7	0.200	mg/kg wet	40.0		91.8	80-120			
Barium	33.7	0.400	"	40.0		84.2	80-120			
Cadmium	1.71	0.200	"	2.00		85.5	80-120			
Copper	37.3	0.400	"	40.0		93.1	80-120			
Lead	16.8	0.200	"	20.0		84.0	80-120			
Nickel	37.0	0.400	"	40.0		92.6	80-120			
Silver	1.72	0.0200	"	2.00		86.1	80-120			
Zinc	36.1	0.400	"	40.0		90.3	80-120			
Selenium	3.57	0.260	"	4.00		89.1	80-120			

Duplicate (BGL0976-DUP1)

Source: 2311412-01

Prepared: 12/28/23 Analyzed: 01/02/24

Arsenic	0.570	0.200	mg/kg dry		0.539			5.52	20	
Barium	29.6	0.400	"		31.4			5.88	20	
Cadmium	0.0349	0.200	"		0.0311			11.6	20	
Copper	1.08	0.400	"		1.09			1.06	20	
Lead	3.15	0.200	"		2.62			18.3	20	
Nickel	1.16	0.400	"		1.19			2.39	20	
Silver	0.0106	0.0200	"		0.0119			11.3	20	
Zinc	4.51	0.400	"		4.26			5.68	20	
Selenium	ND	0.260	"		ND				20	

Matrix Spike (BGL0976-MS1)

Source: 2311412-01

Prepared: 12/28/23 Analyzed: 01/02/24

Arsenic	17.4	0.200	mg/kg dry	42.5	0.539	39.6	75-125			QM-07
Barium	64.9	0.400	"	42.5	31.4	78.6	75-125			
Cadmium	1.82	0.200	"	2.13	0.0311	84.0	75-125			
Copper	18.5	0.400	"	42.5	1.09	40.9	75-125			QM-07
Lead	20.5	0.200	"	21.3	2.62	83.9	75-125			
Nickel	18.4	0.400	"	42.5	1.19	40.5	75-125			QM-07
Silver	1.78	0.0200	"	2.13	0.0119	83.0	75-125			
Zinc	21.3	0.400	"	42.5	4.26	40.1	75-125			QM-07
Selenium	3.22	0.260	"	4.25	ND	75.7	75-125			

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

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 BGL0976 - EPA 3050B

Matrix Spike Dup (BGL0976-MSD1)	Source: 2311412-01			Prepared: 12/28/23 Analyzed: 01/02/24						
Arsenic	17.7	0.200	mg/kg dry	42.5	0.539	40.4	75-125	2.00	25	QM-07
Barium	65.8	0.400	"	42.5	31.4	80.7	75-125	1.39	25	
Cadmium	1.80	0.200	"	2.13	0.0311	83.3	75-125	0.775	25	
Copper	18.7	0.400	"	42.5	1.09	41.3	75-125	0.905	25	QM-07
Lead	20.7	0.200	"	21.3	2.62	85.0	75-125	1.15	25	
Nickel	18.7	0.400	"	42.5	1.19	41.3	75-125	1.83	25	QM-07
Silver	1.79	0.0200	"	2.13	0.0119	83.8	75-125	0.929	25	
Zinc	21.6	0.400	"	42.5	4.26	40.8	75-125	1.42	25	QM-07
Selenium	3.34	0.260	"	4.25	ND	78.6	75-125	3.75	25	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

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 BGK0813 - 3060A Mod

Blank (BGK0813-BLK1)

Prepared: 11/21/23 Analyzed: 11/22/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGK0813-BS1)

Prepared: 11/21/23 Analyzed: 11/22/23

Chromium, Hexavalent 25.8 0.30 mg/kg wet 25.0 103 80-120

Duplicate (BGK0813-DUP1)

Source: 2311307-01

Prepared: 11/21/23 Analyzed: 11/22/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGK0813-MS1)

Source: 2311307-01

Prepared: 11/21/23 Analyzed: 11/22/23

Chromium, Hexavalent 27.7 0.30 mg/kg dry 27.2 ND 102 75-125

Matrix Spike Dup (BGK0813-MSD1)

Source: 2311307-01

Prepared: 11/21/23 Analyzed: 11/22/23

Chromium, Hexavalent 27.1 0.30 mg/kg dry 27.2 ND 99.4 75-125 2.19 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

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 BGK0784 - General Preparation

Blank (BGK0784-BLK1)

Prepared: 11/20/23 Analyzed: 11/22/23

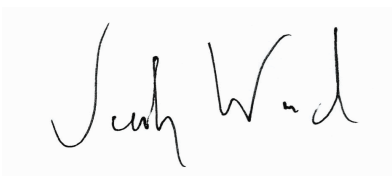
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BGK0784-BS1)

Prepared: 11/20/23 Analyzed: 11/22/23

Calcium	5.73	0.0500	mg/L wet	5.00		115	70-130			
Magnesium	5.12	0.0500	"	5.00		102	70-130			
Sodium	5.53	0.0500	"	5.00		111	70-130			

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 - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

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

Summit Scientific

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

Batch BGK0798 - General Preparation

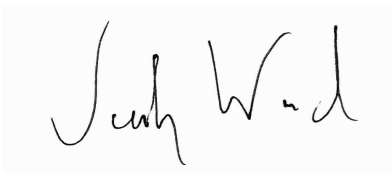
Duplicate (BGK0798-DUP1)

Source: 2311346-01

Prepared & Analyzed: 11/21/23

% Solids	78.8		%		78.9			0.150	20	
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Summit Scientific



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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

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 BGK0793 - General Preparation

Blank (BGK0793-BLK1)

Prepared & Analyzed: 11/21/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGK0793-BS1)

Prepared & Analyzed: 11/21/23

Specific Conductance (EC) 0.148 0.0100 mmhos/cm 0.150 98.6 95-105

Duplicate (BGK0793-DUP1)

Source: 2311412-01

Prepared & Analyzed: 11/21/23

Specific Conductance (EC) 0.202 0.0100 mmhos/cm 0.202 0.00 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 - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/15/24 10:32

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

Summit Scientific

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

Batch BGK0794 - General Preparation

LCS (BGK0794-BS1)

Prepared & Analyzed: 11/21/23

pH	9.17		pH Units	9.18		99.9	95-105		
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Duplicate (BGK0794-DUP1)

Source: 2311412-01

Prepared & Analyzed: 11/21/23

pH	8.02		pH Units		8.02			0.00	20
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Batch BGL0942 - General Preparation

LCS (BGL0942-BS1)

Prepared & Analyzed: 12/27/23

pH	9.18		pH Units	9.18		100	95-105		
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Duplicate (BGL0942-DUP1)

Source: 2311412-03

Prepared & Analyzed: 12/27/23

pH	8.73		pH Units		8.98			2.82	20
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Summit Scientific



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Fremont Environmental
PO Box 1289
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Project: Noble - 20-4N-64W SESE Balboa Hanscome TB

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/15/24 10:32

Notes and Definitions

- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- 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.
- 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