

# **FREMONT ENVIRONMENTAL INC.**

August 16, 2024

Mr. Daniel Peterson  
Noble Energy Inc.  
2115 117<sup>th</sup> Ave,  
Greeley, CO 80634

Subject:     **Excavation Report**  
              Hansen BC O-64N67W 1NESE  
              API# 05-123-26612  
              NESE Sec. 1, T4N, R67W  
              Weld County, Colorado  
              Fremont Project No. C023-232  
              Facility #333177, Remediation #22552

Dear Mr. Peterson:

Enclosed please find a copy of the above referenced Excavation Report for the Hansen BC O-64N67W 1NESE 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 (314) 795-2372 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.**

**HANSEN BC O-64N67W 1NESE**

**WELD COUNTY, COLORADO**

**FREMONT PROJECT NO. C023-232**

**FACILITY #333177, REMEDIATION #22552**

**Prepared by:**

**Fremont Environmental Inc.**

**1759 Redwing Lane**

**Broomfield, CO 80020**

**(303) 956-8714**

**August 16, 2024**

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**EXCAVATION REPORT**  
**NOBLE ENERGY INC.**  
**HANSEN BC O-64N67W 1NESE**  
**WELD COUNTY, COLORADO**  
**FREMONT PROJECT NO. C023-232**  
**FACILITY #333177, REMEDIATION #22552**

**1.0 INTRODUCTION**

The purpose of this document is to present information collected during the excavation of petroleum-impacted soil at the Hansen BC O-64N67W 1NESE location in Weld County, Colorado. This excavation project was completed on February 15, 2024.

**2.0 BACKGROUND INFORMATION**

**2.1 Site Location**

The Hansen BC O-64N67W 1NESE is located in Milliken, Colorado in Weld County as shown on Figure 1. The site is located in an agricultural area approximately 0.38 miles north of the intersection of County Road 48 and County Road 25. The location is further described as the NE  $\frac{1}{4}$  of the SE  $\frac{1}{4}$  of Section 1, Township 4N, Range 67W.

**2.2 Site History**

The site consisted of the Hansen BC O-64N67W 1NESE tank battery which serviced the Hansen O 1-23, Hansen BC O 1-9 and Hansen O 1-10 natural gas wells. The Hansen O 1-23 natural gas well was drilled in 2008 to a depth of approximately 7,410 feet. The Hansen BC O 1-10 natural gas well was drilled in 1989 to a depth of approximately 7,365 feet. The Hansen BC O 1-9 natural gas well was drilled in 2006 to a depth of approximately 7,353 feet.



A historical release was discovered adjacent to the Hansen BC O-64N67W 1NESE produced water vault (PWV), and two sample locations along the Hansen O 1-23 flowline during decommissioning activities in August 2022. Groundwater was not encountered at that time.

### **3.0 FIELD ACTIVITIES**

#### **3.1 Soil and Groundwater Excavation and Sampling**

Soil remediation efforts consisted of the excavation and removal of petroleum impacted soil directly adjacent to the former Hansen BC O-64N67W 1NESE produced water vault and two sample locations along the Hansen O 1-23 flowline. The Hansen BC O-64N67W 1NESE PWV excavation extent measured approximately 15 feet x 15 feet, with a maximum depth of five feet. The excavations, along the Hansen O 1-23 flowline, measured approximately 15 feet x 15 feet, with a maximum depth of five feet for the FL01-01 location, and 20 feet x 20 feet, with a maximum depth of 5.5 feet for the FL01-03 sample location. The soil consisted of well-graded sand to each excavation's maximum depth. Groundwater was encountered in the FL01-03 excavation. The excavation extents are illustrated on Figures 2 through 6.

The excavation of impacts adjacent to the former Hansen BC O-64N67W 1NESE PWV and Hansen O 1-23 flowline sample locations FL01-01 and FL01-03 was completed on February 15, 2024. Soil samples for the PWV and FL01-01 excavations were collected, as grab samples, from each excavations sidewalls at four feet and from the floor of each excavation at five feet below ground surface (bgs). Soil samples for the FL01-03 excavation were collected, as grab samples, from the excavation's sidewalls at 4.5 feet and from the floor of the excavation in the saturated zone at 5.5 feet bgs.

The soil samples were analyzed by Summit Scientific, Inc. in Golden, Colorado for benzene, toluene, ethylbenzene and total xylenes (BTEX), naphthalene, 1,2,4-

trimethylbenzene, 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 all three excavations achieved the ECMC Table 915-1 Protection of Groundwater Soil Screening Levels (PGSSLs). However, eight samples exceeded ECMC Table 915-1 Soil Suitability Limits for pH. Two samples exceeded ECMC Table 915-1 PGSSLs for barium. All samples exceeded ECMC Table 915-1 residential soil screening levels for arsenic. Local background samples collected adjacent to the site's excavations, in native soil at similar depths of four and five feet, also exceeded the ECMC Table 915-1 standards for pH, barium and arsenic. Eleven samples had Chromium analysis outsourced and analyzed by an unaccredited lab (Elevation Diagnostics).

One groundwater sample, collected from the floor of the FL01-03 excavation at 5.5 feet, was submitted to Summit Scientific, Inc. as well for the analyses of organic petroleum constituents' benzene, toluene, ethylbenzene, xylenes (BTEX), 1,2,4-trimethylbenzene;

1,3,5-trimethylbenzene and naphthalene by EPA Method 8260B inorganic petroleum constituents' chloride and sulfate by EPA Method 300.0.

The laboratory analysis indicates that the groundwater sample (GW01) achieved the ECMC Table 915-1 standards for all organic petroleum constituents analyzed. The groundwater chemistry is shown on Figure 5 and the analytical data are summarized in Table 5. A copy of the laboratory's report is presented in Appendix B.

A total of approximately 35 tons (~ 25 cubic yards) of petroleum impacted soil was removed from the PWV excavation, approximately 35 tons (~ 25 cubic yards) of petroleum impacted soil was removed from the FL01-01 excavation and approximately 56 tons (~ 40 cubic yards) of petroleum impacted soil was removed from the FL01-03 excavation by Tasman Geosciences Inc. 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.

#### **4.0 DISCUSSION**

As demonstrated by the soil sampling, petroleum impacted soil was removed at the Hansen BC O-64N67W 1NESE PWV and two sample locations (FL01-01 & FL01-03) along the Hansen O 1-23 flowline 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 90 cubic yards in total of impacted soil were removed and transported to the landfill. The soil and groundwater data for the excavations is illustrated and summarized in the attached tables and figures.

Elevated concentrations of pH, barium and 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. Chromium analytical data for the FL01-01 and FL01-03 excavations were outsourced and analyzed by an unaccredited lab (Elevation Diagnostic). Thus, all sample locations within these two excavations will be resampled to verify the presence of elevated concentrations of chromium (VI) initially observed. Remedial alternatives will be evaluated if elevated concentrations of chromium (VI) are confirmed following receipt of resampling results. A no further action designation will be requested if chromium concentrations comply with the Table 915-1 standard.

### **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:



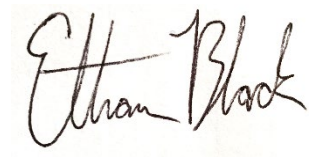
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Jeff T. Griggs  
Geologist

8/16/24

Date\_\_\_\_\_

Reviewed by:

A handwritten signature in black ink that reads "Ethan Black". The signature is written in a cursive, flowing style. The "E" is large and loops around the "t" in "Ethan". The "Black" is written in a similar cursive style with a large "B".

8/16/24

Date\_\_\_\_\_

\_\_\_\_\_  
Ethan D. Black, P.G.

Geologist

## **TABLES**

TABLE 1  
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA  
NOBLE 100322  
HANSEN BC O-64N67W 1NESE, WELD COUNTY, COLORADO  
REM # 22552

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 (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	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	500**		
AST01@0-6"	08/22/2023	0-6"	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
AST02@0-6"	08/22/2023	0-6"	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
PWV01-BE@4'	08/22/2023	4.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
PWV01-BW@4'	08/22/2023	4.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	140	<50
PWV01-E@2'	08/22/2023	2.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
PWV01-NE@2'	08/22/2023	2.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
PWV01-NW@2'	08/22/2023	2.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	0.013	<0.0038	<500	<0.50	110	<50
PWV01-SE@2'	08/22/2023	2.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
PWV01-SW@2'	08/22/2023	2.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
PWV01-W@2'	08/22/2023	2.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SEP01-DL@4'	08/22/2023	4.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
FL01-01@4'	08/22/2023	4.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	0.0063	<500	<0.50	<50	<50
FL01-02@4'	08/22/2023	4.0 FT	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
FL01-03@4'	08/22/2023	4.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	0.012	<500	<0.50	66	<50
FLR01@4'	08/22/2023	4.0 FT	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SEP01-FL@2'	08/22/2023	2.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
(FL01-01) B01@5.0'	2/14/2024	5.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
(FL01-01) N01@4.0'	2/14/2024	4.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
(FL01-01) S01@4.0'	2/14/2024	4.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
(FL01-01) E01@4.0'	2/14/2024	4.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
(FL01-01) W01@4.0'	2/14/2024	4.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
(FL01-03) B01@5.5'	2/14/2024	5.5 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	76	360	53
(FL01-03) N01@4.5'	2/14/2024	4.5 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
(FL01-03) S01@4.5'	2/14/2024	4.5 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
(FL01-03) E01@4.5'	2/14/2024	4.5 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
(FL01-03) W01@4.5'	2/14/2024	4.5 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
(FL01-03) Backfill	2/14/2024	N/A	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
(FL01-01) Backfill	2/15/2024	N/A	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
(PWV) B01@5.0'	2/15/2024	5.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
(PWV) N01@4.0'	2/15/2024	4.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
(PWV) S01@4.0'	2/15/2024	4.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
(PWV) E01@4.0'	2/15/2024	4.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50

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 (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	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	500**		
(PWV) W01@4.0'	2/15/2024	4.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
(PWV) Backfill	2/15/2024	N/A	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50

1. Bold values exceed the ECMC Table 915-1 limit(s)
2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)
3. \* Indicates laboratory minimum detection limit in excess of SSL
4. \*\* Summation of GRO+DRO+ORO must be less than 500 mg/kg

NA - Not analyzed

= Source material characterization sample, excavated and transported off site for disposal.

= Material excavated and transported off site for disposal.



TABLE 2  
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA  
NOBLE 100322  
HANSEN BC O-64N67W 1NESE, WELD COUNTY, COLORADO  
REM # 22552

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
AST01@0-6"	08/22/2023	0-6"	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST02@0-6"	08/22/2023	0-6"	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
PWV01-BE@4'	08/22/2023	4.0 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
PWV01-BW@4'	08/22/2023	4.0 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
PWV01-E@2'	08/22/2023	2.0 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
PWV01-NE@2'	08/22/2023	2.0 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
PWV01-NW@2'	08/22/2023	2.0 Ft	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00964	<0.00500	<0.00500	0.0692	0.112
PWV01-SE@2'	08/22/2023	2.0 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
PWV01-SW@2'	08/22/2023	2.0 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
PWV01-W@2'	08/22/2023	2.0 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
SEP01-DL@4'	08/22/2023	4.0 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
FL01-01@4'	08/22/2023	4.0 Ft	0.0159	0.0362	0.067	0.0343	0.0582	0.0232	0.0675	0.00629	0.153	0.0192	0.0286	0.113	<0.00500	<0.00500
FL01-02@4'	08/22/2023	4.0 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
FL01-03@4'	08/22/2023	4.0 Ft	0.204	0.410	0.609	0.508	0.715	0.285	0.641	0.105	1.46	0.266	0.341	1.02	0.0243	0.0417
FLR01@4'	08/22/2023	4.0 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
SEP01-FL@2'	08/22/2023	2.0 Ft	<0.00500	<0.00500	0.00804	<0.00500	0.00821	<0.00500	0.00867	<0.00500	0.0185	<0.00500	<0.00500	0.0154	<0.00500	<0.00500
(FL01-01) B01@5.0'	2/14/2024	5.0 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
(FL01-01) N01@4.0'	2/14/2024	4.0 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
(FL01-01) S01@4.0'	2/14/2024	4.0 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
(FL01-01) E01@4.0'	2/14/2024	4.0 Ft	<0.00500	<0.00500	0.00574	0.00888	<0.00500	<0.00500	<0.00500	<0.00500	0.00904	<0.00500	<0.00500	0.00719	<0.00500	<0.00500
(FL01-01) W01@4.0'	2/14/2024	4.0 Ft	<0.00500	0.00911	<0.00500	0.0103	0.00748	<0.00500	0.00775	<0.00500	0.0259	<0.00500	<0.00500	0.0209	<0.00500	<0.00500
(FL01-03) B01@5.5'	2/14/2024	5.5 Ft	<0.00500	<0.00500	0.0103	<0.00500	<0.00500	<0.00500	0.00574	<0.00500	0.00503	0.0231	<0.00500	<0.00500	<0.00500	<0.00500
(FL01-03) N01@4.5'	2/14/2024	4.5 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
(FL01-03) S01@4.5'	2/14/2024	4.5 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
(FL01-03) E01@4.5'	2/14/2024	4.5 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
(FL01-03) W01@4.5'	2/14/2024	4.5 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
(FL01-03) Backfill	2/14/2024	N/A	<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
(FL01-01) Backfill	2/15/2024	N/A	<0.00500	<0.00500	0.00751	<0.00500	<0.00500	<0.00500	0.00516	<0.00500	0.00810	<0.00500	<0.00500	0.00936	<0.00500	<0.00500
(PWV) B01@5.0'	2/15/2024	5.0 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@4.0'	2/15/2024	4.0 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) S01@4.0'	2/15/2024	4.0 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) E01@4.0'	2/15/2024	4.0 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) W01@4.0'	2/15/2024	4.0 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) Backfill	2/15/2024	N/A	<0.00500	<0.00500	0.00554	0.00754	0.00533	<0.00500	<0.00500	0.00657	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

1. Bold values exceed the ECMC Table 915-1 limit(s)  
2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)  
3. \* Indicates laboratory minimum detection limit in excess of SSL  
= Source material characterization sample, excavated and transported off site for disposal.  
= Material excavated and transported off site for disposal.

**TABLE 3**  
**SUMMARY OF SOIL SUITABILITY FOR RECLAMATION**  
**NOBLE 100322**  
**HANSEN BC O-64N67W 1NESE, WELD COUNTY, COLORADO**  
**REM # 22552**

Sample ID	Sample Date	Depth (ft)	pH (Standard Units)	EC (mmhos/cm)	SAR (Standard Units)	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
AST01@0-6"	08/22/2023	0-6"	7.90	0.212	0.0127	<0.0100
AST02@0-6"	08/22/2023	0-6"	9.35	0.360	0.0318	<0.0100
PWV01-BE@4'	08/22/2023	4.0 Ft	8.39	0.326	0.114	0.0827
PWV01-BW@4'	08/22/2023	4.0 Ft	9.00	0.670	1.41	0.152
PWV01-E@2'	08/22/2023	2.0 Ft	8.14	0.411	0.271	0.234
PWV01-NE@2'	08/22/2023	2.0 Ft	8.09	0.227	0.0199	<0.0100
PWV01-NW@2'	08/22/2023	2.0 Ft	7.56	0.372	0.297	<0.0100
PWV01-SE@2'	08/22/2023	2.0 Ft	7.38	4.25	1.25	0.359
PWV01-SW@2'	08/22/2023	2.0 Ft	8.46	0.702	1.44	0.133
PWV01-W@2'	08/22/2023	2.0 Ft	8.10	0.261	0.504	0.0782
SEP01-DL@4'	08/22/2023	4.0 Ft	8.50	0.299	0.0808	<0.0100
FL01-01@4'	08/22/2023	4.0 Ft	8.51	0.424	0.888	0.0490
FL01-02@4'	08/22/2023	4.0 FT	7.94	2.77	2.46	0.0634
FL01-03@4'	08/22/2023	4.0 Ft	7.88	3.60	2.80	0.846
FLR01@4'	08/22/2023	4.0 FT	7.61	1.06	0.356	<0.0100
SEP01-FL@2'	08/22/2023	2.0 Ft	8.32	0.158	0.0295	<0.0100
(FL01-01) B01@5.0'	2/14/2024	5.0 Ft	8.08	3.66	0.768	<2.00
(FL01-01) N01@4.0'	2/14/2024	4.0 Ft	7.83	2.18	0.808	<2.00
(FL01-01) S01@4.0'	2/14/2024	4.0 Ft	8.98	0.250	0.711	<2.00
(FL01-01) E01@4.0'	2/14/2024	4.0 Ft	8.66	0.420	1.01	<2.00
(FL01-01) W01@4.0'	2/14/2024	4.0 Ft	8.51	0.747	1.21	<2.00
(FL01-03) B01@5.5'	2/14/2024	5.5 Ft	8.69	0.807	1.65	<2.00

Sample ID	Sample Date	Depth (ft)	pH (Standard Units)	EC (mmhos/cm)	SAR (Standard Units)	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
(FL01-03) N01@4.5'	2/14/2024	4.5 Ft	8.14	0.714	1.05	<2.00
(FL01-03) S01@4.5'	2/14/2024	4.5 Ft	7.89	1.22	2.65	<2.00
(FL01-03) E01@4.5'	2/14/2024	4.5 Ft	7.71	1.68	3.17	<2.00
(FL01-03) W01@4.5'	2/14/2024	4.5 Ft	7.91	1.54	2.11	<2.00
(FL01-03) Backfill	2/14/2024	N/A	8.03	0.321	0.418	<2.00
(FL01-01) Backfill	2/15/2024	N/A	7.98	0.370	0.780	<2.00
(PWV) B01@5.0'	2/15/2024	5.0 Ft	8.42	0.232	0.0211	<2.00
(PWV) N01@4.0'	2/15/2024	4.0 Ft	8.56	0.351	0.320	<2.00
(PWV) S01@4.0'	2/15/2024	4.0 Ft	8.44	0.271	0.244	<2.00
(PWV) E01@4.0'	2/15/2024	4.0 Ft	8.03	0.404	0.125	<2.00
(PWV) W01@4.0'	2/15/2024	4.0 Ft	8.66	0.385	0.305	<2.00
(PWV) Backfill	2/15/2024	N/A	8.74	0.141	0.241	<2.00
BKG01@4.0'	2/15/2024	4.0 Ft	8.61	2.66	0.694	<2.00
BKG01@5.0'	2/15/2024	5.0 Ft	8.93	2.85	0.367	<2.00
BKG02@4.0'	2/15/2024	4.0 Ft	8.54	3.94	0.663	<2.00
BKG02@5.0'	2/15/2024	5.0 Ft	8.83	2.68	0.477	<2.00
BKG03@4.0'	2/15/2024	4.0 Ft	8.63	1.71	0.304	<2.00
BKG03@5.0'	2/15/2024	5.0 Ft	8.38	5.32	0.522	<2.00
BKG04@4.0'	2/15/2024	4.0 Ft	8.53	2.24	0.378	<2.00
BKG04@5.0'	2/15/2024	5.0 Ft	8.08	2.44	0.316	<2.00
BKG05@4.0'	2/15/2024	4.0 Ft	8.58	2.51	0.371	<2.00
BKG05@5.0'	2/15/2024	5.0 Ft	8.61	5.09	0.467	<2.00
BKG06@5.0'	2/14/2024	5.0 Ft	8.42	0.694	0.124	<2.00
BKG07@5.0'	2/14/2024	5.0 Ft	8.15	0.242	0.216	<2.00
BKG08@5.0'	2/14/2024	5.0 Ft	8.12	1.19	0.159	<2.00
BKG09@5.0'	2/14/2024	5.0 Ft	8.90	3.10	0.397	<2.00
BKG10@5.0'	2/14/2024	5.0 Ft	8.84	1.06	0.0711	<2.00

Sample ID	Sample Date	Depth (ft)	pH (Standard Units)	EC (mmhos/cm)	SAR (Standard Units)	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
Maximum Root Background Concentration (0 - 3 ft)			NA	NA	NA	NA
Average Root Background Concentration (0 - 3 ft)			NA	NA	NA	NA
Maximum Background Concentration			<b>8.93</b>	<b>5.32</b>	0.694	<2.00
Average Background Concentration			<b>8.54</b>	2.52	0.368	<2.00

1. Bold faced values exceed the ECMC Table 915-1 limit(s)

2. Blue highlighted soil analytical values indicate a regulatory exceedance

NA - Not analyzed

  = Source material characterization sample, excavated and transported off site for disposal.

  = Material excavated and transported off site for disposal.

TABLE 4  
SUMMARY OF METALS IN SOIL CHEMISTRY DATA  
NOBLE 100322  
HANSEN BC O-64N67W 1NESE, WELD COUNTY, COLORADO  
REM # 22552

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
AST01@0-6"	08/22/2023	0-6"	5.20	62.2	<0.200	<0.30	4.04	6.26	4.92	<0.260	<0.0200	22.7
AST02@0-6"	08/22/2023	0-6"	1.36	32.7	<0.200	<0.30	3.77	2.75	4.05	<0.260	<0.0200	14.1
PWV01-BE@4'	08/22/2023	4.0 Ft	6.66	67.9	<0.200	<0.30	5.68	6.85	5.28	<0.260	0.0234	30.0
PWV01-BW@4'	08/22/2023	4.0 Ft	7.52	66.5	<0.200	<0.30	3.47	6.99	5.06	<0.260	0.0235	23.0
PWV01-E@2'	08/22/2023	2.0 Ft	6.01	70.0	<0.200	<0.30	9.54	7.07	5.35	0.340	0.0229	44.8
PWV01-NE@2'	08/22/2023	2.0 Ft	6.28	57.6	<0.200	<0.30	3.39	6.65	4.94	<0.260	<0.0200	22.3
PWV01-NW@2'	08/22/2023	2.0 Ft	6.45	69.8	<0.200	<0.30	4.53	7.08	5.44	<0.260	0.0228	25.6
PWV01-SE@2'	08/22/2023	2.0 Ft	3.60	57.4	<0.200	<0.30	12.9	4.36	6.13	0.508	<0.0200	52.3
PWV01-SW@2'	08/22/2023	2.0 Ft	6.22	77.6	<0.200	<0.30	8.53	6.72	5.54	0.321	0.0272	40.4
PWV01-W@2'	08/22/2023	2.0 Ft	3.74	64.3	<0.200	<0.30	4.68	4.93	4.84	<0.260	<0.0200	18.7
SEP01-DL@4'	08/22/2023	4.0 Ft	6.01	58.5	<0.200	<0.30	3.78	6.02	4.55	<0.260	<0.0200	19.9
FL01-01@4'	08/22/2023	4.0 Ft	6.70	36.5	<0.200	<0.30	3.53	7.12	4.64	<0.260	0.0349	22.4
FL01-02@4'	08/22/2023	4.0 FT	7.17	64.4	<0.200	<0.30	5.33	8.04	6.05	0.358	0.0458	26.9
FL01-03@4'	08/22/2023	4.0 Ft	3.81	143	<0.200	<0.30	8.22	7.18	6.82	0.777	0.0393	31.2
FLR01@4'	08/22/2023	4.0 FT	4.14	137	0.297	<0.30	9.35	19.2	9.22	0.390	0.0518	36.6
SEP01-FL@2'	08/22/2023	2.0 Ft	5.51	72.9	0.480	<0.30	5.79	7.62	5.42	<0.260	0.0249	23.7
(FL01-01) B01@5.0'	2/14/2024	5.0 Ft	7.36	37.7	<0.200	<0.080	3.85	7.92	5.21	<0.260	0.0499	23.6
(FL01-01) N01@4.0'	2/14/2024	4.0 Ft	7.83	29.1	<0.200	<0.080	3.76	8.49	5.08	<0.260	0.0573	23.0
(FL01-01) S01@4.0'	2/14/2024	4.0 Ft	6.65	43.2	<0.200	<0.080	3.49	7.48	4.92	<0.260	0.0459	22.0
(FL01-01) E01@4.0'	2/14/2024	4.0 Ft	7.21	45.1	<0.200	<0.080	3.79	7.42	4.83	<0.260	0.0444	23.7
(FL01-01) W01@4.0'	2/14/2024	4.0 Ft	9.91	40.9	0.203	<0.080	4.53	8.86	4.97	<0.260	0.0484	23.6
(FL01-03) B01@5.5'	2/14/2024	5.5 Ft	1.17	10.5	<0.200	<0.080	2.34	1.60	3.64	<0.260	<0.0200	10.3
(FL01-03) N01@4.5'	2/14/2024	4.5 Ft	1.11	22.3	<0.200	<0.080	2.10	2.60	3.08	<0.260	<0.0200	9.57
(FL01-03) S01@4.5'	2/14/2024	4.5 Ft	1.67	34.4	<0.200	0.092	3.36	2.75	4.14	<0.260	0.0234	13.7
(FL01-03) E01@4.5'	2/14/2024	4.5 Ft	3.87	92.3	0.242	0.096	6.42	7.76	8.44	<0.260	0.0619	27.2
(FL01-03) W01@4.5'	2/14/2024	4.5 Ft	4.65	92.0	0.261	0.086	5.12	6.94	5.82	<0.260	0.0499	25.6
(FL01-03) Backfill	2/14/2024	N/A	3.51	65.7	<0.200	0.137	4.57	5.95	5.23	<0.260	0.0363	18.3
(FL01-01) Backfill	2/15/2024	N/A	3.48	71.6	<0.200	<0.30	4.39	6.15	5.22	<0.260	0.0324	17.0
(PWV) B01@5.0'	2/15/2024	5.0 Ft	5.94	47.0	<0.200	<0.30	2.87	6.28	4.53	<0.260	0.0267	21.2

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
(PWV) N01@4.0'	2/15/2024	4.0 Ft	5.89	44.6	<0.200	<0.30	2.59	5.99	4.16	<0.260	0.0220	19.6
(PWV) S01@4.0'	2/15/2024	4.0 Ft	4.07	55.7	<0.200	<0.30	3.51	4.98	4.31	<0.260	<0.0200	20.1
(PWV) E01@4.0'	2/15/2024	4.0 Ft	5.23	63.5	0.243	<0.30	4.81	6.58	7.43	<0.260	0.0271	26.5
(PWV) W01@4.0'	2/15/2024	4.0 Ft	5.58	53.5	<0.200	<0.30	3.17	6.04	4.70	<0.260	0.0229	22.0
(PWV) Backfill	2/15/2024	N/A	2.94	37.2	<0.200	<0.30	4.81	4.17	3.55	<0.260	0.0338	13.9
BKG01@4.0'	2/15/2024	4.0 Ft	6.49	97.3	<0.200	<0.30	6.56	8.36	9.69	<0.260	0.0394	23.9
BKG01@5.0'	2/15/2024	5.0 Ft	5.81	78.2	0.193	<0.30	6.53	7.65	9.61	<0.236	0.0325	22.6
BKG02@4.0'	2/15/2024	4.0 Ft	6.20	98.4	0.212	<0.30	7.79	8.12	10.9	<0.260	0.0427	25.2
BKG02@5.0'	2/15/2024	5.0 Ft	5.65	92.2	0.244	<0.30	9.30	8.08	12.8	<0.260	0.0382	26.2
BKG03@4.0'	2/15/2024	4.0 Ft	24.1	118	0.296	<0.30	9.73	8.29	12.8	<0.260	0.0481	25.5
BKG03@5.0'	2/15/2024	5.0 Ft	5.11	85.3	0.230	<0.30	8.07	7.28	11.3	<0.260	0.0395	24.3
BKG04@4.0'	2/15/2024	4.0 Ft	3.61	93.1	0.222	<0.30	9.55	7.56	13.1	<0.260	0.0489	24.8
BKG04@5.0'	2/15/2024	5.0 Ft	2.89	105	0.245	<0.30	11.1	6.93	15.2	<0.260	0.0440	24.7
BKG05@4.0'	2/15/2024	4.0 Ft	1.89	24.3	<0.200	<0.30	2.48	1.78	3.84	<0.260	<0.0200	9.47
BKG05@5.0'	2/15/2024	5.0 Ft	0.810	31.3	<0.200	<0.30	3.43	2.18	5.54	<0.260	<0.0200	12.7
BKG06@5.0'	2/14/2024	5.0 Ft	1.31	37.6	<0.180	<0.30	2.69	2.27	3.79	<0.234	<0.0180	10.6
BKG07@5.0'	2/14/2024	5.0 Ft	3.63	162	0.225	<0.30	13.2	8.65	10.4	<0.260	0.0523	28.3
BKG08@5.0'	2/14/2024	5.0 Ft	0.742	23.1	<0.200	<0.30	2.07	1.65	2.64	<0.260	<0.0200	7.93
BKG09@5.0'	2/14/2024	5.0 Ft	2.39	73.7	<0.200	<0.30	6.94	5.23	6.72	<0.260	0.0287	18.8
BKG10@5.0'	2/14/2024	5.0 Ft	1.60	25.2	<0.200	<0.30	4.41	3.07	4.66	<0.260	<0.0200	13.3
Maximum Root Zone Background Concentration (0 - 3 ft)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
125% Average Root Zone Background Concentration (0 - 3 ft)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Maximum Background Concentration			24.1	162	0.296	<0.30	13.2	8.65	15.2	<0.260	0.0523	28.3
125% Average Background Concentration			6.02	95.4	0.271	<0.30	8.65	7.26	11.1	<0.260	0.0429	24.9

1. Bold values exceed the ECMC Table 915-1 limit(s)

2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)

\* Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed

  = Source material characterization sample, excavated and transported off site for disposal.

  = Material excavated and transported off site for disposal.

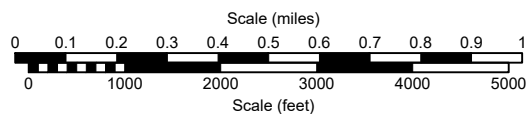
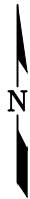
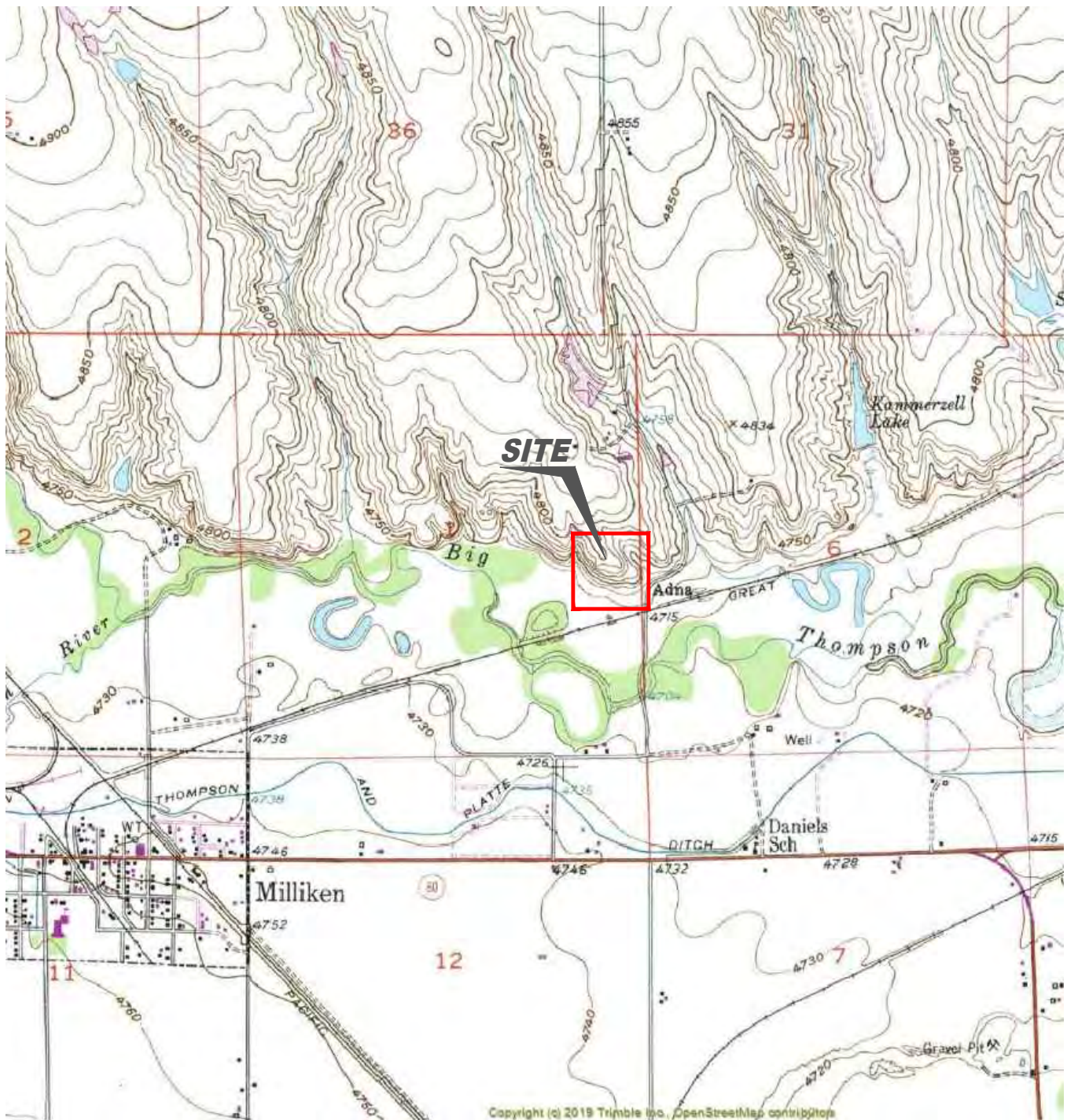
TABLE 5  
SUMMARY OF GROUNDWATER ELEVATION DATA AND ORGANIC CHEMISTRY DATA  
NOBLE 100322  
HANSEN BC O-64N67W 1NESE, WELD COUNTY, COLORADO  
REM # 22552

Sample ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4- Trimethyl- Benzene (µg/L)	1,3,5- Trimethyl- Benzene (µg/L)	TOC Elevation (ft)	Depth to Groundwater Below TOC (ft)	Depth to Groundwater Below Ground Surface (ft)	Groundwater Elevation (ft)	LNAPL Thickness (ft)
ECMC Table 915-1 Limits		5.0	560	700	1400	140	67	67					
GW01	02/14/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	N/A	N/A	5.5 Ft	N/A	NP

1. Bold values exceed the ECMC limit(s)  
2. Red highlighted groundwater analytical values indicate a regulatory exceedance  
NP - No measurable LNAPL, NA - Not Analyzed, INA - Inaccessible, IW - Insufficient Water, DES - Destroyed

## **FIGURES**





USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1

**SITE LOCATION MAP**

**Noble Energy, Inc.**

**Hansen BC O 64N67W 1NESE**

**and Hansen O 1-23 (flow line)**

**NESE Section 1, T4N, R67W, 6th PM**

**Weld County, Colorado 40.339724°,**

**-104.830548°**

Project No.  
**C023-232**

API #  
**05-123-26612**

Facility #  
**333177**

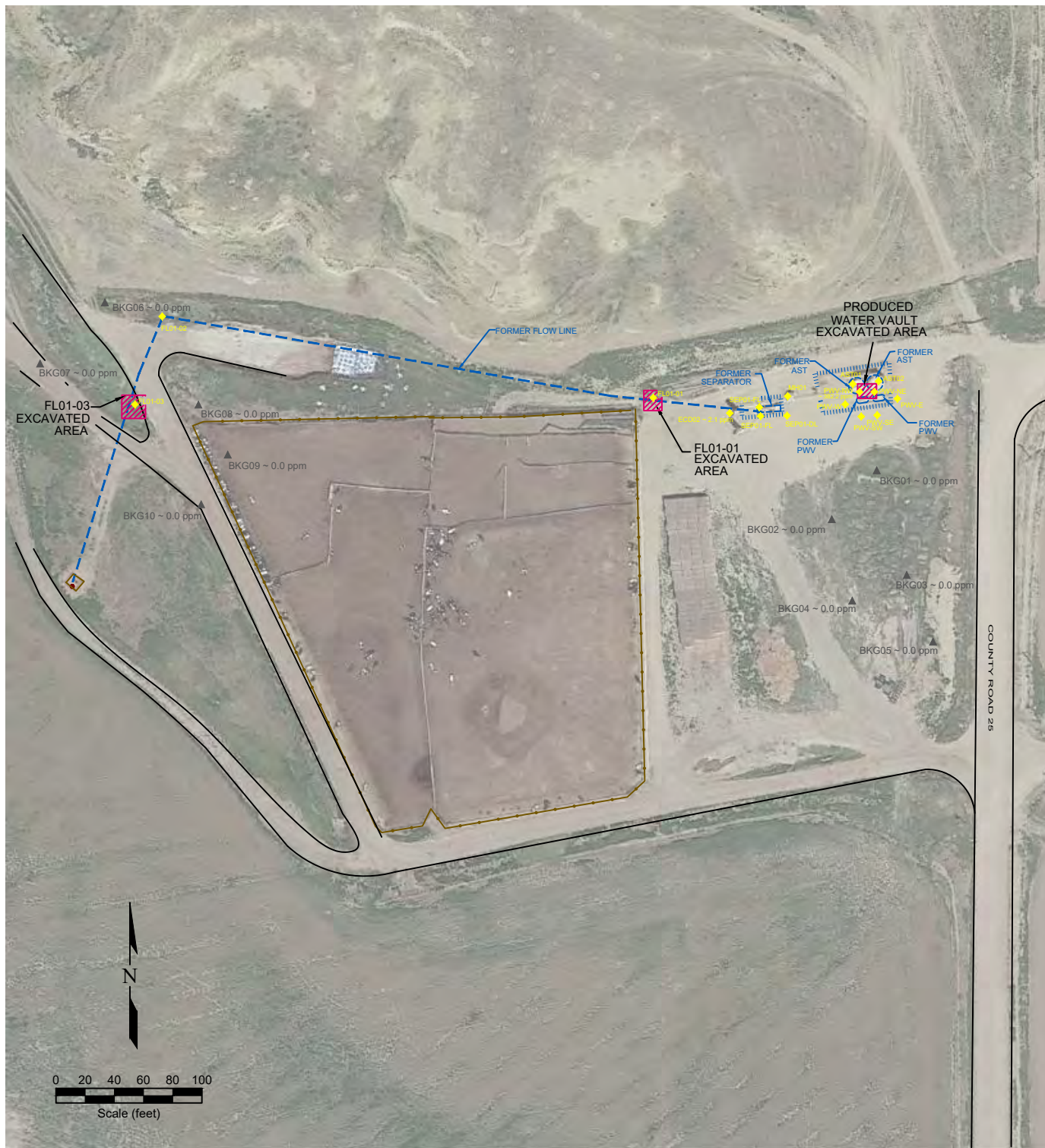
Date  
**8/16/24**

Remediation #  
**22552**

Filename  
**23232T**







#### LEGEND

● WELL HEAD LOCATION	○ ABOVE GROUND STORAGE TANK	--- FORMER FLOW LINE
▲ PID READING LOCATION	FORMER FACILITY	--- FENCE LINE
◆ DECOMMISSIONING PID READING (all decommissioning PID readings are 0.0 ppm unless specified otherwise)	EXCAVATED AREAS	CONTAINMENT BERM
		--- CONTAINMENT WALL

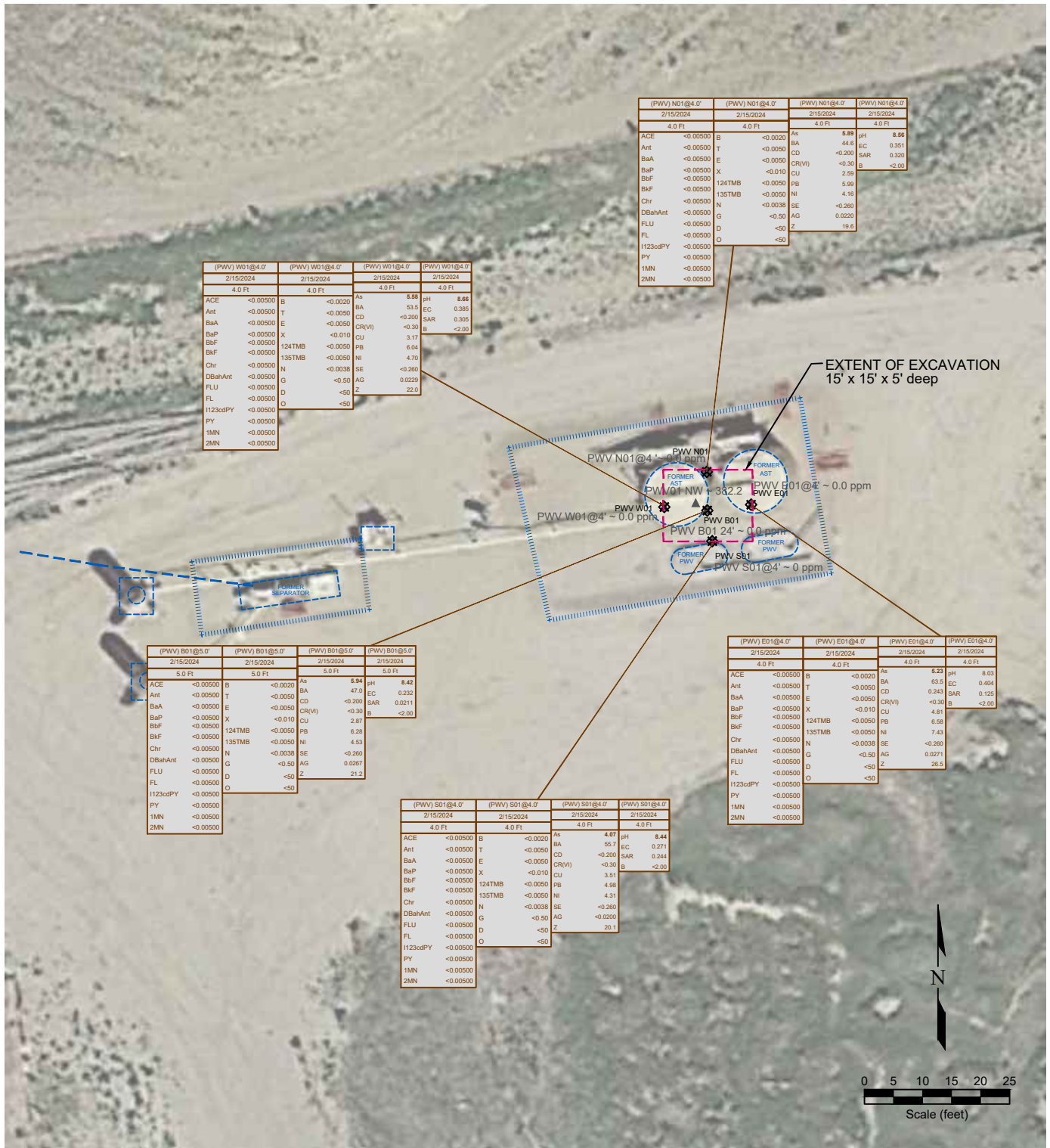
Figure 2

#### SITE MAP

**Noble Energy, Inc.**  
**Hansen BC O 64N67W 1NESE**  
**and Hansen O 1-23 (flow line)**  
 NESE Section 1, T4N, R67W, 6th PM  
 Weld County, Colorado  
 40.339724°, -104.830548°

Project No. <b>C023-232</b>	API # <b>05-123-26612</b>	Facility # <b>333177</b>
Date <b>8/16/24</b>	Remediation # <b>22552</b>	Filename <b>23232Q4</b>





### LEGEND

● WELL HEAD LOCATION	○ ABOVE GROUND STORAGE TANK	FORMER FACILITY	--- EXTENT OF EXCAVATION
▲ PID READING LOCATION			--- FORMER FLOW LINE
⊗ SOIL SAMPLE LOCATION			--- FENCE LINE
			CONTAINMENT BERM
			--- CONTAINMENT WALL
NA			NOT ANALYZED

SAMPLE ID	SAMPLE ID	SAMPLE ID	SAMPLE ID	SAMPLE ID	SAMPLE ID
DATE	DATE	DATE	DATE	DATE	DATE
DEPTH	DEPTH	DEPTH	DEPTH	DEPTH	DEPTH
ACE	ACE	ACE	ACE	ACE	ACE
Ant	Ant	Ant	Ant	Ant	Ant
BaA	BaA	BaA	BaA	BaA	BaA
BaP	BaP	BaP	BaP	BaP	BaP
BbF	BbF	BbF	BbF	BbF	BbF
Chr	Chr	Chr	Chr	Chr	Chr
DBahAnt	DBahAnt	DBahAnt	DBahAnt	DBahAnt	DBahAnt
FLU	FLU	FLU	FLU	FLU	FLU
FL	FL	FL	FL	FL	FL
1123cdPY	1123cdPY	1123cdPY	1123cdPY	1123cdPY	1123cdPY
PY	PY	PY	PY	PY	PY
1MN	1MN	1MN	1MN	1MN	1MN
2MN	2MN	2MN	2MN	2MN	2MN

Figure 3  
PWV EXCAVATION SOIL CHEMISTRY MAP

Noble Energy, Inc.  
Hansen BC O 64N67W 1NESE  
and Hansen O 1-23 (flow line)  
NESE Section 1, T4N, R67W, 6th PM  
Weld County, Colorado  
40.339724°, -104.830548°

Project No. <b>C023-232</b>	API # <b>05-123-26612</b>	Facility # <b>333177</b>	<b>REMONT ENVIRONMENTAL</b>
Date <b>8/16/24</b>	Remediation # <b>22552</b>	Filename <b>23232QPWW</b>	





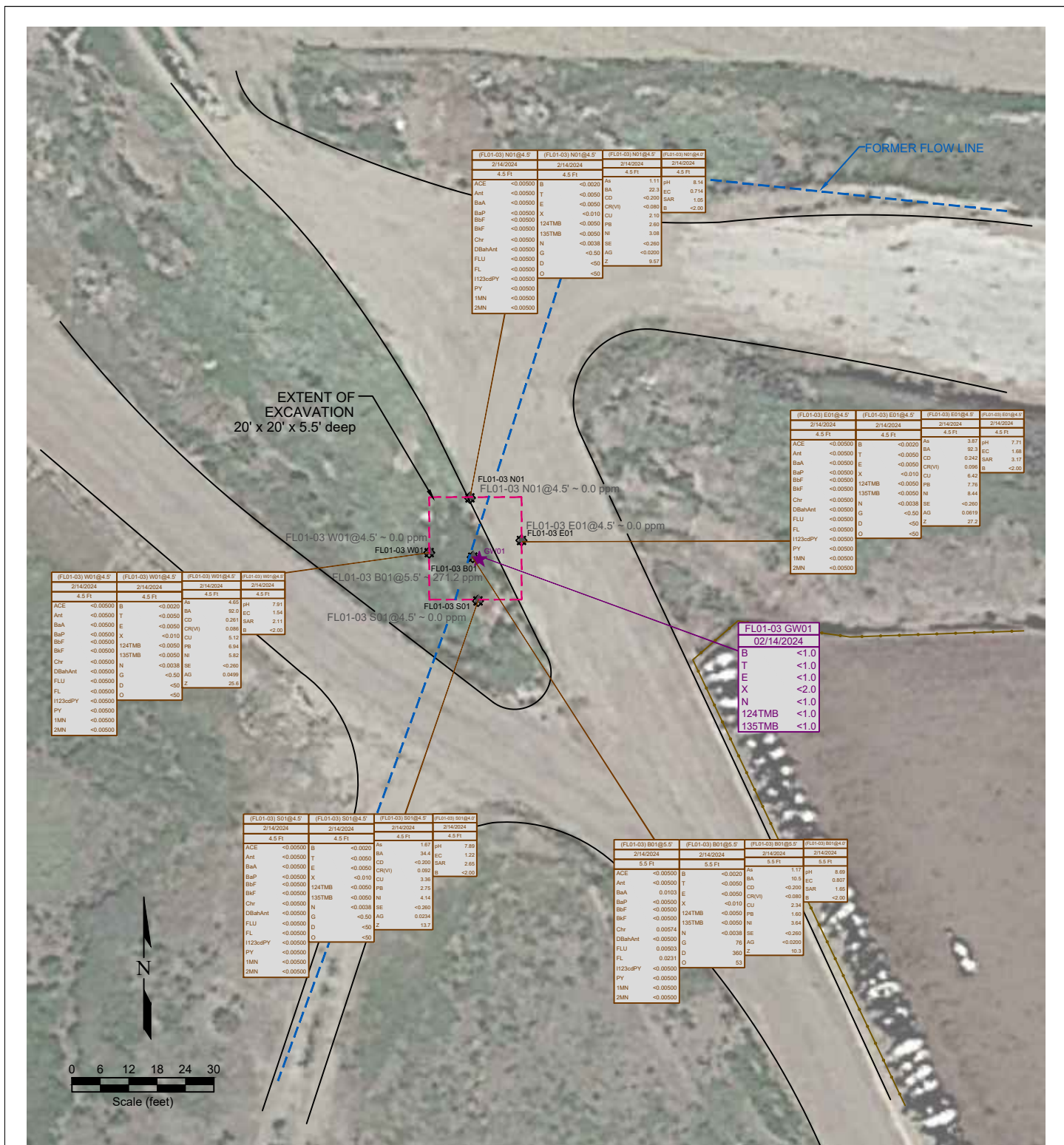
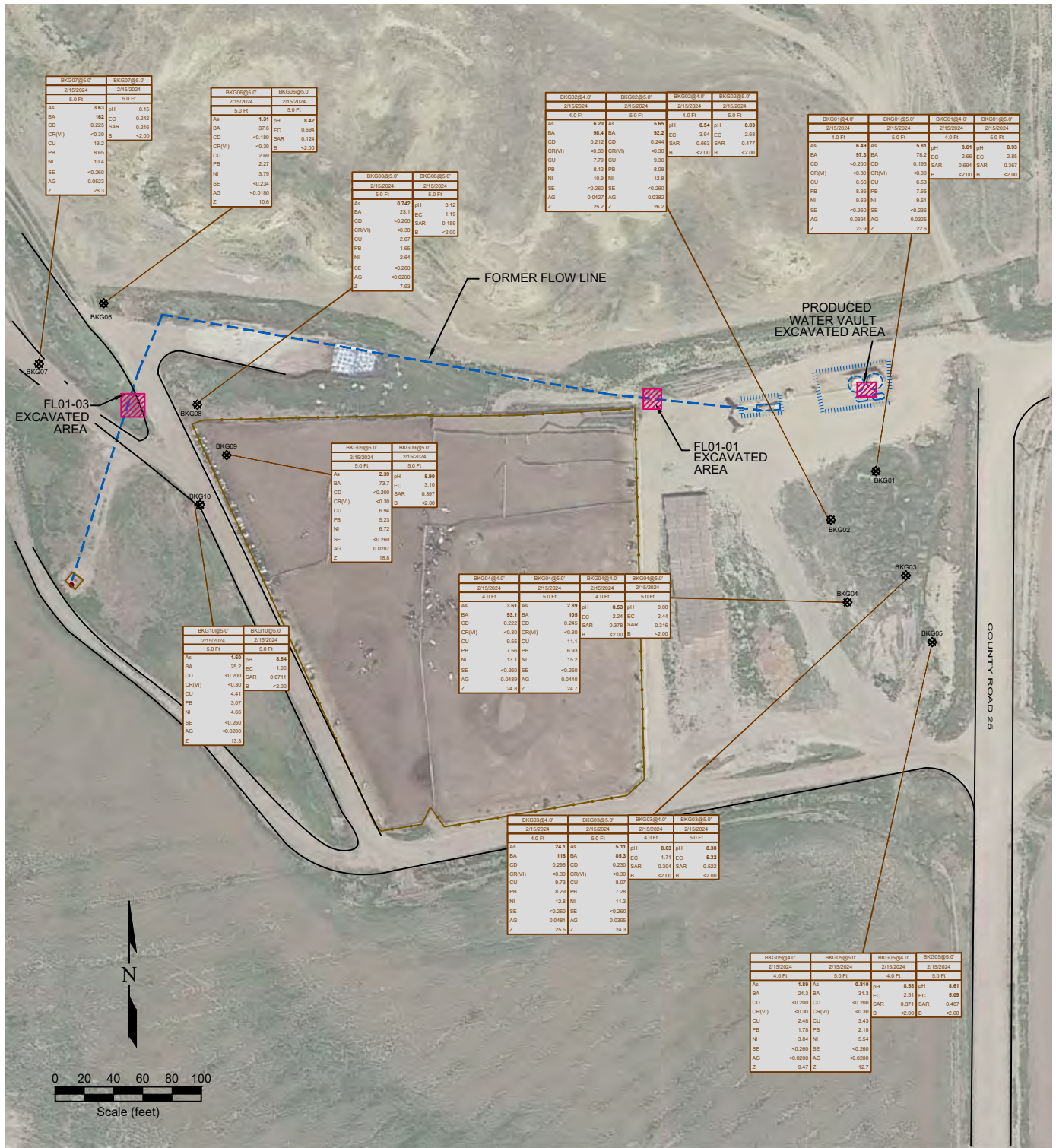


Figure 5  
**FL01-03 EXCAVATION SOIL & GROUNDWATER CHEMISTRY MAP**

**Noble Energy, Inc.**  
**Hansen BC O 64N67W 1NESE**  
**and Hansen O 1-23 (flow line)**  
**NESE Section 1, T4N, R67W, 6th PM**  
**Weld County, Colorado**  
**40.339724°, -104.830548°**

Project No. <b>C023-232</b>	API # <b>05-123-26612</b>	Facility # <b>333177</b>	<b>REMONT ENVIRONMENTAL</b>
Date <b>8/16/24</b>	Remediation # <b>22552</b>	Filename <b>23232Q2</b>	





# LEGEND

- WELL HEAD LOCATION
- SOIL SAMPLE LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- EXCAVATED AREAS
- FORMER FLOW LINE
- FENCE LINE
- CONTAINMENT BERM
- CONTAINMENT WALL

SAMPLE DATE	SAMPLE ID	SAMPLE DATE	SAMPLE ID
DEPTH	DEPTH (ft)	DEPTH	DEPTH (ft)
As	0.01	As	0.01
BA	0.01	BA	0.01
CD	0.01	CD	0.01
CR(VI)	0.01	CR(VI)	0.01
CU	0.01	CU	0.01
NI	0.01	NI	0.01
SE	0.01	SE	0.01
AG	0.01	AG	0.01
Z	0.01	Z	0.01

SAMPLE DATE	SAMPLE ID	SAMPLE DATE	SAMPLE ID
DEPTH	DEPTH (ft)	DEPTH	DEPTH (ft)
As	0.01	As	0.01
BA	0.01	BA	0.01
CD	0.01	CD	0.01
CR(VI)	0.01	CR(VI)	0.01
CU	0.01	CU	0.01
NI	0.01	NI	0.01
SE	0.01	SE	0.01
AG	0.01	AG	0.01
Z	0.01	Z	0.01

Figure 6  
BACKGROUND SAMPLE SOIL CHEMISTRY MAP

Noble Energy, Inc.  
Hansen BC O 64N67W 1NESE  
and Hansen O 1-23 (flow line)  
NESE Section 1, T4N, R67W, 6th PM  
Weld County, Colorado  
40.339724°, -104.830548°

Project No.  
**C023-232**

API #  
**05-123-26612**

Facility #  
**333177**

Date  
**8/16/24**

Remediation #  
**22552**

Filename  
**23232Q4**



**APPENDIX A**

**PHOTO LOG**





**Description:**

#1A - Hansen BC O-64N67W 1NESE - Floor of FL01-03 Sample Location Excavation - (FL01-03) B01@5.5' - Staining/Odor - PID: 271.2ppm



## Photo Log



### ***Description:***

#1B - Hansen BC O-64N67W 1NESE - Groundwater in FL01-03 Excavation - GW01 - Odor/Sheen Present - Depth 5.5 Ft



## Photo Log



### **Description:**

#1C - Hansen BC O-64N67W 1NESE - North Sidewall of FL01-03 Excavation - (FL01-03) N01@4.5' - No Impacts Noted - PID: 0.0ppm



## Photo Log



### ***Description:***

#1D - Hansen BC O-64N67W 1NESE - South Sidewall of FL01-03 Excavation - (FL01-03) S01@4.5' - No Impacts Noted - PID: 0.0ppm



## Photo Log



### ***Description:***

#1E - Hansen BC O-64N67W 1NESE - East Sidewall of FL01-03 Excavation - (FL01-03) E01@4.5' - No Impacts Noted - PID: 0.0ppm



## Photo Log



### ***Description:***

#1F - Hansen BC O-64N67W 1NESE - West Sidewall of FL01-03 Excavation - (FL01-03) W01@4.5' - No Impacts Noted - PID: 0.0ppm



## Photo Log



### ***Description:***

#1C - Hansen BC O-64N67W 1NESE - FL01-03 Excavation Backfill - (FL01-03) Backfill - No Impacts Noted - PID: 0.0ppm





***Description:***

#2A - Hansen BC O-64N67W 1NESE - Floor of FL01-01 Sample Location Excavation - (FL01-01) B01@5.0' - No Impacts Noted - PID: 0.0ppm





**Description:**

#2B - Hansen BC O-64N67W 1NESE - North Sidewall of FL01-01 Excavation - (FL01-01) N01@4.0' - No Impacts Noted - PID: 0.0ppm



## Photo Log



### ***Description:***

#2C - Hansen BC O-64N67W 1NESE - South Sidewall of FL01-01 Excavation - (FL01-01) S01@4.0' - No Impacts Noted - PID: 0.0ppm



## Photo Log



### ***Description:***

#2D - Hansen BC O-64N67W 1NESE - East Sidewall of FL01-01 Excavation - (FL01-01) E01@4.0' - No Impacts Noted - PID: 0.0ppm



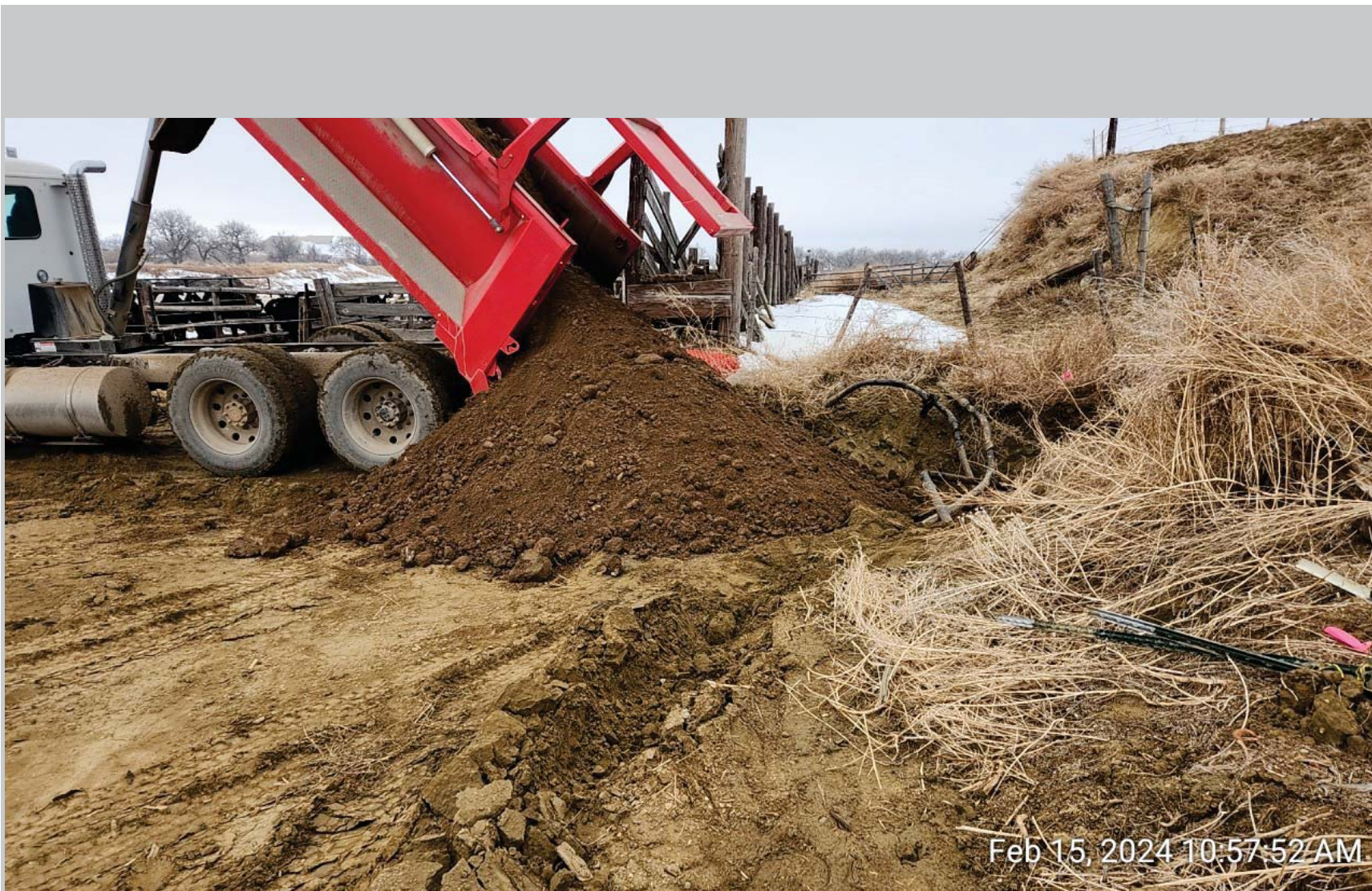


***Description:***

#2E - Hansen BC O-64N67W 1NESE - West Sidewall of FL01-01 Excavation - (FL01-01) W01@4.0' - No Impacts Noted - PID: 0.0ppm



## Photo Log



### ***Description:***

#2F - Hansen BC O-64N67W 1NESE - FL01-01 Excavation Backfill - (FL01-01) Backfill - No Impacts Noted - PID: 0.0ppm



## Photo Log



### ***Description:***

#3A - Hansen BC O-64N67W 1NESE - Floor of Produced Water Vault Excavation - (PWV) B01@5.0' - No Impacts Noted - PID: 0.0ppm





***Description:***

#3B - Hansen BC O-64N67W 1NESE - North Sidewall of Produced Water Vault Excavation - (PWV) N01@4.0' - No Impacts Noted - PID: 0.0ppm



## Photo Log



### ***Description:***

#3C - Hansen BC O-64N67W 1NESE - South Sidewall of Produced Water Vault Excavation - (PWV) S01@4.0' - No Impacts Noted - PID: 0.0ppm





***Description:***

#3D - Hansen BC O-64N67W 1NESE - East Sidewall of Produced Water Vault Excavation - (PWV) E01@4.0' - No Impacts Noted - PID: 0.0ppm



## Photo Log



### ***Description:***

#3E - Hansen BC O-64N67W 1NESE - West Sidewall of Produced Water Vault Excavation - (PWV) W01@4.0' - No Impacts Noted - PID: 0.0ppm



## Photo Log



Feb 15, 2024 11:13:32 AM

### ***Description:***

#4A - Hansen BC O-64N67W 1NESE - 1st Local Background Sample Dig - BKG01 - Samples Collected at 4.0ft and 5.0ft





Feb 15, 2024 11:16:44 AM

**Description:**

#4B - Hansen BC O-64N67W 1NESE - 2nd Local Background Sample Dig - BKG02 - Samples Collected at 4.0ft and 5.0ft



## Photo Log



### ***Description:***

#4C - Hansen BC O-64N67W 1NESE - 3rd Local Background Sample Dig - BKG03 - Samples Collected at 4.0ft and 5.0ft



## Photo Log

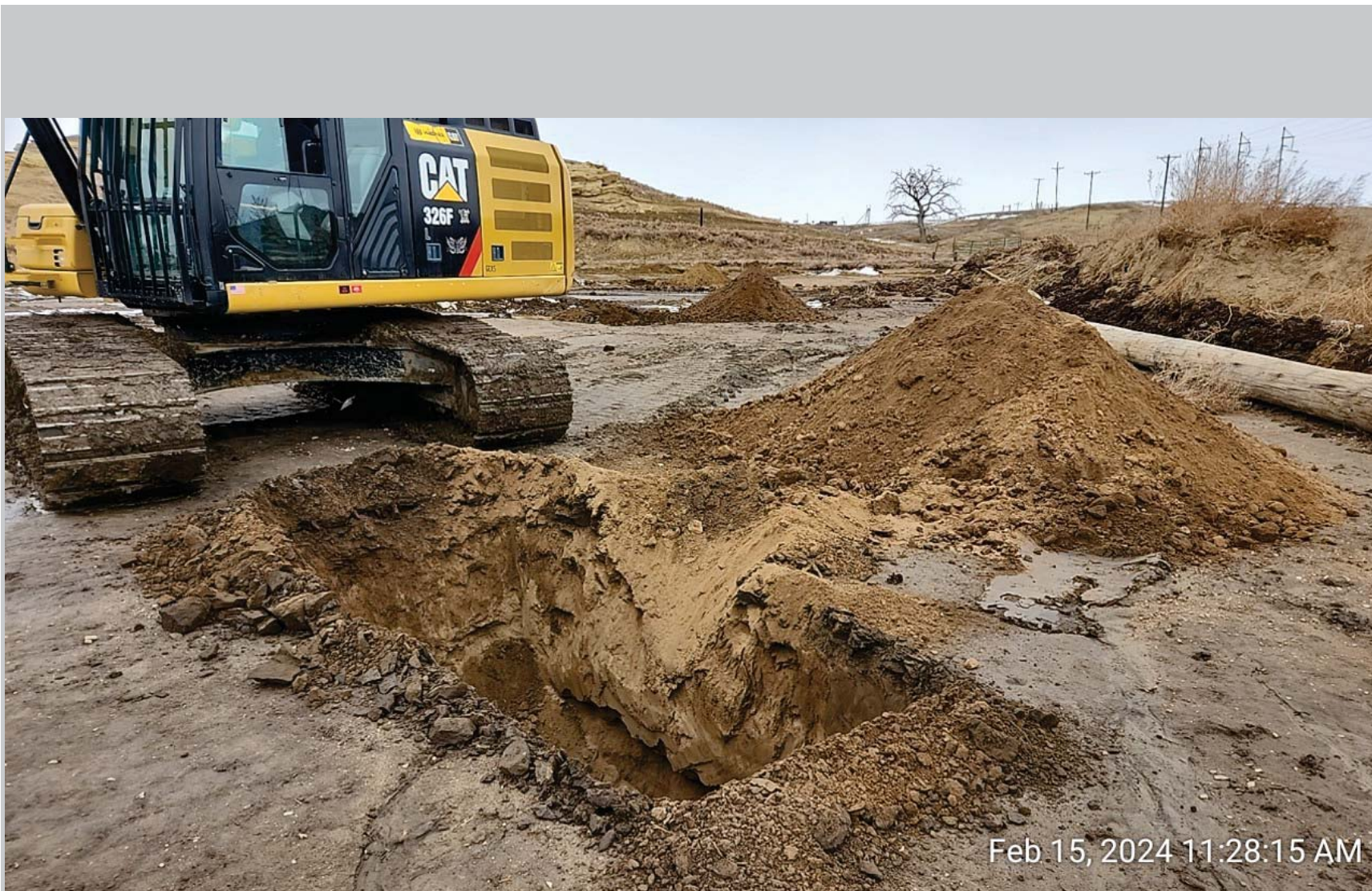


### ***Description:***

#4D - Hansen BC O-64N67W 1NESE - 4th Local Background Sample Dig - BKG04 - Samples Collected at 4.0ft and 5.0ft



## Photo Log



### ***Description:***

#4E - Hansen BC O-64N67W 1NESE - 5th Local Background Sample Dig - BKG05 - Samples Collected at 4.0ft and 5.0ft



## Photo Log



### ***Description:***

#4F - Hansen BC O-64N67W 1NESE - 6th Local Background Sample Dig - BKG06 - Sample Collected at 5.0ft



## Photo Log



### ***Description:***

#4G - Hansen BC O-64N67W 1NESE - 7th Local Background Sample Dig - BKG07 - Sample Collected at 5.0ft



## Photo Log



### ***Description:***

#4H - Hansen BC O-64N67W 1NESE - 8th Local Background Sample Dig - BKG08 - Sample Collected at 5.0ft



## Photo Log



### ***Description:***

#41 - Hansen BC O-64N67W 1NESE - 9th Local Background Sample Dig - BKG09 - Sample Collected at 5.0ft



## Photo Log



***Description:***

#4J - Hansen BC O-64N67W 1NESE - 10th Local Background Sample Dig - BKG10 - Sample Collected at 5.0ft

## **APPENDIX B**

### **LABORATORY DOCUMENTATION**

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 08, 2024

Paul Henchan

Fremont Environmental

PO Box 1289

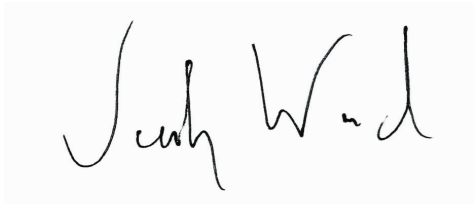
Wellington, CO 80549

RE: Hanson BC 0-64N67W 1NESE

Work Order #2402267

Enclosed are the results of analyses for samples received by Summit Scientific on 02/14/24 17:41. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Ben Shrewsbury

Laboratory Manager





Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
(FL01-01)B01@5.0'	2402267-01	Soil	02/14/24 00:00	02/14/24 17:41
(FL01-01)N01@4.0'	2402267-02	Soil	02/14/24 00:00	02/14/24 17:41
(FL01-01)S01@4.0'	2402267-03	Soil	02/14/24 00:00	02/14/24 17:41
(FL01-01)E01@4.0'	2402267-04	Soil	02/14/24 00:00	02/14/24 17:41
(FL01-01)W01@4.0'	2402267-05	Soil	02/14/24 00:00	02/14/24 17:41
(FL01-03)B01@5.5'	2402267-06	Soil	02/14/24 00:00	02/14/24 17:41
(FL01-03)N01@4.5'	2402267-07	Soil	02/14/24 00:00	02/14/24 17:41
(FL01-03)S01@4.5'	2402267-08	Soil	02/14/24 00:00	02/14/24 17:41
(FL01-03)E01@4.5'	2402267-09	Soil	02/14/24 00:00	02/14/24 17:41
(FL01-03)W01@4.5'	2402267-10	Soil	02/14/24 00:00	02/14/24 17:41
(FL01-03) Backfill	2402267-11	Soil	02/14/24 00:00	02/14/24 17:41
(FL01-03) GW01	2402267-12	Water	02/14/24 00:00	02/14/24 17:41

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.*

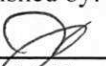
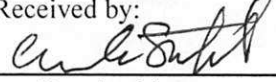
# SUMMIT SCIENTIFIC

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

Lab ID	Page 1 of 1
2402207	

Send Data To:		Send Invoice To:	
Client: Fremont Env	Project Manager: Paul Henahan	Company:	
Address:	E-Mail: Paul.h@fremontenv.com	Project Name/Location:	
City/State/Zip:	Jeffg@fremontenv.com Ethenb@fremontenv.com	AFE#:	
Phone:	Project Name: Hanson BC O-64N67W 1NESE	PO/Billing Codes: UWRWE-A2137-ABN	
Sampler Name: JG	Project Number:	Contact:	

					Preservative				Matrix				Analysis Requested						Special Instructions		
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other _____	Water	Soil	Air-Canister #	Other _____	BTEX+N	TMBs (915)	DRO,ORO,GRO	PAHs (915)	EC,PH,SAR, Baron	Metals (915)			
1	(FL01-01) B01@5.0'	2/14/24		2			X			X			X	X	X	X	X	X			
2	(FL01-01) N01@4.0'																				
3	(FL01-01) S01@4.0'																				
4	(FL01-01) E01@4.0'																				
5	(FL01-01) W01@4.0'																				
6	<del>(FL01-01) B01@4.0'</del>																				
7	(FL01-03) B01@5.5'																				
8	(FL01-03) N01@4.5'																				
9	(FL01-03) S01@4.5'																				
10	(FL01-03) E01@4.5'																				
11	(FL01-03) W01@4.5'																				
12	(FL01-03) <del>6W01</del> Backfill			2			X			X					X	X	X	X			
13	(FL01-03) 6W01			3	X				X				X	X							
14																					
15																					

Relinquished by: 	Date/Time: 2/14/24	Received by: 	Date/Time: 2/14/24 (7:41)	TAT Business Days	Field DO	Notes:	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day	X		Field EC
				1 Day			Field ORP
				2 Days			Field pH
				3 Days			Field Temp.
Relinquished by:	Date/Time:	Received by:	Date/Time:	Standard		Field Turb.	
Temperature Upon Receipt: 11.2	Corrected Temperature:	IR gun #: 2	HNO3 lot #:				



S<sub>2</sub>

## Sample Receipt Checklist

S2 Work Order# 240 2267Client: Fremont Client Project ID: Hanson BC 0-64N67W INESEShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ ☐ ☐ ☐ ☐ Airbill #: \_\_\_\_\_Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☒ Other ☐Temp (°C) 11.2Thermometer # 2

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> <b>NOTE:</b> 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"/>	in cooler
If custody seals are present, are they intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? <sup>(1)</sup>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Samples 1-5 have incomplete names
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HCl
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.
  
 Custodian Printed Name

2/14/24  
 Date/Time



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)B01@5.0'**  
**2402267-01 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BHB0488	02/14/24	02/14/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0384	96.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0416	104 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0487	02/14/24	02/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

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

**PAH by EPA Method 8270D SIM**

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)B01@5.0'**  
**2402267-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0504	02/15/24	02/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0188	56.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0154	46.2 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0735	02/22/24	02/26/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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PO Box 1289  
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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)B01@5.0'**  
**2402267-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	7.36	0.200	mg/kg dry	1	BHC0970	03/26/24	04/05/24	EPA 6020B	
Barium	37.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.85	0.400	"	"	"	"	"	"	
Lead	7.92	0.200	"	"	"	"	"	"	
Nickel	5.21	0.400	"	"	"	"	"	"	
Silver	0.0499	0.0200	"	"	"	"	"	"	
Zinc	23.6	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	532	0.0500	mg/L dry	1	BHB0495	02/14/24	02/16/24	EPA 6020B	
Magnesium	272	0.0500	"	"	"	"	"	"	
Sodium	87.3	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.768	0.00100	units	1	BHB0639	02/20/24	02/20/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.3		%	1	BHB0536	02/16/24	02/16/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)B01@5.0'**  
**2402267-01 (Soil)**

**Summit Scientific**

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Specific Conductance (EC)	3.66	0.0100	mmhos/cm	1	BHB0497	02/15/24	02/15/24	EPA 120.1
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**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.08		pH Units	1	BHB0496	02/15/24	02/15/24	EPA 9045D	

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)N01@4.0'**  
**2402267-02 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0488	02/14/24	02/14/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0407	102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0422	106 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0487	02/14/24	02/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.6	116 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)N01@4.0'**  
**2402267-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0504	02/15/24	02/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0267	80.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0199	59.6 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0735	02/22/24	02/26/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/14/24 00:00**

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

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)N01@4.0'**  
**2402267-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	7.83	0.200	mg/kg dry	1	BHC0970	03/26/24	04/05/24	EPA 6020B
Barium	29.1	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.76	0.400	"	"	"	"	"	"
Lead	8.49	0.200	"	"	"	"	"	"
Nickel	5.08	0.400	"	"	"	"	"	"
Silver	0.0573	0.0200	"	"	"	"	"	"
Zinc	23.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	511	0.0500	mg/L dry	1	BHB0495	02/14/24	02/16/24	EPA 6020B	
Magnesium	322	0.0500	"	"	"	"	"	"	
Sodium	94.7	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.808	0.00100	units	1	BHB0639	02/20/24	02/20/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.6		%	1	BHB0536	02/16/24	02/16/24	Calculation	

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

Date Sampled: **02/14/24 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: Hanson BC 0-64N67W 1NESE Project Number: UWRWE-A2137-ABN Project Manager: Paul Henchan	<b>Reported:</b> 04/08/24 16:24
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(FL01-01)N01@4.0'  
2402267-02 (Soil)

Summit Scientific

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

pH	7.83	pH Units	1	BHB0496	02/15/24	02/15/24	EPA 9045D
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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)N01@4.0'**  
**2402267-02 (Soil)**

**Summit Scientific**

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	2.18	0.0100		mmhos/cm	1	BHB0902	02/28/24	02/28/24	EPA 120.1	

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)S01@4.0'**  
**2402267-03 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0488	02/14/24	02/14/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0400	100 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0419	105 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0422	106 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0487	02/14/24	02/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

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

**PAH by EPA Method 8270D SIM**

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)S01@4.0'**  
**2402267-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0504	02/15/24	02/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0254	76.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0199	59.8 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0735	02/22/24	02/26/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/14/24 00:00**

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

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)S01@4.0'**  
**2402267-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	6.65	0.200	mg/kg dry	1	BHC0970	03/26/24	04/05/24	EPA 6020B
Barium	43.2	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.49	0.400	"	"	"	"	"	"
Lead	7.48	0.200	"	"	"	"	"	"
Nickel	4.92	0.400	"	"	"	"	"	"
Silver	0.0459	0.0200	"	"	"	"	"	"
Zinc	22.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	10.0	0.0500	mg/L dry	1	BHB0495	02/14/24	02/16/24	EPA 6020B	
Magnesium	17.2	0.0500	"	"	"	"	"	"	
Sodium	16.0	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.711	0.00100	units	1	BHB0639	02/20/24	02/20/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.5		%	1	BHB0536	02/16/24	02/16/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/14/24 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: Hanson BC 0-64N67W 1NESE Project Number: UWRWE-A2137-ABN Project Manager: Paul Henchan	Reported: 04/08/24 16:24
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(FL01-01)S01@4.0'  
2402267-03 (Soil)

Summit Scientific

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Specific Conductance (EC)	0.250	0.0100 mmhos/cm	1	BHB0497	02/15/24	02/15/24	EPA 120.1
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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)S01@4.0'**  
**2402267-03 (Soil)**

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>pH</b>	<b>8.98</b>			pH Units	1	BHB0901	02/28/24	02/28/24	EPA 9045D	

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)E01@4.0'**  
**2402267-04 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0488	02/14/24	02/14/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0399	99.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0417	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0415	104 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0487	02/14/24	02/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.8	118 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)E01@4.0'**  
**2402267-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0504	02/15/24	02/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Benzo (a) anthracene</b>	<b>0.00574</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (a) pyrene</b>	<b>0.00888</b>	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	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.00904</b>	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.00719</b>	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0271	81.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0228	68.5 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0735	02/22/24	02/26/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)E01@4.0'**  
**2402267-04 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	7.21	0.200	mg/kg dry	1	BHC0970	03/26/24	04/05/24	EPA 6020B	
Barium	45.1	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.79	0.400	"	"	"	"	"	"	
Lead	7.42	0.200	"	"	"	"	"	"	
Nickel	4.83	0.400	"	"	"	"	"	"	
Silver	0.0444	0.0200	"	"	"	"	"	"	
Zinc	23.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	16.7	0.0500	mg/L dry	1	BHB0495	02/14/24	02/16/24	EPA 6020B	
Magnesium	17.3	0.0500	"	"	"	"	"	"	
Sodium	24.6	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.01	0.00100	units	1	BHB0639	02/20/24	02/20/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.3		%	1	BHB0536	02/16/24	02/16/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)E01@4.0'**  
**2402267-04 (Soil)**

**Summit Scientific**

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Specific Conductance (EC)	0.420	0.0100	mmhos/cm	1	BHB0497	02/15/24	02/15/24	EPA 120.1
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**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.66		pH Units	1	BHB0496	02/15/24	02/15/24	EPA 9045D	

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)W01@4.0'**  
**2402267-05 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0488	02/14/24	02/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0400	100 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0417	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0431	108 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0487	02/14/24	02/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	16.9	135 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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**Reported:**  
04/08/24 16:24

**(FL01-01)W01@4.0'**  
**2402267-05 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0504	02/15/24	02/18/24	EPA 8270D SIM	
<b>Anthracene</b>	<b>0.00911</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (a) pyrene</b>	<b>0.0103</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>0.00748</b>	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.00775</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.0259</b>	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.0209</b>	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0269	80.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0206	61.9 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0735	02/22/24	02/26/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>9.91</b>	0.200	mg/kg dry	1	BHC0970	03/26/24	04/05/24	EPA 6020B	

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)W01@4.0'**  
**2402267-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Barium	40.9	0.400	mg/kg dry	1	BHC0970	03/26/24	04/05/24	EPA 6020B
Cadmium	0.203	0.200	"	"	"	"	"	"
Copper	4.53	0.400	"	"	"	"	"	"
Lead	8.86	0.200	"	"	"	"	"	"
Nickel	4.97	0.400	"	"	"	"	"	"
Silver	0.0484	0.0200	"	"	"	"	"	"
Zinc	23.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	23.6	0.0500	mg/L dry	1	BHB0495	02/14/24	02/16/24	EPA 6020B	
Magnesium	47.5	0.0500	"	"	"	"	"	"	
Sodium	44.3	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.21	0.00100	units	1	BHB0639	02/20/24	02/20/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.0		%	1	BHB0536	02/16/24	02/16/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.747	0.0100	mmhos/cm	1	BHB0497	02/15/24	02/15/24	EPA 120.1	

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Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)W01@4.0'**  
**2402267-05 (Soil)**

**Summit Scientific**

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>pH</b>	<b>8.51</b>			pH Units	1	BHB0496	02/15/24	02/15/24	EPA 9045D	

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-01)W01@4.0'**  
**2402267-05 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) anthracene	ND	0.00500	mg/kg	1	BHB0884	02/15/24	02/29/24	EPA 8270D SIM	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0198	59.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0138	41.3 %	40-150		"	"	"	"	

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03)B01@5.5'**  
**2402267-06 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.20	mg/kg	100	BHB0488	02/14/24	02/15/24	EPA 8260B	R-05
Toluene	ND	0.50	"	"	"	"	"	"	R-05
Ethylbenzene	ND	0.50	"	"	"	"	"	"	R-05
Xylenes (total)	ND	1.0	"	"	"	"	"	"	R-05
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	R-05
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	R-05
Naphthalene	ND	0.38	"	"	"	"	"	"	R-05

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0379	94.8 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0420	105 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0541	135 %	50-150	"	"	"	"	"	

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHB0504	02/15/24	02/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Benzo (a) anthracene</b>	<b>0.0103</b>	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.00574</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.00503</b>	0.00500	"	"	"	"	"	"	
<b>Fluorene</b>	<b>0.0231</b>	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03)B01@5.5'**  
**2402267-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

2-Methylnaphthalene	ND	0.00500	mg/kg	1	BHB0504	02/15/24	02/18/24	EPA 8270D SIM
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Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0368	110 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0203	60.9 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0735	02/22/24	02/26/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.17	0.200	mg/kg dry	1	BHC0970	03/26/24	04/05/24	EPA 6020B	
Barium	10.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.34	0.400	"	"	"	"	"	"	
Lead	1.60	0.200	"	"	"	"	"	"	
Nickel	3.64	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	10.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	31.3	0.0500	mg/L dry	1	BHB0495	02/14/24	02/16/24	EPA 6020B	
Magnesium	52.5	0.0500	"	"	"	"	"	"	

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03)B01@5.5'**  
**2402267-06 (Soil)**

**Summit Scientific**

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

Sodium	65.1	0.0500	mg/L dry	1	BHB0495	02/14/24	02/16/24	EPA 6020B
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**Calculated Analysis**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.65	0.00100	units	1	BHB0639	02/20/24	02/20/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.2		%	1	BHB0536	02/16/24	02/16/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.807	0.0100	mmhos/cm	1	BHB0497	02/15/24	02/15/24	EPA 120.1	

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03)B01@5.5'**  
**2402267-06 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline Range Hydrocarbons	76	0.50	mg/kg	1	BHB0558	02/16/24	02/17/24	EPA 8260B	E

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0343	85.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0391	97.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.213	532 %	50-150		"	"	"	"	S-02

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	360	50	mg/kg	1	BHB0559	"	02/16/24	EPA 8015M	
C28-C36 (ORO)	53	50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	6.71	53.7 %	30-150		"	"	"	"	

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.69		pH Units	1	BHB0901	02/28/24	02/28/24	EPA 9045D	

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03)N01@4.5'**  
**2402267-07 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0488	02/14/24	02/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0390	97.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0411	103 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0487	02/14/24	02/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.1	96.7 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03)N01@4.5'**  
**2402267-07 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0504	02/15/24	02/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0263	78.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0188	56.4 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0735	02/22/24	02/26/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03)N01@4.5'**  
**2402267-07 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	1.11	0.200	mg/kg dry	1	BHC0970	03/26/24	04/05/24	EPA 6020B
Barium	22.3	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.10	0.400	"	"	"	"	"	"
Lead	2.60	0.200	"	"	"	"	"	"
Nickel	3.08	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	9.57	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	42.1	0.0500	mg/L dry	1	BHB0495	02/14/24	02/16/24	EPA 6020B	
Magnesium	39.9	0.0500	"	"	"	"	"	"	
Sodium	39.7	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.05	0.00100	units	1	BHB0639	02/20/24	02/20/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.7		%	1	BHB0536	02/16/24	02/16/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03)N01@4.5'**  
**2402267-07 (Soil)**

**Summit Scientific**

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	<b>0.714</b>	0.0100		mmhos/cm	1	BHB0497	02/15/24	02/15/24	EPA 120.1	

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>pH</b>	<b>8.14</b>			pH Units	1	BHB0496	02/15/24	02/15/24	EPA 9045D	

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03)S01@4.5'**  
**2402267-08 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0488	02/14/24	02/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0390	97.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0411	103 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0487	02/14/24	02/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

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

**PAH by EPA Method 8270D SIM**

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**Reported:**  
04/08/24 16:24

**(FL01-03)S01@4.5'**  
**2402267-08 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0504	02/15/24	02/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0168	50.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0139	41.8 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0735	02/22/24	02/26/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03)S01@4.5'**  
**2402267-08 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	1.67	0.200	mg/kg dry	1	BHC0970	03/26/24	04/05/24	EPA 6020B
Barium	34.4	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.36	0.400	"	"	"	"	"	"
Lead	2.75	0.200	"	"	"	"	"	"
Nickel	4.14	0.400	"	"	"	"	"	"
Silver	0.0234	0.0200	"	"	"	"	"	"
Zinc	13.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	53.7	0.0500	mg/L dry	1	BHB0495	02/14/24	02/16/24	EPA 6020B	
Magnesium	64.6	0.0500	"	"	"	"	"	"	
Sodium	122	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.65	0.00100	units	1	BHB0639	02/20/24	02/20/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.2		%	1	BHB0536	02/16/24	02/16/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/14/24 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: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03)S01@4.5'**  
**2402267-08 (Soil)**

**Summit Scientific**

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Specific Conductance (EC)	1.22	0.0100	mmhos/cm	1	BHB0497	02/15/24	02/15/24	EPA 120.1
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**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.89		pH Units	1	BHB0496	02/15/24	02/15/24	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03)E01@4.5'**  
**2402267-09 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0488	02/14/24	02/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0514	128 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0381	95.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0270	67.4 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0487	02/14/24	02/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.3	82.4 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03)E01@4.5'**  
**2402267-09 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0504	02/15/24	02/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0223	66.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0195	58.4 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0735	02/22/24	02/26/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/14/24 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: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03)E01@4.5'**  
**2402267-09 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	3.87	0.200	mg/kg dry	1	BHC0970	03/26/24	04/05/24	EPA 6020B
Barium	92.3	0.400	"	"	"	"	"	"
Cadmium	0.242	0.200	"	"	"	"	"	"
Copper	6.42	0.400	"	"	"	"	"	"
Lead	7.76	0.200	"	"	"	"	"	"
Nickel	8.44	0.400	"	"	"	"	"	"
Silver	0.0619	0.0200	"	"	"	"	"	"
Zinc	27.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	111	0.0500	mg/L dry	1	BHB0495	02/14/24	02/16/24	EPA 6020B	
Magnesium	100	0.0500	"	"	"	"	"	"	
Sodium	191	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.17	0.00100	units	1	BHB0639	02/20/24	02/20/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	80.2		%	1	BHB0536	02/16/24	02/16/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/14/24 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: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03)E01@4.5'**  
**2402267-09 (Soil)**

**Summit Scientific**

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Specific Conductance (EC)	1.68	0.0100	mmhos/cm	1	BHB0497	02/15/24	02/15/24	EPA 120.1
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**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.71		pH Units	1	BHB0496	02/15/24	02/15/24	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03)W01@4.5'**  
**2402267-10 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0488	02/14/24	02/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

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

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0487	02/14/24	02/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.66	77.3 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03)W01@4.5'**  
**2402267-10 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0504	02/15/24	02/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0158	47.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0164	49.3 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0735	02/22/24	02/26/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03)W01@4.5'**  
**2402267-10 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	4.65	0.200	mg/kg dry	1	BHC0970	03/26/24	04/05/24	EPA 6020B
Barium	92.0	0.400	"	"	"	"	"	"
Cadmium	0.261	0.200	"	"	"	"	"	"
Copper	5.12	0.400	"	"	"	"	"	"
Lead	6.94	0.200	"	"	"	"	"	"
Nickel	5.82	0.400	"	"	"	"	"	"
Silver	0.0499	0.0200	"	"	"	"	"	"
Zinc	25.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	86.6	0.0500	mg/L dry	1	BHB0495	02/14/24	02/16/24	EPA 6020B	
Magnesium	109	0.0500	"	"	"	"	"	"	
Sodium	125	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.11	0.00100	units	1	BHB0639	02/20/24	02/20/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.8		%	1	BHB0536	02/16/24	02/16/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/14/24 00:00**

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

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03)W01@4.5'**  
**2402267-10 (Soil)**

**Summit Scientific**

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Specific Conductance (EC)	1.54	0.0100	mmhos/cm	1	BHB0497	02/15/24	02/15/24	EPA 120.1
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**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.91		pH Units	1	BHB0496	02/15/24	02/15/24	EPA 9045D	

Summit Scientific

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PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03) Backfill**  
**2402267-11 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0488	02/14/24	02/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0394	98.5 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0413	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0424	106 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0487	02/14/24	02/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.6	101 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03) Backfill**  
**2402267-11 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0504	02/15/24	02/18/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0215	64.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0196	58.9 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0735	02/22/24	02/26/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/14/24 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: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03) Backfill**  
**2402267-11 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.51	0.200	mg/kg dry	1	BHC0970	03/26/24	04/05/24	EPA 6020B	
Barium	65.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.57	0.400	"	"	"	"	"	"	
Lead	5.95	0.200	"	"	"	"	"	"	
Nickel	5.23	0.400	"	"	"	"	"	"	
Silver	0.0363	0.0200	"	"	"	"	"	"	
Zinc	18.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

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

Date Sampled: 02/14/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	38.0	0.0500	mg/L dry	1	BHB0495	02/14/24	02/16/24	EPA 6020B	
Magnesium	8.74	0.0500	"	"	"	"	"	"	
Sodium	11.0	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 02/14/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.418	0.00100	units	1	BHB0639	02/20/24	02/20/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: 02/14/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.4		%	1	BHB0536	02/16/24	02/16/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: 02/14/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03) Backfill**  
**2402267-11 (Soil)**

**Summit Scientific**

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Specific Conductance (EC)	0.321	0.0100	mmhos/cm	1	BHB0497	02/15/24	02/15/24	EPA 120.1
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**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.03		pH Units	1	BHB0496	02/15/24	02/15/24	EPA 9045D	

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**(FL01-03) GW01**  
**2402267-12 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BHB0481	02/14/24	02/15/24	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	14.3	107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.5	101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	18.0	135 %	21-167		"	"	"	"	

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

### Summit Scientific

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

#### Batch BHB0481 - EPA 5030 Water MS

##### Blank (BHB0481-BLK1)

Prepared & Analyzed: 02/14/24

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Naphthalene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.6		"	13.3		102	23-173			
Surrogate: Toluene-d8	13.1		"	13.3		98.4	20-170			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		95.8	21-167			

##### LCS (BHB0481-BS1)

Prepared & Analyzed: 02/14/24

Benzene	26.4	1.0	ug/l	25.0		106	51-132			
Toluene	25.5	1.0	"	25.0		102	51-138			
Ethylbenzene	28.9	1.0	"	25.0		115	58-146			
m,p-Xylene	67.4	2.0	"	50.0		135	57-144			
o-Xylene	32.1	1.0	"	25.0		128	53-146			
Naphthalene	20.9	1.0	"	25.0		83.4	70-130			
1,2,4-Trimethylbenzene	25.1	1.0	"	25.0		100	70-130			
1,3,5-Trimethylbenzene	25.3	1.0	"	25.0		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	13.4		"	13.3		101	23-173			
Surrogate: Toluene-d8	13.4		"	13.3		100	20-170			
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.3	21-167			

##### Matrix Spike (BHB0481-MS1)

Source: 2402225-01

Prepared & Analyzed: 02/14/24

Benzene	36.3	1.0	ug/l	25.0	ND	145	34-141			QM-07
Toluene	35.4	1.0	"	25.0	ND	141	27-151			
Ethylbenzene	39.0	1.0	"	25.0	ND	156	29-160			
m,p-Xylene	77.1	2.0	"	50.0	ND	154	20-166			
o-Xylene	32.4	1.0	"	25.0	ND	129	33-159			
Naphthalene	36.9	1.0	"	25.0	ND	148	70-130			QM-07
1,2,4-Trimethylbenzene	35.3	1.0	"	25.0	ND	141	70-130			QM-07
1,3,5-Trimethylbenzene	35.4	1.0	"	25.0	ND	142	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	13.8		"	13.3		103	23-173			
Surrogate: Toluene-d8	13.5		"	13.3		102	20-170			
Surrogate: 4-Bromofluorobenzene	12.3		"	13.3		92.3	21-167			

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PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

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

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

**Batch BHB0481 - EPA 5030 Water MS**

Matrix Spike Dup (BHB0481-MSD1)			Source: 2402225-01		Prepared & Analyzed: 02/14/24					
Benzene	35.8	1.0	ug/l	25.0	ND	143	34-141	1.50	30	QM-07
Toluene	34.9	1.0	"	25.0	ND	140	27-151	1.31	30	
Ethylbenzene	39.1	1.0	"	25.0	ND	156	29-160	0.282	30	
m,p-Xylene	77.0	2.0	"	50.0	ND	154	20-166	0.169	30	
o-Xylene	32.2	1.0	"	25.0	ND	129	33-159	0.527	30	
Naphthalene	37.0	1.0	"	25.0	ND	148	70-130	0.0541	30	QM-07
1,2,4-Trimethylbenzene	35.3	1.0	"	25.0	ND	141	70-130	0.113	30	QM-07
1,3,5-Trimethylbenzene	35.4	1.0	"	25.0	ND	141	70-130	0.170	30	QM-07
Surrogate: 1,2-Dichloroethane-d4	13.9		"	13.3		104	23-173			
Surrogate: Toluene-d8	13.5		"	13.3		101	20-170			
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3		94.1	21-167			

**Batch BHB0488 - EPA 5030 Soil MS**

Blank (BHB0488-BLK1)			Prepared: 02/14/24 Analyzed: 02/15/24							
Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0380		"	0.0400		95.0	50-150			
Surrogate: Toluene-d8	0.0416		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0417		"	0.0400		104	50-150			

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

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

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

**Batch BHB0488 - EPA 5030 Soil MS**

**LCS (BHB0488-BS1)**

Prepared: 02/14/24 Analyzed: 02/15/24

Benzene	0.0944	0.0020	mg/kg	0.100		94.4	70-130			
Toluene	0.0876	0.0050	"	0.100		87.6	70-130			
Ethylbenzene	0.0838	0.0050	"	0.100		83.8	70-130			
m,p-Xylene	0.160	0.010	"	0.200		79.9	70-130			
o-Xylene	0.0821	0.0050	"	0.100		82.1	70-130			
1,2,4-Trimethylbenzene	0.0823	0.0050	"	0.100		82.3	70-130			
1,3,5-Trimethylbenzene	0.0784	0.0050	"	0.100		78.4	70-130			
Naphthalene	0.0948	0.0038	"	0.100		94.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0363		"	0.0400		90.7	50-150			
Surrogate: Toluene-d8	0.0404		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0418		"	0.0400		105	50-150			

**Matrix Spike (BHB0488-MS1)**

Source: 2402267-01

Prepared: 02/14/24 Analyzed: 02/15/24

Benzene	0.0878	0.0020	mg/kg	0.100	ND	87.8	70-130			
Toluene	0.0828	0.0050	"	0.100	ND	82.8	70-130			
Ethylbenzene	0.0754	0.0050	"	0.100	ND	75.4	70-130			
m,p-Xylene	0.143	0.010	"	0.200	ND	71.7	70-130			
o-Xylene	0.0743	0.0050	"	0.100	ND	74.3	70-130			
1,2,4-Trimethylbenzene	0.0717	0.0050	"	0.100	ND	71.7	70-130			
1,3,5-Trimethylbenzene	0.0704	0.0050	"	0.100	ND	70.4	70-130			
Naphthalene	0.0805	0.0038	"	0.100	ND	80.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0375		"	0.0400		93.8	50-150			
Surrogate: Toluene-d8	0.0416		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0428		"	0.0400		107	50-150			

**Matrix Spike Dup (BHB0488-MSD1)**

Source: 2402267-01

Prepared: 02/14/24 Analyzed: 02/15/24

Benzene	0.0833	0.0020	mg/kg	0.100	ND	83.3	70-130	5.29	30	
Toluene	0.0778	0.0050	"	0.100	ND	77.8	70-130	6.16	30	
Ethylbenzene	0.0733	0.0050	"	0.100	ND	73.3	70-130	2.86	30	
m,p-Xylene	0.141	0.010	"	0.200	ND	70.4	70-130	1.90	30	
o-Xylene	0.0726	0.0050	"	0.100	ND	72.6	70-130	2.33	30	
1,2,4-Trimethylbenzene	0.0708	0.0050	"	0.100	ND	70.8	70-130	1.26	30	
1,3,5-Trimethylbenzene	0.0681	0.0050	"	0.100	ND	68.1	70-130	3.25	30	QM-07
Naphthalene	0.0825	0.0038	"	0.100	ND	82.5	70-130	2.43	30	
Surrogate: 1,2-Dichloroethane-d4	0.0398		"	0.0400		99.4	50-150			
Surrogate: Toluene-d8	0.0413		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0428		"	0.0400		107	50-150			

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PO Box 1289  
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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

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

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

**Batch BHB0558 - EPA 5030 Soil MS**

**Blank (BHB0558-BLK1)**

Prepared & Analyzed: 02/16/24

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
Naphthalene	ND	0.0038	"								
Gasoline Range Hydrocarbons	ND	0.50	"								
Surrogate: 1,2-Dichloroethane-d4	0.0374		"	0.0400		93.6		50-150			
Surrogate: Toluene-d8	0.0391		"	0.0400		97.6		50-150			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		99.1		50-150			

**LCS (BHB0558-BS1)**

Prepared & Analyzed: 02/16/24

Benzene	0.100	0.0020	mg/kg	0.100		100		70-130			
Toluene	0.0952	0.0050	"	0.100		95.2		70-130			
Ethylbenzene	0.0916	0.0050	"	0.100		91.6		70-130			
m,p-Xylene	0.175	0.010	"	0.200		87.3		70-130			
o-Xylene	0.0885	0.0050	"	0.100		88.5		70-130			
1,2,4-Trimethylbenzene	0.0866	0.0050	"	0.100		86.6		70-130			
1,3,5-Trimethylbenzene	0.0836	0.0050	"	0.100		83.6		70-130			
Naphthalene	0.105	0.0038	"	0.100		105		70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0382		"	0.0400		95.6		50-150			
Surrogate: Toluene-d8	0.0400		"	0.0400		100		50-150			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		99.9		50-150			

**Matrix Spike (BHB0558-MS1)**

Source: 2402268-01

Prepared & Analyzed: 02/16/24

Benzene	0.0967	0.0020	mg/kg	0.100	ND	96.7		70-130			
Toluene	0.0975	0.0050	"	0.100	ND	97.5		70-130			
Ethylbenzene	0.0830	0.0050	"	0.100	ND	83.0		70-130			
m,p-Xylene	0.176	0.010	"	0.200	ND	88.0		70-130			
o-Xylene	0.0853	0.0050	"	0.100	ND	85.3		70-130			
1,2,4-Trimethylbenzene	0.0799	0.0050	"	0.100	ND	79.9		70-130			
1,3,5-Trimethylbenzene	0.0793	0.0050	"	0.100	ND	79.3		70-130			
Naphthalene	0.103	0.0038	"	0.100	ND	103		70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0371		"	0.0400		92.8		50-150			
Surrogate: Toluene-d8	0.0394		"	0.0400		98.4		50-150			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		99.1		50-150			

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

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

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

**Batch BHB0558 - EPA 5030 Soil MS**

Matrix Spike Dup (BHB0558-MSD1)		Source: 2402268-01			Prepared & Analyzed: 02/16/24					
Benzene	0.0979	0.0020	mg/kg	0.100	ND	97.9	70-130	1.20	30	
Toluene	0.0998	0.0050	"	0.100	ND	99.8	70-130	2.25	30	
Ethylbenzene	0.0870	0.0050	"	0.100	ND	87.0	70-130	4.70	30	
m,p-Xylene	0.179	0.010	"	0.200	ND	89.5	70-130	1.71	30	
o-Xylene	0.0856	0.0050	"	0.100	ND	85.6	70-130	0.386	30	
1,2,4-Trimethylbenzene	0.0826	0.0050	"	0.100	ND	82.6	70-130	3.32	30	
1,3,5-Trimethylbenzene	0.0806	0.0050	"	0.100	ND	80.6	70-130	1.58	30	
Naphthalene	0.102	0.0038	"	0.100	ND	102	70-130	1.11	30	
Surrogate: 1,2-Dichloroethane-d4		0.0355	"	0.0400		88.8	50-150			
Surrogate: Toluene-d8		0.0389	"	0.0400		97.2	50-150			
Surrogate: 4-Bromofluorobenzene		0.0386	"	0.0400		96.4	50-150			

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch BHB0487 - EPA 3550A**

**Blank (BHB0487-BLK1)**

Prepared: 02/14/24 Analyzed: 02/15/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	17.9		"	12.5		143	30-150			

**LCS (BHB0487-BS1)**

Prepared: 02/14/24 Analyzed: 02/15/24

C10-C28 (DRO)	439	50	mg/kg	500		87.8	70-130			
Surrogate: o-Terphenyl	9.47		"	12.5		75.8	30-150			

**Matrix Spike (BHB0487-MS1)**

Source: 2402267-01

Prepared: 02/14/24 Analyzed: 02/15/24

C10-C28 (DRO)	496	50	mg/kg	500	31.7	92.8	70-130			
Surrogate: o-Terphenyl	12.5		"	12.5		100	30-150			

**Matrix Spike Dup (BHB0487-MSD1)**

Source: 2402267-01

Prepared: 02/14/24 Analyzed: 02/15/24

C10-C28 (DRO)	463	50	mg/kg	500	31.7	86.2	70-130	6.93	20	
Surrogate: o-Terphenyl	9.58		"	12.5		76.7	30-150			

**Batch BHB0559 - EPA 3550A**

**Blank (BHB0559-BLK1)**

Prepared & Analyzed: 02/16/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	9.11		"	12.5		72.9	30-150			

**LCS (BHB0559-BS1)**

Prepared & Analyzed: 02/16/24

C10-C28 (DRO)	391	50	mg/kg	500		78.2	70-130			
Surrogate: o-Terphenyl	8.99		"	12.5		71.9	30-150			

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch BHB0559 - EPA 3550A**

<b>Matrix Spike (BHB0559-MS1)</b>		<b>Source: 2402305-01</b>			Prepared & Analyzed: 02/16/24					
C10-C28 (DRO)	389	50	mg/kg	500	11.1	75.6	70-130			
Surrogate: o-Terphenyl	6.49		"	12.5		51.9	30-150			
<b>Matrix Spike Dup (BHB0559-MSD1)</b>		<b>Source: 2402305-01</b>			Prepared & Analyzed: 02/16/24					
C10-C28 (DRO)	388	50	mg/kg	500	11.1	75.4	70-130	0.164	20	
Surrogate: o-Terphenyl	6.45		"	12.5		51.6	30-150			

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

## PAH by EPA Method 8270D SIM - Quality Control

### Summit Scientific

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

#### Batch BHB0504 - EPA 5030 Soil MS

##### Blank (BHB0504-BLK1)

Prepared: 02/15/24 Analyzed: 02/18/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0385		"	0.0333		115	40-150			
Surrogate: Fluoranthene-d10	0.0273		"	0.0333		81.8	40-150			

##### LCS (BHB0504-BS1)

Prepared: 02/15/24 Analyzed: 02/18/24

Acenaphthene	0.0297	0.00500	mg/kg	0.0333		89.1	31-137			
Anthracene	0.0285	0.00500	"	0.0333		85.4	30-120			
Benzo (a) anthracene	0.0182	0.00500	"	0.0333		54.5	30-120			
Benzo (a) pyrene	0.0232	0.00500	"	0.0333		69.7	30-120			
Benzo (b) fluoranthene	0.0221	0.00500	"	0.0333		66.3	30-120			
Benzo (k) fluoranthene	0.0280	0.00500	"	0.0333		84.0	30-120			
Chrysene	0.0297	0.00500	"	0.0333		89.2	30-120			
Dibenz (a,h) anthracene	0.0216	0.00500	"	0.0333		64.7	30-120			
Fluoranthene	0.0272	0.00500	"	0.0333		81.6	30-120			
Fluorene	0.0287	0.00500	"	0.0333		86.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0219	0.00500	"	0.0333		65.6	30-120			
Pyrene	0.0311	0.00500	"	0.0333		93.2	35-142			
1-Methylnaphthalene	0.0417	0.00500	"	0.0333		125	35-142			
2-Methylnaphthalene	0.0305	0.00500	"	0.0333		91.6	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0369		"	0.0333		111	40-150			
Surrogate: Fluoranthene-d10	0.0284		"	0.0333		85.1	40-150			

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**PAH by EPA Method 8270D SIM - Quality Control**

**Summit Scientific**

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

**Batch BHB0504 - EPA 5030 Soil MS**

**Matrix Spike (BHB0504-MS1)**

Source: 2402267-01

Prepared: 02/15/24 Analyzed: 02/18/24

Acenaphthene	0.0178	0.00500	mg/kg	0.0333	ND	53.5	31-137				
Anthracene	0.0181	0.00500	"	0.0333	ND	54.3	30-120				
Benzo (a) anthracene	0.0158	0.00500	"	0.0333	ND	47.4	30-120				
Benzo (a) pyrene	0.0176	0.00500	"	0.0333	ND	52.7	30-120				
Benzo (b) fluoranthene	0.0128	0.00500	"	0.0333	ND	38.5	30-120				
Benzo (k) fluoranthene	0.0155	0.00500	"	0.0333	ND	46.4	30-120				
Chrysene	0.0182	0.00500	"	0.0333	ND	54.7	30-120				
Dibenz (a,h) anthracene	0.0180	0.00500	"	0.0333	ND	54.1	30-120				
Fluoranthene	0.0180	0.00500	"	0.0333	ND	54.0	30-120				
Fluorene	0.0179	0.00500	"	0.0333	ND	53.8	30-120				
Indeno (1,2,3-cd) pyrene	0.0178	0.00500	"	0.0333	ND	53.4	30-120				
Pyrene	0.0189	0.00500	"	0.0333	ND	56.8	35-142				
1-Methylnaphthalene	0.0259	0.00500	"	0.0333	ND	77.6	15-130				
2-Methylnaphthalene	0.0191	0.00500	"	0.0333	ND	57.3	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0242		"	0.0333		72.5	40-150				
Surrogate: Fluoranthene-d10	0.0190		"	0.0333		56.9	40-150				

**Matrix Spike Dup (BHB0504-MSD1)**

Source: 2402267-01

Prepared: 02/15/24 Analyzed: 02/18/24

Acenaphthene	0.0139	0.00500	mg/kg	0.0333	ND	41.8	31-137	24.7	30		
Anthracene	0.0154	0.00500	"	0.0333	ND	46.2	30-120	16.2	30		
Benzo (a) anthracene	0.0214	0.00500	"	0.0333	ND	64.1	30-120	29.9	30		
Benzo (a) pyrene	0.0137	0.00500	"	0.0333	ND	41.0	30-120	24.8	30		
Benzo (b) fluoranthene	0.0186	0.00500	"	0.0333	ND	55.9	30-120	36.9	30		QR-02
Benzo (k) fluoranthene	0.0160	0.00500	"	0.0333	ND	48.1	30-120	3.71	30		
Chrysene	0.0159	0.00500	"	0.0333	ND	47.6	30-120	14.0	30		
Dibenz (a,h) anthracene	0.0156	0.00500	"	0.0333	ND	46.9	30-120	14.2	30		
Fluoranthene	0.0134	0.00500	"	0.0333	ND	40.3	30-120	29.1	30		
Fluorene	0.0144	0.00500	"	0.0333	ND	43.1	30-120	22.1	30		
Indeno (1,2,3-cd) pyrene	0.0153	0.00500	"	0.0333	ND	45.8	30-120	15.2	30		
Pyrene	0.0135	0.00500	"	0.0333	ND	40.5	35-142	33.5	30		QR-02
1-Methylnaphthalene	0.0151	0.00500	"	0.0333	ND	45.2	15-130	52.9	50		QR-02
2-Methylnaphthalene	0.0149	0.00500	"	0.0333	ND	44.8	15-130	24.5	50		
Surrogate: 2-Methylnaphthalene-d10	0.0163		"	0.0333		48.8	40-150				
Surrogate: Fluoranthene-d10	0.0141		"	0.0333		42.4	40-150				

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

### PAH by EPA Method 8270D SIM - Quality Control

#### Summit Scientific

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

#### Batch BHB0884 - EPA 5030 Soil MS

##### Blank (BHB0884-BLK1)

Prepared: 02/28/24 Analyzed: 02/29/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0355		"	0.0333		107	40-150			
Surrogate: Fluoranthene-d10	0.0314		"	0.0333		94.3	40-150			

##### LCS (BHB0884-BS1)

Prepared: 02/28/24 Analyzed: 02/29/24

Acenaphthene	0.0351	0.00500	mg/kg	0.0333		105	31-137			
Anthracene	0.0387	0.00500	"	0.0333		116	30-120			
Benzo (a) anthracene	0.0392	0.00500	"	0.0333		118	30-120			
Benzo (a) pyrene	0.0381	0.00500	"	0.0333		114	30-120			
Benzo (b) fluoranthene	0.0374	0.00500	"	0.0333		112	30-120			
Benzo (k) fluoranthene	0.0350	0.00500	"	0.0333		105	30-120			
Chrysene	0.0337	0.00500	"	0.0333		101	30-120			
Dibenz (a,h) anthracene	0.0354	0.00500	"	0.0333		106	30-120			
Fluoranthene	0.0359	0.00500	"	0.0333		108	30-120			
Fluorene	0.0346	0.00500	"	0.0333		104	30-120			
Indeno (1,2,3-cd) pyrene	0.0368	0.00500	"	0.0333		110	30-120			
Pyrene	0.0344	0.00500	"	0.0333		103	35-142			
1-Methylnaphthalene	0.0392	0.00500	"	0.0333		118	35-142			
2-Methylnaphthalene	0.0242	0.00500	"	0.0333		72.7	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0273		"	0.0333		81.9	40-150			
Surrogate: Fluoranthene-d10	0.0313		"	0.0333		93.8	40-150			

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

## PAH by EPA Method 8270D SIM - Quality Control

### Summit Scientific

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

#### Batch BHB0884 - EPA 5030 Soil MS

##### Matrix Spike (BHB0884-MS1)

Source: 2402458-01

Prepared: 02/28/24 Analyzed: 02/29/24

Acenaphthene	0.0166	0.00500	mg/kg	0.0333	ND	49.9	31-137			
Anthracene	0.0192	0.00500	"	0.0333	ND	57.5	30-120			
Benzo (a) anthracene	0.0158	0.00500	"	0.0333	ND	47.5	30-120			
Benzo (a) pyrene	0.0158	0.00500	"	0.0333	ND	47.3	30-120			
Benzo (b) fluoranthene	0.0150	0.00500	"	0.0333	ND	45.1	30-120			
Benzo (k) fluoranthene	0.0183	0.00500	"	0.0333	ND	54.9	30-120			
Chrysene	0.0180	0.00500	"	0.0333	ND	54.1	30-120			
Dibenz (a,h) anthracene	0.0157	0.00500	"	0.0333	ND	47.1	30-120			
Fluoranthene	0.0183	0.00500	"	0.0333	ND	55.0	30-120			
Fluorene	0.0166	0.00500	"	0.0333	ND	49.9	30-120			
Indeno (1,2,3-cd) pyrene	0.0166	0.00500	"	0.0333	ND	49.7	30-120			
Pyrene	0.0186	0.00500	"	0.0333	ND	55.7	35-142			
1-Methylnaphthalene	0.0166	0.00500	"	0.0333	ND	49.9	15-130			
2-Methylnaphthalene	0.0167	0.00500	"	0.0333	ND	50.0	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0134		"	0.0333		40.2	40-150			
Surrogate: Fluoranthene-d10	0.0147		"	0.0333		44.0	40-150			

##### Matrix Spike Dup (BHB0884-MSD1)

Source: 2402458-01

Prepared: 02/28/24 Analyzed: 02/29/24

Acenaphthene	0.0289	0.00500	mg/kg	0.0333	ND	86.6	31-137	53.8	30	QR-02
Anthracene	0.0311	0.00500	"	0.0333	ND	93.4	30-120	47.7	30	QR-02
Benzo (a) anthracene	0.0255	0.00500	"	0.0333	ND	76.6	30-120	46.8	30	QR-02
Benzo (a) pyrene	0.0268	0.00500	"	0.0333	ND	80.4	30-120	51.8	30	QR-02
Benzo (b) fluoranthene	0.0255	0.00500	"	0.0333	ND	76.4	30-120	51.5	30	QR-02
Benzo (k) fluoranthene	0.0283	0.00500	"	0.0333	ND	84.9	30-120	42.9	30	QR-02
Chrysene	0.0285	0.00500	"	0.0333	ND	85.6	30-120	45.1	30	QR-02
Dibenz (a,h) anthracene	0.0228	0.00500	"	0.0333	ND	68.5	30-120	36.9	30	QR-02
Fluoranthene	0.0303	0.00500	"	0.0333	ND	91.0	30-120	49.3	30	QR-02
Fluorene	0.0285	0.00500	"	0.0333	ND	85.4	30-120	52.4	30	QR-02
Indeno (1,2,3-cd) pyrene	0.0230	0.00500	"	0.0333	ND	69.0	30-120	32.5	30	QR-02
Pyrene	0.0288	0.00500	"	0.0333	ND	86.4	35-142	43.2	30	QR-02
1-Methylnaphthalene	0.0305	0.00500	"	0.0333	ND	91.6	15-130	59.0	50	QR-02
2-Methylnaphthalene	0.0341	0.00500	"	0.0333	ND	102	15-130	68.6	50	QR-02
Surrogate: 2-Methylnaphthalene-d10	0.0192		"	0.0333		57.7	40-150			
Surrogate: Fluoranthene-d10	0.0203		"	0.0333		61.0	40-150			

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

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

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

**Batch BHB0735 - EPA 3050B**

**Blank (BHB0735-BLK1)**

Prepared: 02/22/24 Analyzed: 02/26/24

Boron ND 2.00 mg/L

**LCS (BHB0735-BS1)**

Prepared: 02/22/24 Analyzed: 02/26/24

Boron 7.61 2.00 mg/L 5.00 152 80-120 QLCS-01

**Duplicate (BHB0735-DUP1)**

**Source: 2402184-01**

Prepared: 02/22/24 Analyzed: 02/26/24

Boron 0.792 2.00 mg/L 0.861 8.34 20

**Matrix Spike (BHB0735-MS1)**

**Source: 2402184-01**

Prepared: 02/22/24 Analyzed: 02/26/24

Boron 9.44 2.00 mg/L 5.00 0.861 172 75-125 QLCS-01

**Matrix Spike Dup (BHB0735-MSD1)**

**Source: 2402184-01**

Prepared: 02/22/24 Analyzed: 02/26/24

Boron 9.28 2.00 mg/L 5.00 0.861 168 75-125 1.71 25 QLCS-01

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BHC0970 - EPA 3050B**

**Blank (BHC0970-BLK1)**

Prepared: 03/26/24 Analyzed: 04/05/24

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	"

**LCS (BHC0970-BS1)**

Prepared: 03/26/24 Analyzed: 04/05/24

Arsenic	38.3	0.200	mg/kg wet	40.0	95.8	80-120
Barium	39.2	0.400	"	40.0	98.1	80-120
Cadmium	1.98	0.200	"	2.00	99.2	80-120
Copper	40.5	0.400	"	40.0	101	80-120
Lead	19.4	0.200	"	20.0	96.9	80-120
Nickel	39.9	0.400	"	40.0	99.7	80-120
Silver	1.97	0.0200	"	2.00	98.4	80-120
Zinc	40.5	0.400	"	40.0	101	80-120
Selenium	4.04	0.260	"	4.00	101	80-120

**Duplicate (BHC0970-DUP1)**

Source: 2402267-01

Prepared: 03/26/24 Analyzed: 04/05/24

Arsenic	7.65	0.200	mg/kg dry	7.36	3.92	20
Barium	38.6	0.400	"	37.7	2.23	20
Cadmium	0.186	0.200	"	0.171	8.48	20
Copper	3.90	0.400	"	3.85	1.21	20
Lead	8.23	0.200	"	7.92	3.77	20
Nickel	5.21	0.400	"	5.21	0.00	20
Silver	0.0546	0.0200	"	0.0499	9.13	20
Zinc	23.5	0.400	"	23.6	0.637	20
Selenium	ND	0.260	"	ND		20

Summit Scientific

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Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BHC0970 - EPA 3050B**

Matrix Spike (BHC0970-MS1)			Source: 2402267-01		Prepared: 03/26/24 Analyzed: 04/05/24					
Arsenic	48.1	0.200	mg/kg dry	43.4	7.36	93.9	75-125			
Barium	75.2	0.400	"	43.4	37.7	86.4	75-125			
Cadmium	2.30	0.200	"	2.17	0.171	98.4	75-125			
Copper	27.9	0.400	"	43.4	3.85	55.4	75-125			QM-05
Lead	29.0	0.200	"	21.7	7.92	97.2	75-125			
Nickel	29.1	0.400	"	43.4	5.21	55.0	75-125			QM-05
Silver	2.10	0.0200	"	2.17	0.0499	94.4	75-125			
Zinc	48.6	0.400	"	43.4	23.6	57.6	75-125			QM-05
Selenium	3.39	0.260	"	4.34	ND	78.1	75-125			

Matrix Spike Dup (BHC0970-MSD1)			Source: 2402267-01		Prepared: 03/26/24 Analyzed: 04/05/24					
Arsenic	48.4	0.200	mg/kg dry	43.4	7.36	94.7	75-125	0.694	25	
Barium	75.5	0.400	"	43.4	37.7	87.3	75-125	0.516	25	
Cadmium	2.32	0.200	"	2.17	0.171	99.1	75-125	0.638	25	
Copper	27.4	0.400	"	43.4	3.85	54.3	75-125	1.76	25	QM-05
Lead	29.1	0.200	"	21.7	7.92	97.6	75-125	0.276	25	
Nickel	28.6	0.400	"	43.4	5.21	53.9	75-125	1.68	25	QM-05
Silver	2.12	0.0200	"	2.17	0.0499	95.3	75-125	0.885	25	
Zinc	47.5	0.400	"	43.4	23.6	55.0	75-125	2.30	25	QM-05
Selenium	3.39	0.260	"	4.34	ND	78.1	75-125	0.00	25	

Post Spike (BHC0970-PS1)			Source: 2402267-01		Prepared: 03/26/24 Analyzed: 04/05/24					
Arsenic	114		ug/l	100	17.0	97.2	75-125			
Barium	174		"	100	87.0	87.2	75-125			
Cadmium	5.32		"	5.00	0.395	98.4	75-125			

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: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

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

**Summit Scientific**

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

**Batch BHB0495 - General Preparation**

**Blank (BHB0495-BLK1)**

Prepared: 02/14/24 Analyzed: 02/16/24

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

**LCS (BHB0495-BS1)**

Prepared: 02/14/24 Analyzed: 02/16/24

Calcium	5.74	0.0500	mg/L wet	5.00	115	70-130
Magnesium	5.32	0.0500	"	5.00	106	70-130
Sodium	5.18	0.0500	"	5.00	104	70-130

Summit Scientific

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Fremont Environmental	Project: Hanson BC 0-64N67W 1NESE	
PO Box 1289	Project Number: UWRWE-A2137-ABN	Reported:
Wellington CO, 80549	Project Manager: Paul Henchan	04/08/24 16:24

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

Summit Scientific

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

Batch BHB0536 - General Preparation

Duplicate (BHB0536-DUP1)	Source: 2402062-04			Prepared & Analyzed: 02/16/24						
% Solids	86.6		%		86.3			0.266	20	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

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

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

**Batch BHB0497 - General Preparation**

**Blank (BHB0497-BLK1)**

Prepared & Analyzed: 02/15/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BHB0497-BS1)**

Prepared & Analyzed: 02/15/24

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

**Duplicate (BHB0497-DUP1)**

Source: 2402267-01

Prepared & Analyzed: 02/15/24

Specific Conductance (EC) 3.66 0.0100 mmhos/cm 3.66 0.00 20

**Batch BHB0902 - General Preparation**

**Blank (BHB0902-BLK1)**

Prepared & Analyzed: 02/28/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BHB0902-BS1)**

Prepared & Analyzed: 02/28/24

Specific Conductance (EC) 0.148 0.0100 mmhos/cm 0.150 98.9 95-105

**Duplicate (BHB0902-DUP1)**

Source: 2402267-02RE1

Prepared & Analyzed: 02/28/24

Specific Conductance (EC) 2.22 0.0100 mmhos/cm 2.18 2.05 20

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

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

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

**Batch BHB0496 - General Preparation**

**LCS (BHB0496-BS1)**

Prepared & Analyzed: 02/15/24

pH	9.14		pH Units	9.18	99.6	95-105
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**Duplicate (BHB0496-DUP1)**

**Source: 2402267-01**

Prepared & Analyzed: 02/15/24

pH	8.08		pH Units	8.08	0.00	20
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**Batch BHB0901 - General Preparation**

**LCS (BHB0901-BS1)**

Prepared & Analyzed: 02/28/24

pH	9.13		pH Units	9.18	99.5	95-105
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**Duplicate (BHB0901-DUP1)**

**Source: 2402267-03RE1**

Prepared & Analyzed: 02/28/24

pH	8.96		pH Units	8.98	0.223	20
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**Batch BHC0932 - General Preparation**

**LCS (BHC0932-BS1)**

Prepared & Analyzed: 03/25/24

pH	9.14		pH Units	9.18	99.6	95-105
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**Duplicate (BHC0932-DUP1)**

**Source: 2402267-03RE2**

Prepared & Analyzed: 03/25/24

pH	8.99		pH Units	9.01	0.222	20
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Summit Scientific

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## Division of Environmental Testing

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

March 14, 2024

4653 Table Mountain Drive  
Golden, CO 80403  
303-277-9310  
reports@s2scientific.com

**Project Manager :** Mikayla Axtell

**Project Name :** 2402267

**Project Number :** N/A

Attached are the analytical results for 2402267 N/A received by Elevation Diagnostics, Division of Environmental Testing on February 22, 2024. This is associated with Elevation's number AA05622 .

The results were analyzed under the guidelines of various methods. These methods are identified in the report as follows: "SW" is referring to the EPA's SW-846 Compendium; "EPA" is referring to 40 CFR part 136; "HACH" is referring to a method which was validated by HACH®; "SM" is referring to a revision of the Standard Methods For the Examination of Water and Wastewater; and "ASTM" is referring to the standard test method set forth by ASTM International.

The analytical results in this report apply specifically to the samples listed in the attached Chain of Custody. This report may only be duplicated in full.

Any deviations to sample integrity, method specifications, or Elevation Diagnostics's standard operating procedures are documented in the report below.

Please contact us for any questions or comments concerning the content of this report.

Thank you,

Elevation Diagnostics, Division of Environmental Testing

Kristen Reichel  
Laboratory Director  
CSO,CCO



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

Lab ID

Page of

				Send Data To:								Send Invoice To:							
Client: Summit Scientific				Project Manager: Mikayla Axtell								Company:							
Address:				E-Mail: reports@s2scientific.com								Project Name/Location:							
City/State/Zip:												AFE#:							
Phone:				Project Name: 2402267								PO/Billing Codes:							
Sampler Name:				Project Number:								Contact:							
				Preservative				Matrix				Analysis Requested				Special Instructions			
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	915 Metals						
1	(FL01-01) B01@5.0'	2/14/2024		1						X			X						
2	(FL01-01) N01@4.0'	2/14/2024		1						X			X						
3	(FL01-01) S01@4.0'	2/14/2024		1						X			X						
4	(FL01-01) E01@4.0'	2/14/2024		1						X			X						
5	(FL01-01) W01@4.0'	2/14/2024		1						X			X						
6	(FL01-03) B01@5.5'	2/14/2024		1						X			X						
7	(FL01-03) N01@4.5'	2/14/2024		1						X			X						
8	(FL01-03) S01@4.5'	2/14/2024		1						X			X						
9	(FL01-03) E01@4.5'	2/14/2024		1						X			X						
10	(FL01-03) W01@4.5'	2/14/2024		1						X			X						
11	(FL01-03) BACKFILL	2/14/2024		1						X			X						
12																			
13																			
14																			
15																			

Relinquished by:	Date/Time:	Received by:	Date/Time:	TAT Business Days	Field DO	Notes:  Samples Intact Sample temp: 13.7 C Corrected temp: 15.7 C no pH measured no pH correction Thermometer: EDX.EQ.248 2.22.2024 2024-02-22-040
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day	Field EC	
				1 Day	Field ORP	
Relinquished by:	Date/Time:	Received by:	Date/Time:	2 Days	Field pH	
				3 Days	Field Temp.	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Standard	X	Field Turb.
Temperature Upon Receipt: 9.0		Corrected Temperature 9		IR gun #:	HNO3 lot #:	

**Division of Environmental Testing**

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

**FINAL RESULTS REPORT****Report Date :** 3/14/2024**Report Time :** 14:36

REPORT TO
4653 Table Mountain Drive Golden, CO 80403 303-277-9310 reports@s2scientific.com

**Project Manager :** Mikayla Axtell**Project Name :** 2402267**Project Number :** N/A

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
AA05622-1	(FL01-01) B01@5.0'						
	Collected : 02/14/2024 15:19						
		Chromium VI, Soil					EPA 3060A & EPA
		03/04/2024 08:37		<0.080	mg/kg	0.080	7199
AA05623-1	(FL01-01) N01@4.0'						
	Collected : 02/14/2024 15:19						
		Chromium VI, Soil					EPA 3060A & EPA
		03/04/2024 11:37		<0.080	mg/kg	0.080	7199
AA05624-1	(FL01-01) S01@4.0'						
	Collected : 02/14/2024 15:19						
		Chromium VI, Soil					EPA 3060A & EPA
		03/04/2024 11:37		<0.080	mg/kg	0.080	7199
AA05625-1	(FL01-01) E01@4.0'						
	Collected : 02/14/2024 15:19						
		Chromium VI, Soil					EPA 3060A & EPA
		03/04/2024 11:37		<0.080	mg/kg	0.080	7199
AA05626-1	(FL01-01) W01@4.0'						
	Collected : 02/14/2024 15:19						
		Chromium VI, Soil					EPA 3060A & EPA
		03/04/2024 11:37		<0.080	mg/kg	0.080	7199
AA05627-1	(FL01-03) B01@5.5'						
	Collected : 02/14/2024 15:19						
		Chromium VI, Soil					EPA 3060A & EPA
		03/04/2024 11:37		<0.080	mg/kg	0.080	7199
AA05628-1	(FL01-03) N01@4.5'						
	Collected : 02/14/2024 15:19						
		Chromium VI, Soil					EPA 3060A & EPA
		03/04/2024 11:37		<0.080	mg/kg	0.080	7199



**Division of Environmental Testing**

2115 N Scranton St Suite 3040A

Aurora, CO 80045

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4653 Table Mountain Drive  
Golden, CO 80403  
303-277-9310  
reports@s2scientific.com

**Project Manager :** Mikayla Axtell**Project Name :** 2402267**Project Number :** N/A

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
AA05629-1	(FL01-03) S01@4.5' Collected : 02/14/2024 15:19	Chromium VI, Soil					EPA 3060A & EPA
		03/04/2024 11:37		0.092	mg/kg	0.080	7199
AA05630-1	(FL01-03) E01@4.5' Collected : 02/14/2024 15:19	Chromium VI, Soil					EPA 3060A & EPA
		03/04/2024 11:37		0.096	mg/kg	0.080	7199
AA05631-1	(FL01-03) W01@4.5' Collected : 02/14/2024 15:19	Chromium VI, Soil					EPA 3060A & EPA
		03/04/2024 11:37		0.086	mg/kg	0.080	7199
AA05632-1	(FL01-03) BACKFILL Collected : 02/14/2024 15:19	Chromium VI, Soil					EPA 3060A & EPA
		03/04/2024 11:37		0.137	mg/kg	0.080	7199

**Division of Environmental Testing**

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Aurora, CO 80045

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4653 Table Mountain Drive  
Golden, CO 80403  
303-277-9310  
reports@s2scientific.com

**Project Manager :** Mikayla Axtell**Project Name :** 2402267**Project Number :** N/A

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
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**QC Report****CHROM\_VI\_SOIL-2125**

Analyte		Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
DUP	AA05392	0.084	0.001	mg/kg		<0.080				
DUP	AA05651	0.086	0.001	mg/kg		0.120			33.010	
MB	AA05963	Not Detected		ppb						
LCS	AA05965	41.291		ppb	40		103.23			
LCS	AA05966	39.639		ppb	40		99.098			

**CHROM\_VI\_SOIL-2128**

Analyte		Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
DUP	AA05398	<0.080	0.001	mg/kg		<0.080				
DUP	AA05612	<0.080	0.080	mg/kg		<0.080				
MB	AA05979	0.539		ppb						
LCS	AA05981	39.193		ppb	40		97.982			
LCS	AA05982	39.449		ppb	40		98.622			



## Division of Environmental Testing

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800-440-5184

## FINAL RESULTS REPORT

Report Date : 3/14/2024

Report Time : 14:36

REPORT TO
4653 Table Mountain Drive Golden, CO 80403 303-277-9310 reports@s2scientific.com

Project Manager : Mikayla Axtell

Project Name : 2402267

Project Number : N/A

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
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### QC Report

#### METALS\_S-2123

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
<b>AA05384</b>									
<b>Arsenic</b>									
DUP	2.288	0.025	mg/kg		2.148			6.3120	0 - 15
Matrix Spike	12.362		mg/kg	10.000	2.148	102.14			
<b>Barium</b>									
DUP	42.098	0.025	mg/kg		41.783			0.75106	0 - 15
Matrix Spike	50.102		mg/kg	10.000	41.783	83.190			
<b>Cadmium</b>									
DUP	0.030	0.001	mg/kg		0.033			9.5238	0 - 15
Matrix Spike	10.911		mg/kg	10.000	0.033	108.78			
<b>Copper</b>									
DUP	4.264	0.025	mg/kg		4.393			2.9802	0 - 15
Matrix Spike	15.187		mg/kg	10.000	4.393	107.94			
<b>Lead</b>									
DUP	3.903	0.025	mg/kg		3.552			9.4165	0 - 15
Matrix Spike	14.589		mg/kg	10.000	3.552	110.37			
<b>Nickel</b>									
DUP	4.763	0.025	mg/kg		4.428			7.2897	0 - 15
Matrix Spike	15.624		mg/kg	10.000	4.428	111.96			
<b>Selenium</b>									
DUP	1.410	0.025	mg/kg		1.561			10.165	0 - 15
Matrix Spike	12.850		mg/kg	10.000	1.561	112.89			
<b>Silver</b>									
DUP	<0.250	0.250	mg/kg		<0.250				
Matrix Spike	10.470		mg/kg	10.000	<0.250	104.70			





## Division of Environmental Testing

2115 N Scranton St Suite 3040A

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## FINAL RESULTS REPORT

Report Date : 3/14/2024

Report Time : 14:36

REPORT TO
4653 Table Mountain Drive Golden, CO 80403 303-277-9310 reports@s2scientific.com

Project Manager : Mikayla Axtell

Project Name : 2402267

Project Number : N/A

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
<b>Zinc</b>							
DUP	18.907	0.025	mg/kg	17.499		7.7350	0 - 15
Matrix Spike	29.003		mg/kg	10.000	17.499	115.04	
<b>AA05971</b>							
<b>Arsenic</b>							
MB	0.100		µg/kg				
<b>Barium</b>							
MB	-0.003		µg/kg				
<b>Cadmium</b>							
MB	0.016		µg/kg				
<b>Copper</b>							
MB	0.067		µg/kg				
<b>Lead</b>							
MB	0.042		µg/kg				
<b>Nickel</b>							
MB	0.063		µg/kg				
<b>Selenium</b>							
MB	0.010		µg/kg				
<b>Silver</b>							
MB	0.137		µg/kg				
<b>Zinc</b>							
MB	-0.586		µg/kg				
<b>AA05973</b>							
<b>Arsenic</b>							
LCS	87.769		µg/kg	90	97.521	80 - 120	
<b>Barium</b>							
LCS	89.427		µg/kg	90	99.363	80 - 120	
<b>Cadmium</b>							
LCS	87.895		µg/kg	90	97.661	80 - 120	
<b>Copper</b>							



## Division of Environmental Testing

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

## FINAL RESULTS REPORT

Report Date : 3/14/2024

Report Time : 14:36

REPORT TO
4653 Table Mountain Drive Golden, CO 80403 303-277-9310 reports@s2scientific.com

Project Manager : Mikayla Axtell

Project Name : 2402267

Project Number : N/A

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
LCS	97.804	µg/kg	90	108.67	80 - 120		
<b>Lead</b>							
LCS	100.124	µg/kg	90	111.25	80 - 120		
<b>Nickel</b>							
LCS	90.992	µg/kg	90	101.10	80 - 120		
<b>Selenium</b>							
LCS	88.474	µg/kg	90	98.304	80 - 120		
<b>Silver</b>							
LCS	106.140	µg/kg	90	117.93	80 - 120		
<b>Zinc</b>							
LCS	91.630	µg/kg	90	101.81	80 - 120		
<b>AA05974</b>							
<b>Arsenic</b>							
LCS	89.236	µg/kg	90	99.151	80 - 120		
<b>Barium</b>							
LCS	87.469	µg/kg	90	97.188	80 - 120		
<b>Cadmium</b>							
LCS	86.995	µg/kg	90	96.661	80 - 120		
<b>Copper</b>							
LCS	92.304	µg/kg	90	102.56	80 - 120		
<b>Lead</b>							
LCS	80.221	µg/kg	90	89.134	80 - 120		
<b>Nickel</b>							
LCS	91.083	µg/kg	90	101.20	80 - 120		
<b>Selenium</b>							
LCS	87.418	µg/kg	90	97.131	80 - 120		
<b>Silver</b>							
LCS	81.125	µg/kg	90	90.139	80 - 120		
<b>Zinc</b>							
LCS	90.745	µg/kg	90	100.83	80 - 120		

**Division of Environmental Testing**

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

**FINAL RESULTS REPORT****Report Date :** 3/14/2024**Report Time :** 14:36**REPORT TO**4653 Table Mountain Drive  
Golden, CO 80403  
303-277-9310  
reports@s2scientific.com**Project Manager :** Mikayla Axtell**Project Name :** 2402267**Project Number :** N/A

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
<b>Arsenic</b>							
DUP	2.121	25.000	µg/kg	2.133		0.56417	0 - 15
Matrix Spike	10.394		mg/kg	10.000	2.133	82.610	
<b>Barium</b>							
DUP	75.760	25.000	µg/kg	72.329		4.6337	0 - 15
Matrix Spike	86.455		mg/kg	10.000	72.329	141.26	
<b>Cadmium</b>							
DUP	0.215	1.000	µg/kg	0.200		7.2289	0 - 15
Matrix Spike	8.843		mg/kg	10.000	0.200	86.430	
<b>Copper</b>							
DUP	7.848	25.000	µg/kg	7.661		2.4115	0 - 15
Matrix Spike	16.602		mg/kg	10.000	7.661	89.410	
<b>Lead</b>							
DUP	21.485	25.000	µg/kg	23.944		10.826	0 - 15
Matrix Spike	34.652		mg/kg	10.000	23.944	107.08	
<b>Nickel</b>							
DUP	3.950	25.000	µg/kg	3.906		1.1202	0 - 15
Matrix Spike	12.538		mg/kg	10.000	3.906	86.320	
<b>Selenium</b>							
DUP	2.424	25.000	µg/kg	2.242		7.8011	0 - 15
Matrix Spike	12.316		mg/kg	10.000	2.242	100.74	
<b>Silver</b>							
DUP	<0.250	25.000	µg/kg	<0.250			
Matrix Spike	8.405		mg/kg	10.000	<0.250	84.050	
<b>Zinc</b>							
DUP	32.676	25.000	µg/kg	34.794		6.2783	0 - 15
Matrix Spike	46.038		mg/kg	10.000	34.794	112.44	
<b>AA06098</b>							
<b>Arsenic</b>							
MB	0.319		µg/kg				



## Division of Environmental Testing

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

# FINAL RESULTS REPORT

Report Date : 3/14/2024

Report Time : 14:36

### REPORT TO

4653 Table Mountain Drive  
Golden, CO 80403  
303-277-9310  
reports@s2scientific.com

Project Manager : Mikayla Axtell

Project Name : 2402267

Project Number : N/A

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
<b>Barium</b>							
MB	0.425	µg/kg					
<b>Cadmium</b>							
MB	0.313	µg/kg					
<b>Copper</b>							
MB	0.410	µg/kg					
<b>Lead</b>							
MB	0.341	µg/kg					
<b>Nickel</b>							
MB	0.426	µg/kg					
<b>Selenium</b>							
MB	0.189	µg/kg					
<b>Silver</b>							
MB	1.313	µg/kg					
<b>Zinc</b>							
MB	-0.819	µg/kg					
<b>AA06100</b>							
<b>Arsenic</b>							
LCS	85.188	µg/kg	90	94.653	80 - 120		
<b>Barium</b>							
LCS	87.495	µg/kg	90	97.217	80 - 120		
<b>Cadmium</b>							
LCS	88.914	µg/kg	90	98.793	80 - 120		
<b>Copper</b>							
LCS	88.364	µg/kg	90	98.182	80 - 120		
<b>Lead</b>							
LCS	88.322	µg/kg	90	98.136	80 - 120		
<b>Nickel</b>							
LCS	86.867	µg/kg	90	96.519	80 - 120		
<b>Selenium</b>							





## Division of Environmental Testing

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

## FINAL RESULTS REPORT

Report Date : 3/14/2024

Report Time : 14:36

REPORT TO
4653 Table Mountain Drive Golden, CO 80403 303-277-9310 reports@s2scientific.com

Project Manager : Mikayla Axtell

Project Name : 2402267

Project Number : N/A

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
LCS <b>Silver</b>	89.124	µg/kg	90	99.027	80 - 120		
LCS <b>Zinc</b>	83.701	µg/kg	90	93.001	80 - 120		
LCS <b>AA06101</b>	89.584	µg/kg	90	99.538	80 - 120		
LCS <b>Arsenic</b>	84.282	µg/kg	90	93.647	80 - 120		
LCS <b>Barium</b>	89.001	µg/kg	90	98.890	80 - 120		
LCS <b>Cadmium</b>	89.416	µg/kg	90	99.351	80 - 120		
LCS <b>Copper</b>	84.240	µg/kg	90	93.600	80 - 120		
LCS <b>Lead</b>	91.898	µg/kg	90	102.11	80 - 120		
LCS <b>Nickel</b>	82.335	µg/kg	90	91.483	80 - 120		
LCS <b>Selenium</b>	86.523	µg/kg	90	96.137	80 - 120		
LCS <b>Silver</b>	81.928	µg/kg	90	91.031	80 - 120		
LCS <b>Zinc</b>	87.775	µg/kg	90	97.528	80 - 120		



## Division of Environmental Testing

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

# FINAL RESULTS REPORT

Report Date : 3/14/2024

Report Time : 14:36

REPORT TO
4653 Table Mountain Drive Golden, CO 80403 303-277-9310 reports@s2scientific.com

Project Manager : Mikayla Axtell

Project Name : 2402267

Project Number : N/A

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
-----------	-------------	--------------------------------	----------	--------	-------	--------------------	---------------------

Qualifier	Explanation
H1	Sample received outside of regulatory holding time.
H2	Sample analyzed outside of regulatory holding time due to a laboratory error.
P1	Sample received outside temperature requirements, 0-6°C.
P2	Sample received unpreserved.
P3	Broken or leaking sample container.
P4	Sample improperly collected
P5	Sample improperly preserved
B	The same analyte is found in the associated blank
B1	Blank failed high, indicating possible high bias in sample results.
B2	Blank failed low, indicating possible low bias in sample results.
MS	Matrix Spike / Matrix Spike Duplicate recovery and/or RPD limit exceeded, indicating potential matrix interference.
QC	Associated batch quality control was outside the acceptable range
D1	Duplicate RPD limit exceeded due to low sample concentration.
D2	Duplicate RPD limit exceeded due to matrix interference.
S	Surrogate recovery failed, indicating potential matrix interference.
RL1	Reporting limits raised due to matrix interference.
RL2	Reporting limits raised due to limited sample.
U	Sample result less than method detection limit.
J	Sample result less than reporting limit but higher than method detection limit.
EST	The concentration indicated has been estimated due to high analyte content
E	Electronic loss or corruption of data.
I	Subcontracted sample



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE

Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/08/24 16:24

### Notes and Definitions

S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
R-05	The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.
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.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
QLCS-01	The spike recovery was outside acceptance limits for this analyte indicating a potential high bias. The corresponding samples did not exhibit concentrations above reporting level for this analyte. Data quality is not affected.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 10, 2024

Paul Henchan

Fremont Environmental

PO Box 1289

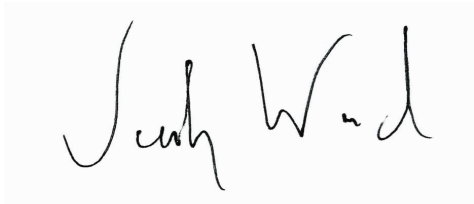
Wellington, CO 80549

RE: Hanson BC 0-64N67W 1NESE

Work Order #2402290

Enclosed are the results of analyses for samples received by Summit Scientific on 02/15/24 13:25. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Ben Shrewsbury

Laboratory Manager





Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
(FL01-01)Backfill	2402290-01	Soil	02/15/24 00:00	02/15/24 13:25
(PWV)B01@5.0'	2402290-02	Soil	02/15/24 00:00	02/15/24 13:25
(PWV)N01@4.0'	2402290-03	Soil	02/15/24 00:00	02/15/24 13:25
(PWV)S01@4.0'	2402290-04	Soil	02/15/24 00:00	02/15/24 13:25
(PWV)E01@4.0'	2402290-05	Soil	02/15/24 00:00	02/15/24 13:25
(PWV)W01@4.0'	2402290-06	Soil	02/15/24 00:00	02/15/24 13:25

#### Case Narrative

This is a revision of the report originally sent on 4/11/2024 at 12:04 PM MT.

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	Page <u>1</u> of <u>1</u>
2402290	

				Send Data To:				Send Invoice To:											
Client: <u>Fremont Env</u>				Project Manager: <u>Paul Henahan</u>				Company:											
Address:				E-Mail: <u>Paulh@Fremontenv.com</u>				Project Name/Location:											
City/State/Zip:				<u>jeff@Fremontenv.com</u> <u>Ethanb@Fremontenv.com</u>				AFE#:											
Phone:				Project Name: <u>Hanson BL 0-64N67W 1NESE</u>				PO/Billing Codes: <u>UWRWE-A2137-ABN</u>											
Sampler Name: <u>J6</u>				Project Number:				Contact:											
				Preservative				Matrix				Analysis Requested				Special Instructions			
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX+N	TMBs(915)	PRO,ORO,GRO	PAHs(915)	EC,PH,SAR, Boron	Metals(915)	
1	<del>(FLOI-01) Backfill</del>	2/15/24		2			X			X			X	X	X	X	X	X	
2	(PUV) B01@5.0'						X			X									
3	(PUV) N01@4.0'						X			X									
4	(PUV) S01@4.0'						X			X									
5	(PUV) E01@4.0'						X			X									
6	(PUV) U01@4.0'						X			X									
8																			COC modified per client request
9																			
10																			
11																			
12																			
13																			
14																			
15																			
Relinquished by:		Date/Time:		Received by:		Date/Time:		TAT Business Days		Field DO		Notes:							
<u>SV</u>		<u>2/15/24 1325</u>		<u>SV</u>		<u>2/15/24 1325</u>		Same Day <input checked="" type="checkbox"/>		Field EC									
Relinquished by:		Date/Time:		Received by:		Date/Time:		1 Day <input type="checkbox"/>		Field ORP									
								2 Days <input type="checkbox"/>		Field pH									
Relinquished by:		Date/Time:		Received by:		Date/Time:		3 Days <input type="checkbox"/>		Field Temp.									
								Standard <input type="checkbox"/>		Field Turb.									
Temperature Upon Receipt: <u>10.1</u>				Corrected Temperature				IR gun #: <u>2</u>				HNO3 lot #:							

S<sub>2</sub>

## Sample Receipt Checklist

S2 Work Order# 24022910Client: FremontClient Project ID: Hanson BC D-64N674 INESEShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐Airbill #: ☐
☒ ☐ ☐ ☐ ☐

Matrix (Check all that apply)

Air ☐Soil/Solid ☒Water ☐Other ☐

Temp (°C)

10.1

Thermometer #

Z

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> <b>NOTE:</b> If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ice
If custody seals are present, are they intact? <sup>(1)</sup>	<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 <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , 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? <sup>(1)</sup>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No sample time S
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

J. H. W.

Custodian Printed Name

2/15/24 13:25

Date/Time



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(FL01-01)Backfill**  
**2402290-01 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0526	02/15/24	02/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0431	108 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0379	94.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0385	96.3 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0528	02/15/24	02/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.7	93.6 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(FL01-01)Backfill**  
**2402290-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0532	02/16/24	02/17/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Benzo (a) anthracene</b>	<b>0.00751</b>	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.00516</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.00810</b>	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.00936</b>	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0147	44.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0168	50.4 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0737	02/22/24	02/27/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/15/24 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: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(FL01-01)Backfill  
2402290-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	3.48	0.200	mg/kg dry	1	BHC0928	03/07/24	04/04/24	EPA 6020B
Barium	71.6	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.39	0.400	"	"	"	"	"	"
Lead	6.15	0.200	"	"	"	"	"	"
Nickel	5.22	0.400	"	"	"	"	"	"
Silver	0.0324	0.0200	"	"	"	"	"	"
Zinc	17.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	50.9	0.0500	mg/L dry	1	BHB0530	02/15/24	02/20/24	EPA 6020B	
Magnesium	9.09	0.0500	"	"	"	"	"	"	
Sodium	23.0	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.780	0.00100	units	1	BHB0743	02/22/24	02/22/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(FL01-01)Backfill**  
**2402290-01 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>90.2</b>		%	1	BHB0536	02/16/24	02/16/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.370</b>	0.0100	mmhos/cm	1	BHB0537	02/16/24	02/20/24	EPA 120.1	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>7.98</b>		pH Units	1	BHB0538	02/16/24	02/20/24	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)B01@5.0'**  
**2402290-02 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0526	02/15/24	02/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0462	115 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0383	95.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0381	95.2 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0528	02/15/24	02/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.6	92.4 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)B01@5.0'**  
**2402290-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0532	02/16/24	02/17/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0147	44.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0200	60.0 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0737	02/22/24	02/27/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/15/24 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: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)B01@5.0'**  
**2402290-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	5.94	0.200	mg/kg dry	1	BHD0178	04/05/24	04/10/24	EPA 6020B
Barium	47.0	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.87	0.400	"	"	"	"	"	"
Lead	6.28	0.200	"	"	"	"	"	"
Nickel	4.53	0.400	"	"	"	"	"	"
Silver	0.0267	0.0200	"	"	"	"	"	"
Zinc	21.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	126	0.0500	mg/L dry	1	BHB0530	02/15/24	02/20/24	EPA 6020B	
Magnesium	14.3	0.0500	"	"	"	"	"	"	
Sodium	0.935	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0211	0.00100	units	1	BHB0743	02/22/24	02/22/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)B01@5.0'**  
**2402290-02 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.5		%	1	BHB0536	02/16/24	02/16/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.232	0.0100	mmhos/cm	1	BHB0537	02/16/24	02/20/24	EPA 120.1	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.42		pH Units	1	BHB0538	02/16/24	02/20/24	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)N01@4.0'**  
**2402290-03 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0526	02/15/24	02/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0477	119 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0373	93.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0374	93.4 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0528	02/15/24	02/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.6	93.1 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)N01@4.0'**  
**2402290-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0532	02/16/24	02/17/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0194	58.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0177	53.0 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0737	02/22/24	02/27/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/15/24 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: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)N01@4.0'**  
**2402290-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	5.89	0.200	mg/kg dry	1	BHD0178	04/05/24	04/10/24	EPA 6020B
Barium	44.6	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.59	0.400	"	"	"	"	"	"
Lead	5.99	0.200	"	"	"	"	"	"
Nickel	4.16	0.400	"	"	"	"	"	"
Silver	0.0220	0.0200	"	"	"	"	"	"
Zinc	19.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	100	0.0500	mg/L dry	1	BHB0530	02/15/24	02/20/24	EPA 6020B	
Magnesium	14.1	0.0500	"	"	"	"	"	"	
Sodium	12.9	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.320	0.00100	units	1	BHB0743	02/22/24	02/22/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)N01@4.0'**  
**2402290-03 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.8		%	1	BHB0536	02/16/24	02/16/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.351	0.0100	mmhos/cm	1	BHB0537	02/16/24	02/20/24	EPA 120.1	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.56		pH Units	1	BHB0538	02/16/24	02/20/24	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)S01@4.0'**  
**2402290-04 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0526	02/15/24	02/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0442	111 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0374	93.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0387	96.8 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0528	02/15/24	02/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.5	100 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)S01@4.0'**  
**2402290-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0532	02/16/24	02/17/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0150	44.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0137	41.0 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0737	02/22/24	02/27/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/15/24 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: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)S01@4.0'**  
**2402290-04 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	4.07	0.200	mg/kg dry	1	BHC0928	03/07/24	04/04/24	EPA 6020B
Barium	55.7	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.51	0.400	"	"	"	"	"	"
Lead	4.98	0.200	"	"	"	"	"	"
Nickel	4.31	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	20.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	60.9	0.0500	mg/L dry	1	BHB0530	02/15/24	02/20/24	EPA 6020B	
Magnesium	9.28	0.0500	"	"	"	"	"	"	
Sodium	7.75	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.244	0.00100	units	1	BHB0743	02/22/24	02/22/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)S01@4.0'**  
**2402290-04 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.1		%	1	BHB0536	02/16/24	02/16/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.271	0.0100	mmhos/cm	1	BHB0537	02/16/24	02/20/24	EPA 120.1	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.44		pH Units	1	BHB0538	02/16/24	02/20/24	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)E01@4.0'**  
**2402290-05 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0526	02/15/24	02/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0440	110 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0369	92.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0380	95.1 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0528	02/15/24	02/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.0	80.1 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)E01@4.0'**  
**2402290-05 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHB0532	02/16/24	02/17/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0148	44.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0153	45.9 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHB0737	02/22/24	02/27/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)E01@4.0'**  
**2402290-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	5.23	0.200	mg/kg dry	1	BHC0928	03/07/24	04/04/24	EPA 6020B
Barium	63.5	0.400	"	"	"	"	"	"
Cadmium	0.243	0.200	"	"	"	"	"	"
Copper	4.81	0.400	"	"	"	"	"	"
Lead	6.58	0.200	"	"	"	"	"	"
Nickel	7.43	0.400	"	"	"	"	"	"
Silver	0.0271	0.0200	"	"	"	"	"	"
Zinc	26.5	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	72.5	0.0500	mg/L dry	1	BHB0530	02/15/24	02/20/24	EPA 6020B	
Magnesium	11.6	0.0500	"	"	"	"	"	"	
Sodium	4.35	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.125	0.00100	units	1	BHB0743	02/22/24	02/22/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/15/24 00:00**

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

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)E01@4.0'**  
**2402290-05 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	87.1	%	1	BHB0536	02/16/24	02/16/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.404</b>	0.0100	mmhos/cm	1	BHB0537	02/16/24	02/20/24	EPA 120.1	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.03</b>		pH Units	1	BHB0538	02/16/24	02/20/24	EPA 9045D	

Summit Scientific

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PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)W01@4.0'**  
**2402290-06 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0526	02/15/24	02/15/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0449	112 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0370	92.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0386	96.4 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0528	02/15/24	02/16/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/15/24 00:00**

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

**PAH by EPA Method 8270D SIM**

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)W01@4.0'**  
**2402290-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0532	02/16/24	02/17/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **02/15/24 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	0.0189	56.8 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0737	02/22/24	02/27/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/15/24 00:00**

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

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)W01@4.0'**  
**2402290-06 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	5.58	0.200	mg/kg dry	1	BHC0928	03/07/24	04/04/24	EPA 6020B
Barium	53.5	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.17	0.400	"	"	"	"	"	"
Lead	6.04	0.200	"	"	"	"	"	"
Nickel	4.70	0.400	"	"	"	"	"	"
Silver	0.0229	0.0200	"	"	"	"	"	"
Zinc	22.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	77.6	0.0500	mg/L dry	1	BHB0530	02/15/24	02/20/24	EPA 6020B	
Magnesium	11.8	0.0500	"	"	"	"	"	"	
Sodium	10.9	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.305	0.00100	units	1	BHB0743	02/22/24	02/22/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Summit Scientific

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PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**(PWV)W01@4.0'**  
**2402290-06 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.3		%	1	BHB0536	02/16/24	02/16/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.385	0.0100	mmhos/cm	1	BHB0537	02/16/24	02/20/24	EPA 120.1	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.66		pH Units	1	BHB0538	02/16/24	02/20/24	EPA 9045D	

Summit Scientific

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Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

### Summit Scientific

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

#### Batch BHB0526 - EPA 5030 Soil MS

##### Blank (BHB0526-BLK1)

Prepared: 02/15/24 Analyzed: 02/16/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0357		"	0.0400		89.2	50-150			
Surrogate: Toluene-d8	0.0380		"	0.0400		95.0	50-150			
Surrogate: 4-Bromofluorobenzene	0.0370		"	0.0400		92.6	50-150			

##### LCS (BHB0526-BS1)

Prepared: 02/15/24 Analyzed: 02/16/24

Benzene	0.0859	0.0020	mg/kg	0.100		85.9	70-130			
Toluene	0.103	0.0050	"	0.100		103	70-130			
Ethylbenzene	0.106	0.0050	"	0.100		106	70-130			
m,p-Xylene	0.218	0.010	"	0.200		109	70-130			
o-Xylene	0.108	0.0050	"	0.100		108	70-130			
1,2,4-Trimethylbenzene	0.101	0.0050	"	0.100		101	70-130			
1,3,5-Trimethylbenzene	0.102	0.0050	"	0.100		102	70-130			
Naphthalene	0.0906	0.0038	"	0.100		90.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0345		"	0.0400		86.2	50-150			
Surrogate: Toluene-d8	0.0372		"	0.0400		92.9	50-150			
Surrogate: 4-Bromofluorobenzene	0.0366		"	0.0400		91.4	50-150			

##### Matrix Spike (BHB0526-MS1)

Source: 2402280-01

Prepared: 02/15/24 Analyzed: 02/16/24

Benzene	0.0442	0.0020	mg/kg	0.100	ND	44.2	70-130			QM-07
Toluene	0.0571	0.0050	"	0.100	ND	57.1	70-130			QM-07
Ethylbenzene	0.0805	0.0050	"	0.100	ND	80.5	70-130			
m,p-Xylene	0.152	0.010	"	0.200	ND	75.9	70-130			
o-Xylene	0.0771	0.0050	"	0.100	ND	77.1	70-130			
1,2,4-Trimethylbenzene	0.0660	0.0050	"	0.100	ND	66.0	70-130			QM-07
1,3,5-Trimethylbenzene	0.0816	0.0050	"	0.100	ND	81.6	70-130			
Naphthalene	0.0374	0.0038	"	0.100	ND	37.4	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0399		"	0.0400		99.8	50-150			
Surrogate: Toluene-d8	0.0361		"	0.0400		90.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0400		96.7	50-150			

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Fremont Environmental  
PO Box 1289  
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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

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

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

**Batch BHB0526 - EPA 5030 Soil MS**

Matrix Spike Dup (BHB0526-MSD1)		Source: 2402280-01			Prepared: 02/15/24 Analyzed: 02/16/24					
Benzene	0.0479	0.0020	mg/kg	0.100	ND	47.9	70-130	8.01	30	QM-07
Toluene	0.0608	0.0050	"	0.100	ND	60.8	70-130	6.21	30	QM-07
Ethylbenzene	0.0807	0.0050	"	0.100	ND	80.7	70-130	0.298	30	
m,p-Xylene	0.150	0.010	"	0.200	ND	75.1	70-130	1.03	30	
o-Xylene	0.0766	0.0050	"	0.100	ND	76.6	70-130	0.624	30	
1,2,4-Trimethylbenzene	0.0642	0.0050	"	0.100	ND	64.2	70-130	2.86	30	QM-07
1,3,5-Trimethylbenzene	0.0806	0.0050	"	0.100	ND	80.6	70-130	1.18	30	
Naphthalene	0.0446	0.0038	"	0.100	ND	44.6	70-130	17.5	30	QM-07
Surrogate: 1,2-Dichloroethane-d4		0.0428	"	0.0400		107	50-150			
Surrogate: Toluene-d8		0.0382	"	0.0400		95.6	50-150			
Surrogate: 4-Bromofluorobenzene		0.0384	"	0.0400		95.9	50-150			

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch BHB0528 - EPA 3550A**

**Blank (BHB0528-BLK1)**

Prepared: 02/15/24 Analyzed: 02/16/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	14.3		"	12.5		115	30-150			

**LCS (BHB0528-BS1)**

Prepared: 02/15/24 Analyzed: 02/16/24

C10-C28 (DRO)	387	50	mg/kg	500		77.4	70-130			
Surrogate: o-Terphenyl	16.6		"	12.5		133	30-150			

**Matrix Spike (BHB0528-MS1)**

Source: 2402280-01

Prepared: 02/15/24 Analyzed: 02/16/24

C10-C28 (DRO)	383	50	mg/kg	500	14.6	73.7	70-130			
Surrogate: o-Terphenyl	15.0		"	12.5		120	30-150			

**Matrix Spike Dup (BHB0528-MSD1)**

Source: 2402280-01

Prepared: 02/15/24 Analyzed: 02/16/24

C10-C28 (DRO)	381	50	mg/kg	500	14.6	73.3	70-130	0.464	20	
Surrogate: o-Terphenyl	14.0		"	12.5		112	30-150			

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

## PAH by EPA Method 8270D SIM - Quality Control

### Summit Scientific

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

#### Batch BHB0532 - EPA 5030 Soil MS

##### Blank (BHB0532-BLK1)

Prepared & Analyzed: 02/16/24

Acenaphthene	ND	0.00500	mg/kg								
Anthracene	ND	0.00500	"								
Benzo (a) anthracene	ND	0.00500	"								
Benzo (a) pyrene	ND	0.00500	"								
Benzo (b) fluoranthene	ND	0.00500	"								
Benzo (k) fluoranthene	ND	0.00500	"								
Chrysene	ND	0.00500	"								
Dibenz (a,h) anthracene	ND	0.00500	"								
Fluoranthene	ND	0.00500	"								
Fluorene	ND	0.00500	"								
Indeno (1,2,3-cd) pyrene	ND	0.00500	"								
Pyrene	ND	0.00500	"								
1-Methylnaphthalene	ND	0.00500	"								
2-Methylnaphthalene	ND	0.00500	"								
Surrogate: 2-Methylnaphthalene-d10	0.0160		"	0.0333		48.0		40-150			
Surrogate: Fluoranthene-d10	0.0320		"	0.0333		96.1		40-150			

##### LCS (BHB0532-BS1)

Prepared & Analyzed: 02/16/24

Acenaphthene	0.0276	0.00500	mg/kg	0.0333		82.9		31-137			
Anthracene	0.0276	0.00500	"	0.0333		82.9		30-120			
Benzo (a) anthracene	0.0238	0.00500	"	0.0333		71.4		30-120			
Benzo (a) pyrene	0.0208	0.00500	"	0.0333		62.5		30-120			
Benzo (b) fluoranthene	0.0244	0.00500	"	0.0333		73.2		30-120			
Benzo (k) fluoranthene	0.0277	0.00500	"	0.0333		83.2		30-120			
Chrysene	0.0328	0.00500	"	0.0333		98.4		30-120			
Dibenz (a,h) anthracene	0.0253	0.00500	"	0.0333		75.8		30-120			
Fluoranthene	0.0273	0.00500	"	0.0333		82.0		30-120			
Fluorene	0.0303	0.00500	"	0.0333		91.0		30-120			
Indeno (1,2,3-cd) pyrene	0.0206	0.00500	"	0.0333		61.7		30-120			
Pyrene	0.0307	0.00500	"	0.0333		92.0		35-142			
1-Methylnaphthalene	0.0289	0.00500	"	0.0333		86.7		35-142			
2-Methylnaphthalene	0.0351	0.00500	"	0.0333		105		35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0301		"	0.0333		90.4		40-150			
Surrogate: Fluoranthene-d10	0.0278		"	0.0333		83.5		40-150			

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Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**PAH by EPA Method 8270D SIM - Quality Control**

**Summit Scientific**

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

**Batch BHB0532 - EPA 5030 Soil MS**

**Matrix Spike (BHB0532-MS1)**

Source: 2402209-61

Prepared & Analyzed: 02/16/24

Acenaphthene	0.0149	0.00500	mg/kg	0.0333	ND	44.6	31-137				
Anthracene	0.0140	0.00500	"	0.0333	ND	42.1	30-120				
Benzo (a) anthracene	0.0175	0.00500	"	0.0333	ND	52.4	30-120				
Benzo (a) pyrene	0.0142	0.00500	"	0.0333	ND	42.7	30-120				
Benzo (b) fluoranthene	0.0157	0.00500	"	0.0333	ND	47.2	30-120				
Benzo (k) fluoranthene	0.0195	0.00500	"	0.0333	ND	58.4	30-120				
Chrysene	0.0142	0.00500	"	0.0333	ND	42.7	30-120				
Dibenz (a,h) anthracene	0.0229	0.00500	"	0.0333	ND	68.6	30-120				
Fluoranthene	0.0145	0.00500	"	0.0333	ND	43.6	30-120				
Fluorene	0.0156	0.00500	"	0.0333	ND	46.8	30-120				
Indeno (1,2,3-cd) pyrene	0.0185	0.00500	"	0.0333	ND	55.5	30-120				
Pyrene	0.0156	0.00500	"	0.0333	ND	46.8	35-142				
1-Methylnaphthalene	0.0145	0.00500	"	0.0333	ND	43.4	15-130				
2-Methylnaphthalene	0.0189	0.00500	"	0.0333	ND	56.6	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0154		"	0.0333		46.3	40-150				
Surrogate: Fluoranthene-d10	0.0134		"	0.0333		40.1	40-150				

**Matrix Spike Dup (BHB0532-MSD1)**

Source: 2402209-61

Prepared & Analyzed: 02/16/24

Acenaphthene	0.0181	0.00500	mg/kg	0.0333	ND	54.3	31-137	19.7	30		
Anthracene	0.0167	0.00500	"	0.0333	ND	50.2	30-120	17.4	30		
Benzo (a) anthracene	0.0157	0.00500	"	0.0333	ND	47.0	30-120	10.9	30		
Benzo (a) pyrene	0.0202	0.00500	"	0.0333	ND	60.5	30-120	34.5	30		QR-02
Benzo (b) fluoranthene	0.0135	0.00500	"	0.0333	ND	40.4	30-120	15.7	30		
Benzo (k) fluoranthene	0.0152	0.00500	"	0.0333	ND	45.6	30-120	24.6	30		
Chrysene	0.0171	0.00500	"	0.0333	ND	51.3	30-120	18.3	30		
Dibenz (a,h) anthracene	0.0196	0.00500	"	0.0333	ND	58.9	30-120	15.2	30		
Fluoranthene	0.0166	0.00500	"	0.0333	ND	49.8	30-120	13.4	30		
Fluorene	0.0183	0.00500	"	0.0333	ND	54.9	30-120	15.9	30		
Indeno (1,2,3-cd) pyrene	0.0207	0.00500	"	0.0333	ND	62.1	30-120	11.3	30		
Pyrene	0.0194	0.00500	"	0.0333	ND	58.3	35-142	22.0	30		
1-Methylnaphthalene	0.0182	0.00500	"	0.0333	ND	54.7	15-130	23.0	50		
2-Methylnaphthalene	0.0211	0.00500	"	0.0333	ND	63.2	15-130	11.0	50		
Surrogate: 2-Methylnaphthalene-d10	0.0189		"	0.0333		56.6	40-150				
Surrogate: Fluoranthene-d10	0.0170		"	0.0333		51.1	40-150				

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

### PAH by EPA Method 8270D SIM - Quality Control

#### Summit Scientific

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

#### Batch BHC0829 - EPA 5030 Soil MS

##### Blank (BHC0829-BLK1)

Prepared: 03/21/24 Analyzed: 03/22/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0436		"	0.0333		131	40-150			
Surrogate: Fluoranthene-d10	0.0285		"	0.0333		85.6	40-150			

##### LCS (BHC0829-BS1)

Prepared: 03/21/24 Analyzed: 03/22/24

Acenaphthene	0.0268	0.00500	mg/kg	0.0333		80.4	31-137			
Anthracene	0.0284	0.00500	"	0.0333		85.2	30-120			
Benzo (a) anthracene	0.0210	0.00500	"	0.0333		62.9	30-120			
Benzo (a) pyrene	0.0241	0.00500	"	0.0333		72.3	30-120			
Benzo (b) fluoranthene	0.0226	0.00500	"	0.0333		67.9	30-120			
Benzo (k) fluoranthene	0.0259	0.00500	"	0.0333		77.8	30-120			
Chrysene	0.0279	0.00500	"	0.0333		83.7	30-120			
Dibenz (a,h) anthracene	0.0298	0.00500	"	0.0333		89.5	30-120			
Fluoranthene	0.0254	0.00500	"	0.0333		76.2	30-120			
Fluorene	0.0260	0.00500	"	0.0333		77.9	30-120			
Indeno (1,2,3-cd) pyrene	0.0305	0.00500	"	0.0333		91.5	30-120			
Pyrene	0.0334	0.00500	"	0.0333		100	35-142			
1-Methylnaphthalene	0.0209	0.00500	"	0.0333		62.7	35-142			
2-Methylnaphthalene	0.0192	0.00500	"	0.0333		57.5	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0242		"	0.0333		72.7	40-150			
Surrogate: Fluoranthene-d10	0.0262		"	0.0333		78.6	40-150			

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

## PAH by EPA Method 8270D SIM - Quality Control

### Summit Scientific

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

#### Batch BHC0829 - EPA 5030 Soil MS

Matrix Spike (BHC0829-MS1)			Source: 2403293-01		Prepared: 03/21/24 Analyzed: 03/22/24						
Acenaphthene	0.0212	0.00500	mg/kg	0.0333	ND	63.5	31-137				
Anthracene	0.0230	0.00500	"	0.0333	ND	68.9	30-120				
Benzo (a) anthracene	0.0206	0.00500	"	0.0333	ND	61.7	30-120				
Benzo (a) pyrene	0.0197	0.00500	"	0.0333	ND	59.2	30-120				
Benzo (b) fluoranthene	0.0153	0.00500	"	0.0333	ND	45.9	30-120				
Benzo (k) fluoranthene	0.0182	0.00500	"	0.0333	ND	54.7	30-120				
Chrysene	0.0219	0.00500	"	0.0333	ND	65.8	30-120				
Dibenz (a,h) anthracene	0.0279	0.00500	"	0.0333	ND	83.6	30-120				
Fluoranthene	0.0211	0.00500	"	0.0333	ND	63.2	30-120				
Fluorene	0.0207	0.00500	"	0.0333	ND	62.1	30-120				
Indeno (1,2,3-cd) pyrene	0.0277	0.00500	"	0.0333	ND	83.2	30-120				
Pyrene	0.0242	0.00500	"	0.0333	ND	72.5	35-142				
1-Methylnaphthalene	0.0173	0.00500	"	0.0333	ND	51.9	15-130				
2-Methylnaphthalene	0.0173	0.00500	"	0.0333	ND	51.8	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0149		"	0.0333		44.6	40-150				
Surrogate: Fluoranthene-d10	0.0218		"	0.0333		65.5	40-150				

Matrix Spike Dup (BHC0829-MSD1)			Source: 2403293-01		Prepared: 03/21/24 Analyzed: 03/22/24						
Acenaphthene	0.0192	0.00500	mg/kg	0.0333	ND	57.5	31-137	9.95	30		
Anthracene	0.0213	0.00500	"	0.0333	ND	64.0	30-120	7.30	30		
Benzo (a) anthracene	0.0190	0.00500	"	0.0333	ND	57.1	30-120	7.77	30		
Benzo (a) pyrene	0.0183	0.00500	"	0.0333	ND	54.9	30-120	7.50	30		
Benzo (b) fluoranthene	0.0143	0.00500	"	0.0333	ND	42.8	30-120	7.02	30		
Benzo (k) fluoranthene	0.0154	0.00500	"	0.0333	ND	46.1	30-120	16.9	30		
Chrysene	0.0193	0.00500	"	0.0333	ND	57.9	30-120	12.8	30		
Dibenz (a,h) anthracene	0.0269	0.00500	"	0.0333	ND	80.7	30-120	3.52	30		
Fluoranthene	0.0194	0.00500	"	0.0333	ND	58.3	30-120	8.13	30		
Fluorene	0.0192	0.00500	"	0.0333	ND	57.7	30-120	7.43	30		
Indeno (1,2,3-cd) pyrene	0.0261	0.00500	"	0.0333	ND	78.2	30-120	6.21	30		
Pyrene	0.0206	0.00500	"	0.0333	ND	61.9	35-142	15.8	30		
1-Methylnaphthalene	0.0179	0.00500	"	0.0333	ND	53.7	15-130	3.42	50		
2-Methylnaphthalene	0.0172	0.00500	"	0.0333	ND	51.6	15-130	0.325	50		
Surrogate: 2-Methylnaphthalene-d10	0.0186		"	0.0333		55.9	40-150				
Surrogate: Fluoranthene-d10	0.0203		"	0.0333		60.9	40-150				

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

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

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

**Batch BHB0737 - EPA 3050B**

**Blank (BHB0737-BLK1)**

Prepared: 02/22/24 Analyzed: 02/27/24

Boron ND 2.00 mg/L

**LCS (BHB0737-BS1)**

Prepared: 02/22/24 Analyzed: 02/27/24

Boron 7.26 2.00 mg/L 5.00 145 80-120 QLCS-01

**Duplicate (BHB0737-DUP1)**

**Source: 2402183-01**

Prepared: 02/22/24 Analyzed: 02/27/24

Boron 0.124 2.00 mg/L 0.162 26.3 20 QR-01

**Matrix Spike (BHB0737-MS1)**

**Source: 2402183-01**

Prepared: 02/22/24 Analyzed: 02/27/24

Boron 7.94 2.00 mg/L 5.00 0.162 156 75-125 QLCS-01

**Matrix Spike Dup (BHB0737-MSD1)**

**Source: 2402183-01**

Prepared: 02/22/24 Analyzed: 02/27/24

Boron 7.04 2.00 mg/L 5.00 0.162 138 75-125 12.0 25 QLCS-01

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BHC0928 - EPA 3050B**

**Blank (BHC0928-BLK1)**

Prepared: 03/25/24 Analyzed: 04/04/24

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	"

**LCS (BHC0928-BS1)**

Prepared: 03/25/24 Analyzed: 04/04/24

Arsenic	38.4	0.200	mg/kg wet	40.0	96.0	80-120
Barium	38.1	0.400	"	40.0	95.1	80-120
Cadmium	1.89	0.200	"	2.00	94.4	80-120
Copper	40.3	0.400	"	40.0	101	80-120
Lead	18.7	0.200	"	20.0	93.5	80-120
Nickel	39.5	0.400	"	40.0	98.7	80-120
Silver	1.89	0.0200	"	2.00	94.4	80-120
Zinc	40.1	0.400	"	40.0	100	80-120
Selenium	3.84	0.260	"	4.00	96.0	80-120

**Duplicate (BHC0928-DUP1)**

Source: 2402290-01

Prepared: 03/25/24 Analyzed: 04/04/24

Arsenic	3.78	0.200	mg/kg dry	3.48	8.21	20
Barium	75.6	0.400	"	71.6	5.39	20
Cadmium	0.199	0.200	"	0.191	4.55	20
Copper	4.90	0.400	"	4.39	11.0	20
Lead	8.04	0.200	"	6.15	26.6	20
Nickel	5.58	0.400	"	5.22	6.81	20
Silver	0.0368	0.0200	"	0.0324	12.8	20
Zinc	19.9	0.400	"	17.0	15.9	20
Selenium	ND	0.260	"	ND		20

QR-04

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Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BHC0928 - EPA 3050B**

Matrix Spike (BHC0928-MS1)		Source: 2402290-01			Prepared: 03/25/24 Analyzed: 04/04/24						
Arsenic	44.3	0.200	mg/kg dry	44.3	3.48	92.1	75-125				
Barium	117	0.400	"	44.3	71.6	101	75-125				
Cadmium	2.39	0.200	"	2.22	0.191	99.2	75-125				
Copper	31.4	0.400	"	44.3	4.39	61.0	75-125				QM-05
Lead	27.0	0.200	"	22.2	6.15	94.0	75-125				
Nickel	32.7	0.400	"	44.3	5.22	61.9	75-125				QM-05
Silver	2.15	0.0200	"	2.22	0.0324	95.6	75-125				
Zinc	46.1	0.400	"	44.3	17.0	65.7	75-125				QM-05
Selenium	3.52	0.260	"	4.43	ND	79.5	75-125				

Matrix Spike Dup (BHC0928-MSD1)		Source: 2402290-01			Prepared: 03/25/24 Analyzed: 04/04/24						
Arsenic	44.2	0.200	mg/kg dry	44.3	3.48	91.9	75-125	0.215	25		
Barium	116	0.400	"	44.3	71.6	99.6	75-125	0.648	25		
Cadmium	2.38	0.200	"	2.22	0.191	98.8	75-125	0.335	25		
Copper	31.4	0.400	"	44.3	4.39	60.9	75-125	0.167	25		QM-05
Lead	26.6	0.200	"	22.2	6.15	92.1	75-125	1.55	25		
Nickel	32.3	0.400	"	44.3	5.22	61.2	75-125	0.956	25		QM-05
Silver	2.13	0.0200	"	2.22	0.0324	94.8	75-125	0.807	25		
Zinc	45.9	0.400	"	44.3	17.0	65.3	75-125	0.403	25		QM-05
Selenium	3.63	0.260	"	4.43	ND	81.9	75-125	3.05	25		

**Batch BHD0178 - EPA 3050B**

Blank (BHD0178-BLK1)		Prepared: 04/05/24 Analyzed: 04/09/24									
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

*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: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BHD0178 - EPA 3050B**

**LCS (BHD0178-BS1)**

Prepared: 04/05/24 Analyzed: 04/09/24

Arsenic	36.9	0.200	mg/kg wet	40.0		92.1	80-120
Barium	38.6	0.400	"	40.0		96.5	80-120
Cadmium	1.89	0.200	"	2.00		94.5	80-120
Copper	40.6	0.400	"	40.0		102	80-120
Lead	19.1	0.200	"	20.0		95.5	80-120
Nickel	40.0	0.400	"	40.0		100	80-120
Silver	1.91	0.0200	"	2.00		95.4	80-120
Zinc	40.4	0.400	"	40.0		101	80-120
Selenium	4.30	0.260	"	4.00		107	80-120

**Duplicate (BHD0178-DUP1)**

Source: 2402199-01

Prepared: 04/05/24 Analyzed: 04/09/24

Arsenic	1.25	0.200	mg/kg dry		1.12		10.8	20
Barium	35.2	0.400	"		34.7		1.47	20
Cadmium	0.0763	0.200	"		0.0672		12.8	20
Copper	2.22	0.400	"		2.08		6.35	20
Lead	3.02	0.200	"		2.91		3.54	20
Nickel	2.15	0.400	"		1.99		7.57	20
Silver	0.00877	0.0200	"		0.00973		10.3	20
Zinc	9.48	0.400	"		9.26		2.32	20
Selenium	ND	0.260	"		ND			20

**Matrix Spike (BHD0178-MS1)**

Source: 2402199-01

Prepared: 04/05/24 Analyzed: 04/09/24

Arsenic	42.7	0.200	mg/kg dry	44.5	1.12	93.4	75-125
Barium	80.6	0.400	"	44.5	34.7	103	75-125
Cadmium	2.25	0.200	"	2.23	0.0672	98.0	75-125
Copper	36.7	0.400	"	44.5	2.08	77.7	75-125
Lead	24.3	0.200	"	22.3	2.91	95.9	75-125
Nickel	36.7	0.400	"	44.5	1.99	78.0	75-125
Silver	2.09	0.0200	"	2.23	0.00973	93.4	75-125
Zinc	45.3	0.400	"	44.5	9.26	80.8	75-125
Selenium	4.55	0.260	"	4.45	ND	102	75-125

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BHD0178 - EPA 3050B**

Matrix Spike Dup (BHD0178-MSD1)		Source: 2402199-01			Prepared: 04/05/24 Analyzed: 04/09/24					
Arsenic	42.9	0.200	mg/kg dry	44.5	1.12	93.9	75-125	0.480	25	
Barium	82.0	0.400	"	44.5	34.7	106	75-125	1.70	25	
Cadmium	2.30	0.200	"	2.23	0.0672	100	75-125	2.06	25	
Copper	36.9	0.400	"	44.5	2.08	78.3	75-125	0.753	25	
Lead	24.7	0.200	"	22.3	2.91	97.8	75-125	1.65	25	
Nickel	36.9	0.400	"	44.5	1.99	78.3	75-125	0.370	25	
Silver	2.16	0.0200	"	2.23	0.00973	96.4	75-125	3.13	25	
Zinc	45.4	0.400	"	44.5	9.26	81.1	75-125	0.284	25	
Selenium	4.49	0.260	"	4.45	ND	101	75-125	1.33	25	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

**Hexavalent Chromium by EPA Method 7196 - Quality Control**  
**Summit Scientific**

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

**Batch BHD0615 - 3060A Mod**

**Blank (BHD0615-BLK1)**

Prepared & Analyzed: 04/18/24

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BHD0615-BS1)**

Prepared & Analyzed: 04/18/24

Chromium, Hexavalent 25.6 0.30 mg/kg wet 25.0 102 80-120

**Duplicate (BHD0615-DUP1)**

**Source: 2402287-01**

Prepared & Analyzed: 04/18/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BHD0615-MS1)**

**Source: 2402287-01**

Prepared & Analyzed: 04/18/24

Chromium, Hexavalent 28.5 0.30 mg/kg dry 28.0 ND 102 75-125

**Matrix Spike Dup (BHD0615-MSD1)**

**Source: 2402287-01**

Prepared & Analyzed: 04/18/24

Chromium, Hexavalent 28.5 0.30 mg/kg dry 28.0 ND 102 75-125 0.00 20

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

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

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

**Batch BHB0530 - General Preparation**

**Blank (BHB0530-BLK1)**

Prepared: 02/15/24 Analyzed: 02/20/24

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

**LCS (BHB0530-BS1)**

Prepared: 02/15/24 Analyzed: 02/20/24

Calcium	5.97	0.0500	mg/L wet	5.00	119	70-130
Magnesium	5.90	0.0500	"	5.00	118	70-130
Sodium	6.31	0.0500	"	5.00	126	70-130

Summit Scientific

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Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Hanson BC 0-64N67W 1NESE Project Number: UWRWE-A2137-ABN Project Manager: Paul Henchan	Reported: 06/10/24 14:05
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Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

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

Batch BHB0536 - General Preparation

Duplicate (BHB0536-DUP1)		Source: 2402062-04			Prepared & Analyzed: 02/16/24					
% Solids	86.6		%		86.3			0.266	20	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

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

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

**Batch BHB0537 - General Preparation**

**Blank (BHB0537-BLK1)**

Prepared: 02/16/24 Analyzed: 02/20/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BHB0537-BS1)**

Prepared: 02/16/24 Analyzed: 02/20/24

Specific Conductance (EC) 0.153 0.0100 mmhos/cm 0.150 102 95-105

**Duplicate (BHB0537-DUP1)**

**Source: 2402280-01**

Prepared: 02/16/24 Analyzed: 02/20/24

Specific Conductance (EC) 2.61 0.0100 mmhos/cm 2.64 0.990 20

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

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

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

**Batch BHB0538 - General Preparation**

**LCS (BHB0538-BS1)**

Prepared: 02/16/24 Analyzed: 02/20/24

pH	9.29	pH Units	9.18	101	95-105
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**Duplicate (BHB0538-DUP1)**

**Source: 2402280-01**

Prepared: 02/16/24 Analyzed: 02/20/24

pH	8.23	pH Units	8.23	0.00	20
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Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE

Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/10/24 14:05

### Notes and Definitions

QR-04	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
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.
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
QLCS-01	The spike recovery was outside acceptance limits for this analyte indicating a potential high bias. The corresponding samples did not exhibit concentrations above reporting level for this analyte. Data quality is not affected.
I-04	Sample was analyzed out of recommended holding time per clients request.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 19, 2024

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Hansen BCO-64N67W 1NESE

Work Order #2405479

Enclosed are the results of analyses for samples received by Summit Scientific on 05/31/24 13:13. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Paul Shrewsbury

President



Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - Hansen BCO-64N67W 1NESE Project Number: UWRWE-A2137-ABN Project Manager: Paul Henchan	<b>Reported:</b> 06/19/24 15:39
--	--	------------------------------------

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
(PWV) Backfill	2405479-01	Soil	05/31/24 00:00	05/31/24 13:13

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

Page 1 of 1

2405479

				Send Data To:				Send Invoice To:											
Client: Fremont Env				Project Manager: Paul Henahan				Company: Noble											
Address:				E-Mail: Paulh@fremontenv.com				Project Name/Location:											
City/State/Zip:				Jeffg@fremontenv.com Ethenb@fremontenv.com				AFE#:											
Phone:				Project Name: Hansen BC O-64N67W 1NESE				PO/Billing Codes: UWRUE-A2137-ABN											
Sampler Name: JG				Project Number:				Contact:											
				Preservative		Matrix		Analysis Requested				Special Instructions							
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTX+N	TMBS(915)	DRD, DRD, BRO	PAHs(915)	EC-PH, SAR, BOD5	Metals(915)	
1	(PWV) Backfill	5/31/24		2			X			X			X	X	X	X	X	X	
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by:	Date/Time:	Received by:	Date/Time:	TAT Business Days	Field DO	Notes:	
JG	5/31/24 1313	JG U-d	5/31/24 13:13	Same Day	X		Field EC
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day			Field ORP
				2 Days			Field pH
				3 Days			Field Temp.
				Standard		Field Turb.	
Temperature Upon Receipt: 20.4		Corrected Temperature		IR gun #: 2	HNO3 lot #:		



S<sub>2</sub>

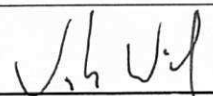
## Sample Receipt Checklist

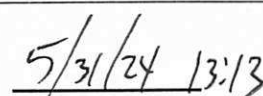
S2 Work Order# 2405479

Client: Noble Farm Client Project ID: Han Son BC 0-64 N67W 1NESEShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: \_\_\_\_\_
☒ ☐ ☐ ☐ ☐
Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 20.4 Thermometer # 2

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> <b>NOTE:</b> If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ice
If custody seals are present, are they intact? <sup>(1)</sup>	<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 <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , 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? <sup>(1)</sup>	<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? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.
  
 Custodian Printed Name

  
 Date/Time



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/19/24 15:39

**(PWV) Backfill**  
**2405479-01 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/31/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHE0985	05/31/24	05/31/24	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: **05/31/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0448	112 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0418	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0392	97.9 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/31/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHE0986	05/31/24	05/31/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/31/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.0	80.1 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/19/24 15:39

**(PWV) Backfill**  
**2405479-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/31/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0011	06/03/24	06/03/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Benzo (a) pyrene</b>	<b>0.00554</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>0.00754</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (k) fluoranthene</b>	<b>0.00533</b>	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.00657</b>	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: **05/31/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0277	83.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0288	86.4 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **05/31/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0023	06/03/24	06/05/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/31/24 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 - Hansen BCO-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/19/24 15:39

**(PWV) Backfill**  
**2405479-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	2.94	0.200	mg/kg dry	1	BHF0030	06/03/24	06/05/24	EPA 6020B
Barium	37.2	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.81	0.400	"	"	"	"	"	"
Lead	4.17	0.200	"	"	"	"	"	"
Nickel	3.55	0.400	"	"	"	"	"	"
Silver	0.0338	0.0200	"	"	"	"	"	"
Zinc	13.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **05/31/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0017	06/03/24	06/03/24	EPA 7196A	

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

Date Sampled: **05/31/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	88.5	0.0500	mg/L dry	1	BHE0980	05/31/24	06/04/24	EPA 6020B	
Magnesium	5.48	0.0500	"	"	"	"	06/05/24	"	
Sodium	8.64	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **05/31/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.241	0.00100	units	1	BHF0109	06/05/24	06/05/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/19/24 15:39

**(PWV) Backfill**  
**2405479-01 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/31/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	95.5			%	1	BHF0015	06/03/24	06/03/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **05/31/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.141	0.0100		mmhos/cm	1	BHE0984	05/31/24	06/04/24	EPA 120.1	

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Project: Noble - Hansen BCO-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/19/24 15:39

**(PWV) Backfill**  
**2405479-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/31/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>pH</b>	<b>8.74</b>			pH Units	1	BHF0315	05/31/24	06/12/24	EPA 9045D	

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/19/24 15:39

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

### Summit Scientific

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

#### Batch BHE0985 - EPA 5030 Soil MS

##### Blank (BHE0985-BLK1)

Prepared: 05/31/24 Analyzed: 06/01/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0401		"	0.0400		100	50-150			
Surrogate: Toluene-d8	0.0422		"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400		98.2	50-150			

##### LCS (BHE0985-BS1)

Prepared: 05/31/24 Analyzed: 06/01/24

Benzene	0.0865	0.0020	mg/kg	0.100		86.5	70-130			
Toluene	0.0990	0.0050	"	0.100		99.0	70-130			
Ethylbenzene	0.0972	0.0050	"	0.100		97.2	70-130			
m,p-Xylene	0.193	0.010	"	0.200		96.4	70-130			
o-Xylene	0.0945	0.0050	"	0.100		94.5	70-130			
1,2,4-Trimethylbenzene	0.0902	0.0050	"	0.100		90.2	70-130			
1,3,5-Trimethylbenzene	0.0907	0.0050	"	0.100		90.7	70-130			
Naphthalene	0.0775	0.0038	"	0.100		77.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0375		"	0.0400		93.7	50-150			
Surrogate: Toluene-d8	0.0410		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400		97.8	50-150			

##### Matrix Spike (BHE0985-MS1)

Source: 2405479-01

Prepared: 05/31/24 Analyzed: 06/01/24

Benzene	0.0840	0.0020	mg/kg	0.100	ND	84.0	70-130			
Toluene	0.0988	0.0050	"	0.100	ND	98.8	70-130			
Ethylbenzene	0.0899	0.0050	"	0.100	ND	89.9	70-130			
m,p-Xylene	0.177	0.010	"	0.200	ND	88.6	70-130			
o-Xylene	0.0847	0.0050	"	0.100	ND	84.7	70-130			
1,2,4-Trimethylbenzene	0.0718	0.0050	"	0.100	ND	71.8	70-130			
1,3,5-Trimethylbenzene	0.0753	0.0050	"	0.100	ND	75.3	70-130			
Naphthalene	0.0621	0.0038	"	0.100	ND	62.1	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0346		"	0.0400		86.6	50-150			
Surrogate: Toluene-d8	0.0420		"	0.0400		105	50-150			
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400		97.1	50-150			

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/19/24 15:39

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

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

**Batch BHE0985 - EPA 5030 Soil MS**

Matrix Spike Dup (BHE0985-MSD1)		Source: 2405479-01			Prepared: 05/31/24 Analyzed: 06/01/24					
Benzene	0.0950	0.0020	mg/kg	0.100	ND	95.0	70-130	12.3	30	
Toluene	0.115	0.0050	"	0.100	ND	115	70-130	15.3	30	
Ethylbenzene	0.0982	0.0050	"	0.100	ND	98.2	70-130	8.80	30	
m,p-Xylene	0.196	0.010	"	0.200	ND	98.1	70-130	10.1	30	
o-Xylene	0.0934	0.0050	"	0.100	ND	93.4	70-130	9.81	30	
1,2,4-Trimethylbenzene	0.0840	0.0050	"	0.100	ND	84.0	70-130	15.6	30	
1,3,5-Trimethylbenzene	0.0851	0.0050	"	0.100	ND	85.1	70-130	12.2	30	
Naphthalene	0.0669	0.0038	"	0.100	ND	66.9	70-130	7.35	30	QM-07
Surrogate: 1,2-Dichloroethane-d4		0.0400	"	0.0400		100	50-150			
Surrogate: Toluene-d8		0.0428	"	0.0400		107	50-150			
Surrogate: 4-Bromofluorobenzene		0.0405	"	0.0400		101	50-150			

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Project: Noble - Hansen BCO-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/19/24 15:39

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch BHE0986 - EPA 3550A**

**Blank (BHE0986-BLK1)**

Prepared & Analyzed: 05/31/24

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

Surrogate: o-Terphenyl	12.6	"	12.5	101	30-150
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**LCS (BHE0986-BS1)**

Prepared & Analyzed: 05/31/24

C10-C28 (DRO)	405	50	mg/kg	500	81.0	70-130
Surrogate: o-Terphenyl	12.1	"	12.5	96.6	30-150	

**Matrix Spike (BHE0986-MS1)**

Source: 2405479-01

Prepared & Analyzed: 05/31/24

C10-C28 (DRO)	408	50	mg/kg	500	30.3	75.5	70-130
Surrogate: o-Terphenyl	11.1	"	12.5	88.6	30-150		

**Matrix Spike Dup (BHE0986-MSD1)**

Source: 2405479-01

Prepared & Analyzed: 05/31/24

C10-C28 (DRO)	415	50	mg/kg	500	30.3	76.9	70-130	1.63	20
Surrogate: o-Terphenyl	10.7	"	12.5	85.7	30-150				

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Fremont Environmental  
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Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/19/24 15:39

**PAH by EPA Method 8270D SIM - Quality Control**

**Summit Scientific**

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

**Batch BHF0011 - EPA 5030 Soil MS**

**Blank (BHF0011-BLK1)**

Prepared & Analyzed: 06/03/24

Acenaphthene	ND	0.00500	mg/kg
Anthracene	ND	0.00500	"
Benzo (a) anthracene	ND	0.00500	"
Benzo (a) pyrene	ND	0.00500	"
Benzo (b) fluoranthene	ND	0.00500	"
Benzo (k) fluoranthene	ND	0.00500	"
Chrysene	ND	0.00500	"
Dibenz (a,h) anthracene	ND	0.00500	"
Fluoranthene	ND	0.00500	"
Fluorene	ND	0.00500	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"
Pyrene	ND	0.00500	"
1-Methylnaphthalene	ND	0.00500	"
2-Methylnaphthalene	ND	0.00500	"

Surrogate: 2-Methylnaphthalene-d10	0.0333	"	0.0333	100	40-150
Surrogate: Fluoranthene-d10	0.0372	"	0.0333	112	40-150

**LCS (BHF0011-BS1)**

Prepared & Analyzed: 06/03/24

Acenaphthene	0.0247	0.00500	mg/kg	0.0333	74.1	31-137
Anthracene	0.0259	0.00500	"	0.0333	77.7	30-120
Benzo (a) anthracene	0.0254	0.00500	"	0.0333	76.3	30-120
Benzo (a) pyrene	0.0252	0.00500	"	0.0333	75.6	30-120
Benzo (b) fluoranthene	0.0246	0.00500	"	0.0333	73.7	30-120
Benzo (k) fluoranthene	0.0235	0.00500	"	0.0333	70.6	30-120
Chrysene	0.0263	0.00500	"	0.0333	78.9	30-120
Dibenz (a,h) anthracene	0.0237	0.00500	"	0.0333	71.0	30-120
Fluoranthene	0.0253	0.00500	"	0.0333	76.0	30-120
Fluorene	0.0249	0.00500	"	0.0333	74.6	30-120
Indeno (1,2,3-cd) pyrene	0.0300	0.00500	"	0.0333	90.1	30-120
Pyrene	0.0315	0.00500	"	0.0333	94.6	35-142
1-Methylnaphthalene	0.0249	0.00500	"	0.0333	74.8	35-142
2-Methylnaphthalene	0.0248	0.00500	"	0.0333	74.5	35-142

Surrogate: 2-Methylnaphthalene-d10	0.0255	"	0.0333	76.4	40-150
Surrogate: Fluoranthene-d10	0.0267	"	0.0333	80.2	40-150

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/19/24 15:39

### PAH by EPA Method 8270D SIM - Quality Control

#### Summit Scientific

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

#### Batch BHF0011 - EPA 5030 Soil MS

##### Matrix Spike (BHF0011-MS1)

Source: 2405479-01

Prepared & Analyzed: 06/03/24

Acenaphthene	0.0227	0.00500	mg/kg	0.0333	ND	68.1	31-137		
Anthracene	0.0238	0.00500	"	0.0333	ND	71.5	30-120		
Benzo (a) anthracene	0.0231	0.00500	"	0.0333	ND	69.2	30-120		
Benzo (a) pyrene	0.0235	0.00500	"	0.0333	0.00554	54.0	30-120		
Benzo (b) fluoranthene	0.0237	0.00500	"	0.0333	0.00754	48.5	30-120		
Benzo (k) fluoranthene	0.0227	0.00500	"	0.0333	0.00533	52.1	30-120		
Chrysene	0.0234	0.00500	"	0.0333	ND	70.3	30-120		
Dibenz (a,h) anthracene	0.0276	0.00500	"	0.0333	ND	82.7	30-120		
Fluoranthene	0.0217	0.00500	"	0.0333	0.00657	45.3	30-120		
Fluorene	0.0226	0.00500	"	0.0333	ND	67.9	30-120		
Indeno (1,2,3-cd) pyrene	0.0193	0.00500	"	0.0333	ND	58.0	30-120		
Pyrene	0.0425	0.00500	"	0.0333	ND	128	35-142		
1-Methylnaphthalene	0.0225	0.00500	"	0.0333	ND	67.5	15-130		
2-Methylnaphthalene	0.0227	0.00500	"	0.0333	ND	68.1	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0235		"	0.0333		70.5	40-150		
Surrogate: Fluoranthene-d10	0.0233		"	0.0333		69.8	40-150		

##### Matrix Spike Dup (BHF0011-MSD1)

Source: 2405479-01

Prepared & Analyzed: 06/03/24

Acenaphthene	0.0225	0.00500	mg/kg	0.0333	ND	67.4	31-137	1.11	30	
Anthracene	0.0229	0.00500	"	0.0333	ND	68.7	30-120	4.01	30	
Benzo (a) anthracene	0.0240	0.00500	"	0.0333	ND	71.9	30-120	3.78	30	
Benzo (a) pyrene	0.0219	0.00500	"	0.0333	0.00554	49.2	30-120	6.97	30	
Benzo (b) fluoranthene	0.0213	0.00500	"	0.0333	0.00754	41.4	30-120	10.5	30	
Benzo (k) fluoranthene	0.0215	0.00500	"	0.0333	0.00533	48.4	30-120	5.58	30	
Chrysene	0.0232	0.00500	"	0.0333	ND	69.6	30-120	0.971	30	
Dibenz (a,h) anthracene	0.0231	0.00500	"	0.0333	ND	69.2	30-120	17.8	30	
Fluoranthene	0.0220	0.00500	"	0.0333	0.00657	46.3	30-120	1.53	30	
Fluorene	0.0235	0.00500	"	0.0333	ND	70.5	30-120	3.74	30	
Indeno (1,2,3-cd) pyrene	0.0159	0.00500	"	0.0333	ND	47.6	30-120	19.7	30	
Pyrene	0.0257	0.00500	"	0.0333	ND	77.2	35-142	49.2	30	QR-02
1-Methylnaphthalene	0.0225	0.00500	"	0.0333	ND	67.6	15-130	0.148	50	
2-Methylnaphthalene	0.0229	0.00500	"	0.0333	ND	68.8	15-130	0.973	50	
Surrogate: 2-Methylnaphthalene-d10	0.0232		"	0.0333		69.5	40-150			
Surrogate: Fluoranthene-d10	0.0234		"	0.0333		70.2	40-150			

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PO Box 1289  
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Project: Noble - Hansen BCO-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/19/24 15:39

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

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

**Batch BHF0023 - EPA 3050B**

**Blank (BHF0023-BLK1)**

Prepared: 06/03/24 Analyzed: 06/05/24

Boron ND 2.00 mg/L

**LCS (BHF0023-BS1)**

Prepared: 06/03/24 Analyzed: 06/05/24

Boron 5.01 2.00 mg/L 5.00 100 80-120

**Duplicate (BHF0023-DUP1)**

**Source: 2405479-01**

Prepared: 06/03/24 Analyzed: 06/05/24

Boron 0.105 2.00 mg/L 0.133 23.7 20 QR-01

**Matrix Spike (BHF0023-MS1)**

**Source: 2405479-01**

Prepared: 06/03/24 Analyzed: 06/05/24

Boron 5.15 2.00 mg/L 5.01 0.133 100 75-125

**Matrix Spike Dup (BHF0023-MSD1)**

**Source: 2405479-01**

Prepared: 06/03/24 Analyzed: 06/05/24

Boron 5.57 2.00 mg/L 5.01 0.133 109 75-125 7.87 25

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Project: Noble - Hansen BCO-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/19/24 15:39

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BHF0030 - EPA 3050B**

**Blank (BHF0030-BLK1)**

Prepared: 06/03/24 Analyzed: 06/05/24

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	"

**LCS (BHF0030-BS1)**

Prepared: 06/03/24 Analyzed: 06/05/24

Arsenic	38.8	0.200	mg/kg wet	39.1	99.3	80-120
Barium	39.0	0.400	"	39.1	99.8	80-120
Cadmium	1.95	0.200	"	1.95	100	80-120
Copper	40.6	0.400	"	39.1	104	80-120
Lead	19.4	0.200	"	19.5	99.6	80-120
Nickel	40.5	0.400	"	39.1	104	80-120
Silver	1.94	0.0200	"	1.95	99.2	80-120
Zinc	40.3	0.400	"	39.1	103	80-120
Selenium	4.29	0.260	"	3.91	110	80-120

**Duplicate (BHF0030-DUP1)**

Source: 2405476-01

Prepared: 06/03/24 Analyzed: 06/05/24

Arsenic	2.00	0.200	mg/kg dry	1.88	6.22	20
Barium	31.8	0.400	"	31.2	1.70	20
Cadmium	0.0860	0.200	"	0.0925	7.22	20
Copper	1.73	0.400	"	1.88	8.13	20
Lead	3.39	0.200	"	4.82	34.8	20
Nickel	1.89	0.400	"	1.83	2.79	20
Silver	0.00960	0.0200	"	0.0103	7.20	20
Zinc	8.72	0.400	"	8.65	0.772	20
Selenium	ND	0.260	"	ND		20

QR-04

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 - Hansen BCO-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/19/24 15:39

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BHF0030 - EPA 3050B**

**Matrix Spike (BHF0030-MS1)**

**Source: 2405476-01**

Prepared: 06/03/24 Analyzed: 06/05/24

Arsenic	39.8	0.200	mg/kg dry	40.3	1.88	94.1	75-125
Barium	67.9	0.400	"	40.3	31.2	90.9	75-125
Cadmium	2.07	0.200	"	2.02	0.0925	98.3	75-125
Copper	33.0	0.400	"	40.3	1.88	77.2	75-125
Lead	22.8	0.200	"	20.2	4.82	89.2	75-125
Nickel	33.5	0.400	"	40.3	1.83	78.4	75-125
Silver	1.93	0.0200	"	2.02	0.0103	95.4	75-125
Zinc	40.7	0.400	"	40.3	8.65	79.4	75-125
Selenium	4.07	0.260	"	4.03	ND	101	75-125

**Matrix Spike Dup (BHF0030-MSD1)**

**Source: 2405476-01**

Prepared: 06/03/24 Analyzed: 06/05/24

Arsenic	40.1	0.200	mg/kg dry	39.1	1.88	97.7	75-125	0.668	25
Barium	66.0	0.400	"	39.1	31.2	88.8	75-125	2.82	25
Cadmium	2.02	0.200	"	1.96	0.0925	98.4	75-125	2.78	25
Copper	32.8	0.400	"	39.1	1.88	79.1	75-125	0.510	25
Lead	22.7	0.200	"	19.6	4.82	91.3	75-125	0.516	25
Nickel	33.9	0.400	"	39.1	1.83	82.0	75-125	1.27	25
Silver	1.87	0.0200	"	1.96	0.0103	94.9	75-125	3.62	25
Zinc	40.6	0.400	"	39.1	8.65	81.6	75-125	0.257	25
Selenium	4.01	0.260	"	3.91	ND	103	75-125	1.55	25

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/19/24 15:39

**Hexavalent Chromium by EPA Method 7196 - Quality Control**  
**Summit Scientific**

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

**Batch BHF0017 - 3060A Mod**

**Blank (BHF0017-BLK1)**

Prepared & Analyzed: 06/03/24

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BHF0017-BS1)**

Prepared & Analyzed: 06/03/24

Chromium, Hexavalent 25.7 0.30 mg/kg wet 25.0 103 80-120

**Duplicate (BHF0017-DUP1)**

**Source: 2405423-01**

Prepared & Analyzed: 06/03/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BHF0017-MS1)**

**Source: 2405423-01**

Prepared & Analyzed: 06/03/24

Chromium, Hexavalent 28.6 0.30 mg/kg dry 29.3 ND 97.8 75-125

**Matrix Spike Dup (BHF0017-MSD1)**

**Source: 2405423-01**

Prepared & Analyzed: 06/03/24

Chromium, Hexavalent 27.1 0.30 mg/kg dry 27.9 ND 97.4 75-125 5.38 20

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/19/24 15:39

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

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

**Batch BHE0980 - General Preparation**

**Blank (BHE0980-BLK1)**

Prepared: 05/31/24 Analyzed: 06/04/24

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

**LCS (BHE0980-BS1)**

Prepared: 05/31/24 Analyzed: 06/04/24

Calcium	5.44	0.0500	mg/L wet	5.00	109	70-130
Magnesium	5.18	0.0500	"	5.00	104	70-130
Sodium	5.19	0.0500	"	5.00	104	70-130

Summit Scientific

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Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - Hansen BCO-64N67W 1NESE Project Number: UWRWE-A2137-ABN Project Manager: Paul Henchan	Reported: 06/19/24 15:39
--	--	-----------------------------

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

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

Batch BHF0015 - General Preparation

Duplicate (BHF0015-DUP1)	Source: 2405423-09			Prepared & Analyzed: 06/03/24						
% Solids	87.2		%		88.1			1.07	20	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/19/24 15:39

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

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

**Batch BHE0984 - General Preparation**

**Blank (BHE0984-BLK1)**

Prepared: 05/31/24 Analyzed: 06/04/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BHE0984-BS1)**

Prepared: 05/31/24 Analyzed: 06/04/24

Specific Conductance (EC) 0.156 0.0100 mmhos/cm 0.150 104 95-105

**Duplicate (BHE0984-DUP1)**

**Source: 2405421-01**

Prepared: 05/31/24 Analyzed: 06/04/24

Specific Conductance (EC) 0.0906 0.0100 mmhos/cm 0.0913 0.748 20

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/19/24 15:39

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

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

**Batch BHE0983 - General Preparation**

**LCS (BHE0983-BS1)**

Prepared: 05/31/24 Analyzed: 06/04/24

pH	9.13		pH Units	9.18		99.5	95-105		
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**Duplicate (BHE0983-DUP1)**

**Source: 2405421-01**

Prepared: 05/31/24 Analyzed: 06/04/24

pH	8.99		pH Units		9.09			1.11	20
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**Batch BHF0315 - General Preparation**

**LCS (BHF0315-BS1)**

Prepared & Analyzed: 06/12/24

pH	9.16		pH Units	9.18		99.8	95-105		
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**Duplicate (BHF0315-DUP1)**

**Source: 2405479-01RE1**

Prepared & Analyzed: 06/12/24

pH	8.71		pH Units		8.74			0.344	20
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Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE

Project Number: UWRWE-A2137-ABN

Project Manager: Paul Henchan

**Reported:**  
06/19/24 15:39

### Notes and Definitions

QR-04	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
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.
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
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

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 22, 2024

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Hanson BC 0-64N67W 1NESE (Backgrounds)

Work Order #2402287

Enclosed are the results of analyses for samples received by Summit Scientific on 02/15/24 13:25. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Ben Shrewsbury

Laboratory Manager



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BKG01@5.0'	2402287-01	Soil	02/15/24 00:00	02/15/24 13:25
BKG01@4.0'	2402287-02	Soil	02/15/24 00:00	02/15/24 13:25
BKG02@5.0'	2402287-03	Soil	02/15/24 00:00	02/15/24 13:25
BKG02@4.0'	2402287-04	Soil	02/15/24 00:00	02/15/24 13:25
BKG03@5.0'	2402287-05	Soil	02/15/24 00:00	02/15/24 13:25
BKG03@4.0'	2402287-06	Soil	02/15/24 00:00	02/15/24 13:25
BKG04@5.0'	2402287-07	Soil	02/15/24 00:00	02/15/24 13:25
BKG04@4.0'	2402287-08	Soil	02/15/24 00:00	02/15/24 13:25
BKG05@5.0'	2402287-09	Soil	02/15/24 00:00	02/15/24 13:25
BKG05@4.0'	2402287-10	Soil	02/15/24 00:00	02/15/24 13:25
BKG06@5.0'	2402287-11	Soil	02/14/24 00:00	02/15/24 13:25
BKG07@5.0'	2402287-12	Soil	02/14/24 00:00	02/15/24 13:25
BKG08@5.0'	2402287-13	Soil	02/14/24 00:00	02/15/24 13:25
BKG09@5.0'	2402287-14	Soil	02/14/24 00:00	02/15/24 13:25
BKG10@5.0'	2402287-15	Soil	02/14/24 00:00	02/15/24 13:25

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.*

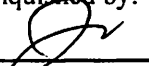
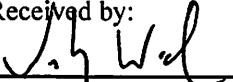
# SUMMIT SCIENTIFIC

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

Lab ID	Page 1 of 1
2402287	

Client: Fremont Env		Send Data To:		Send Invoice To:	
Address:		Project Manager: Paul Henchen		Company:	
City/State/Zip:		E-Mail: Paulh@fremontenv.com		Project Name/Location:	
Phone:		Jeff@fremontenv.com Ethemb@fremontenv.com		AFE#:	
Sampler Name: JG		Project Name: Hanson BC O-64N67W 1NESE (Background)		PO/Billing Codes: VWRWE-AR137-ARN	
		Project Number:		Contact:	

					Preservative				Matrix				Analysis Requested							Special Instructions	
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other _____	Water	Soil	Air-Canister #	Other _____	EC, pH, SAR, Boron	Metals (915)							
1	BK601@5.0'	2/15/24		1			X			X			X	X							
2	BK601@4.0'	↓		↓			↓			↓			↓	↓							
3	BK602@5.0'			↓			↓			↓			↓	↓							
4	BK602@4.0'			↓			↓			↓			↓	↓							
5	BK603@5.0'			↓			↓			↓			↓	↓							
6	BK603@4.0'			↓			↓			↓			↓	↓							
7	BK604@5.0'			↓			↓			↓			↓	↓							
8	BK604@4.0'			↓			↓			↓			↓	↓							
9	BK605@5.0'	↓		↓			↓			↓			↓	↓							
10	BK605@4.0'	2/15/24		↓			↓			↓			↓	↓							
11	BK606@5.0'	2/14/24		↓			↓			↓			↓	↓							
12	BK607@5.0'	↓		↓			↓			↓			↓	↓							
13	BK608@5.0'			↓			↓			↓			↓	↓							
14	BK609@5.0'			↓			↓			↓			↓	↓							
15	BK610@5.0'	↓		↓			↓			↓			↓	↓							

Relinquished by: 	Date/Time: 2/15/24 13:25	Received by: 	Date/Time: 2/15/24 13:25	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 8.2	Corrected Temperature	IR gun #: 2	HNO3 lot #:			

S<sub>2</sub>

## Sample Receipt Checklist

S2 Work Order# 2402287Client: FremontClient Project ID: Hanson BLD-64N67W 1NESE (backgrounds)Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐

Airbill #: \_\_\_\_\_

☒ ☐ ☐ ☐ ☐

Matrix (Check all that apply)

Air ☐Soil/Solid ☒Water ☐Other ☐

Temp (°C)

8.2

Thermometer #

2

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

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

John W. L.

Custodian Printed Name

2/15/24 13:25

Date/Time





Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG01@5.0'**  
**2402287-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHB0920	02/29/24	03/01/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	5.81	0.181		mg/kg dry	1	BHD0325	04/10/24	04/12/24	EPA 6020B	
Barium	78.2	0.362		"	"	"	"	"	"	
Cadmium	0.193	0.181		"	"	"	"	"	"	
Copper	6.53	0.362		"	"	"	"	"	"	
Lead	7.65	0.181		"	"	"	"	"	"	
Nickel	9.61	0.362		"	"	"	"	"	"	
Silver	0.0325	0.0181		"	"	"	"	"	"	
Zinc	22.6	0.362		"	"	"	"	"	"	
Selenium	ND	0.236		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	7.49	0.0500		mg/L dry	1	BHB0673	02/21/24	02/29/24	EPA 6020B	
Magnesium	2.24	0.0500		"	"	"	"	"	"	
Sodium	4.46	0.0500		"	"	"	"	"	"	

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: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG01@5.0'**  
**2402287-01 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.367	0.00100	units	1	BHC0013	03/01/24	03/01/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.2		%	1	BHB0854	02/27/24	02/28/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.85	0.0100	mmhos/cm	1	BHB0732	02/22/24	02/25/24	EPA 120.1	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.93		pH Units	1	BHB0730	02/22/24	02/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG01@4.0'**  
**2402287-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHB0920	02/29/24	03/01/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	6.49	0.200		mg/kg dry	1	BHD0325	04/10/24	04/12/24	EPA 6020B	
Barium	97.3	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	6.56	0.400		"	"	"	"	"	"	
Lead	8.36	0.200		"	"	"	"	"	"	
Nickel	9.69	0.400		"	"	"	"	"	"	
Silver	0.0394	0.0200		"	"	"	"	"	"	
Zinc	23.9	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	4.84	0.0500		mg/L dry	1	BHB0673	02/21/24	02/29/24	EPA 6020B	
Magnesium	1.96	0.0500		"	"	"	"	"	"	
Sodium	7.16	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG01@4.0'**  
**2402287-02 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	<b>0.694</b>	0.00100	units	1	BHC0013	03/01/24	03/01/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>91.1</b>		%	1	BHB0854	02/27/24	02/28/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>2.66</b>	0.0100	mmhos/cm	1	BHB0732	02/22/24	02/25/24	EPA 120.1	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.61</b>		pH Units	1	BHB0730	02/22/24	02/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG02@5.0'**  
**2402287-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHB0920	02/29/24	03/01/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	5.65	0.200		mg/kg dry	1	BHD0325	04/10/24	04/12/24	EPA 6020B	
Barium	92.2	0.400		"	"	"	"	"	"	
Cadmium	0.244	0.200		"	"	"	"	"	"	
Copper	9.30	0.400		"	"	"	"	"	"	
Lead	8.08	0.200		"	"	"	"	"	"	
Nickel	12.8	0.400		"	"	"	"	"	"	
Silver	0.0382	0.0200		"	"	"	"	"	"	
Zinc	26.2	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	9.80	0.0500		mg/L dry	1	BHB0673	02/21/24	02/29/24	EPA 6020B	
Magnesium	4.00	0.0500		"	"	"	"	"	"	
Sodium	7.02	0.0500		"	"	"	"	"	"	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG02@5.0'**  
**2402287-03 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.477	0.00100	units	1	BHC0013	03/01/24	03/01/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.0		%	1	BHB0854	02/27/24	02/28/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.68	0.0100	mmhos/cm	1	BHB0732	02/22/24	02/25/24	EPA 120.1	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.83		pH Units	1	BHB0730	02/22/24	02/25/24	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG02@4.0'**  
**2402287-04 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHB0920	02/29/24	03/01/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	6.20	0.200		mg/kg dry	1	BHD0325	04/10/24	04/12/24	EPA 6020B	
Barium	98.4	0.400		"	"	"	"	"	"	
Cadmium	0.212	0.200		"	"	"	"	"	"	
Copper	7.79	0.400		"	"	"	"	"	"	
Lead	8.12	0.200		"	"	"	"	"	"	
Nickel	10.9	0.400		"	"	"	"	"	"	
Silver	0.0427	0.0200		"	"	"	"	"	"	
Zinc	25.2	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	8.34	0.0500		mg/L dry	1	BHB0673	02/21/24	02/29/24	EPA 6020B	
Magnesium	5.21	0.0500		"	"	"	"	"	"	
Sodium	9.91	0.0500		"	"	"	"	"	"	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG02@4.0'**  
**2402287-04 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.663	0.00100	units	1	BHC0013	03/01/24	03/01/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.4		%	1	BHB0854	02/27/24	02/28/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.94	0.0100	mmhos/cm	1	BHB0732	02/22/24	02/25/24	EPA 120.1	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.54		pH Units	1	BHB0730	02/22/24	02/25/24	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG03@5.0'**  
**2402287-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHB0920	02/29/24	03/01/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	5.11	0.200		mg/kg dry	1	BHD0325	04/10/24	04/12/24	EPA 6020B	
Barium	85.3	0.400		"	"	"	"	"	"	
Cadmium	0.230	0.200		"	"	"	"	"	"	
Copper	8.07	0.400		"	"	"	"	"	"	
Lead	7.28	0.200		"	"	"	"	"	"	
Nickel	11.3	0.400		"	"	"	"	"	"	
Silver	0.0395	0.0200		"	"	"	"	"	"	
Zinc	24.3	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	11.7	0.0500		mg/L dry	1	BHB0673	02/21/24	02/29/24	EPA 6020B	
Magnesium	2.75	0.0500		"	"	"	"	"	"	
Sodium	7.64	0.0500		"	"	"	"	"	"	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG03@5.0'**  
**2402287-05 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.522	0.00100	units	1	BHC0013	03/01/24	03/01/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.5		%	1	BHB0854	02/27/24	02/28/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	5.32	0.0100	mmhos/cm	1	BHB0732	02/22/24	02/25/24	EPA 120.1	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.38		pH Units	1	BHB0730	02/22/24	02/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG03@4.0'**  
**2402287-06 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHB0920	02/29/24	03/01/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	24.1	0.200		mg/kg dry	1	BHD0325	04/10/24	04/12/24	EPA 6020B	
Barium	118	0.400		"	"	"	"	"	"	
Cadmium	0.296	0.200		"	"	"	"	"	"	
Copper	9.73	0.400		"	"	"	"	"	"	
Lead	8.29	0.200		"	"	"	"	"	"	
Nickel	12.8	0.400		"	"	"	"	"	"	
Silver	0.0481	0.0200		"	"	"	"	"	"	
Zinc	25.5	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	7.48	0.0500		mg/L dry	1	BHB0673	02/21/24	02/29/24	EPA 6020B	
Magnesium	1.94	0.0500		"	"	"	"	"	"	
Sodium	3.61	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
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Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG03@4.0'**  
**2402287-06 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	<b>0.304</b>	0.00100	units	1	BHC0013	03/01/24	03/01/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>88.1</b>		%	1	BHB0854	02/27/24	02/28/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>1.71</b>	0.0100	mmhos/cm	1	BHB0732	02/22/24	02/25/24	EPA 120.1	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.63</b>		pH Units	1	BHB0730	02/22/24	02/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG04@5.0'**  
**2402287-07 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHB0920	02/29/24	03/01/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	2.89	0.200		mg/kg dry	1	BHD0325	04/10/24	04/12/24	EPA 6020B	
Barium	105	0.400		"	"	"	"	"	"	
Cadmium	0.245	0.200		"	"	"	"	"	"	
Copper	11.1	0.400		"	"	"	"	"	"	
Lead	6.93	0.200		"	"	"	"	"	"	
Nickel	15.2	0.400		"	"	"	"	"	"	
Silver	0.0440	0.0200		"	"	"	"	"	"	
Zinc	24.7	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	6.74	0.0500		mg/L dry	1	BHB0673	02/21/24	02/29/24	EPA 6020B	
Magnesium	3.95	0.0500		"	"	"	"	"	"	
Sodium	4.18	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG04@5.0'**  
**2402287-07 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.316	0.00100	units	1	BHC0013	03/01/24	03/01/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.2		%	1	BHB0854	02/27/24	02/28/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.44	0.0100	mmhos/cm	1	BHB0732	02/22/24	02/25/24	EPA 120.1	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.08		pH Units	1	BHB0730	02/22/24	02/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG04@4.0'**  
**2402287-08 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHB0920	02/29/24	03/01/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.61	0.200	mg/kg dry	1	BHD0325	04/10/24	04/12/24	EPA 6020B	
Barium	93.1	0.400	"	"	"	"	"	"	
Cadmium	0.222	0.200	"	"	"	"	"	"	
Copper	9.55	0.400	"	"	"	"	"	"	
Lead	7.56	0.200	"	"	"	"	"	"	
Nickel	13.1	0.400	"	"	"	"	"	"	
Silver	0.0489	0.0200	"	"	"	"	"	"	
Zinc	24.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	13.1	0.0500	mg/L dry	1	BHB0673	02/21/24	02/29/24	EPA 6020B	
Magnesium	5.17	0.0500	"	"	"	"	"	"	
Sodium	6.38	0.0500	"	"	"	"	"	"	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG04@4.0'**  
**2402287-08 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.378	0.00100	units	1	BHC0013	03/01/24	03/01/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.1		%	1	BHB0854	02/27/24	02/28/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.24	0.0100	mmhos/cm	1	BHB0732	02/22/24	02/25/24	EPA 120.1	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.53		pH Units	1	BHB0730	02/22/24	02/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG05@5.0'**  
**2402287-09 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHB0920	02/29/24	03/01/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	<b>0.810</b>	0.200	mg/kg dry	1	BHD0325	04/10/24	04/12/24	EPA 6020B	
Barium	<b>31.3</b>	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	<b>3.43</b>	0.400	"	"	"	"	"	"	
Lead	<b>2.18</b>	0.200	"	"	"	"	"	"	
Nickel	<b>5.54</b>	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	<b>12.7</b>	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	<b>0.620</b>	0.0500	mg/L dry	1	BHB0673	02/21/24	02/29/24	EPA 6020B	
Magnesium	<b>0.829</b>	0.0500	"	"	"	"	"	"	
Sodium	<b>2.39</b>	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG05@5.0'**  
**2402287-09 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.467	0.00100	units	1	BHC0013	03/01/24	03/01/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	98.1		%	1	BHB0854	02/27/24	02/28/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	5.09	0.0100	mmhos/cm	1	BHB0732	02/22/24	02/25/24	EPA 120.1	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.61		pH Units	1	BHB0730	02/22/24	02/25/24	EPA 9045D	

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Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG05@4.0'**  
**2402287-10 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHB0920	02/29/24	03/01/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.89	0.200	mg/kg dry	1	BHD0325	04/10/24	04/12/24	EPA 6020B	
Barium	24.3	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.48	0.400	"	"	"	"	"	"	
Lead	1.78	0.200	"	"	"	"	"	"	
Nickel	3.84	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	9.47	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	0.977	0.0500	mg/L dry	1	BHB0673	02/21/24	02/29/24	EPA 6020B	
Magnesium	1.05	0.0500	"	"	"	"	"	"	
Sodium	2.22	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
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Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG05@4.0'**  
**2402287-10 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.371	0.00100	units	1	BHC0013	03/01/24	03/01/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.4		%	1	BHB0854	02/27/24	02/28/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.51	0.0100	mmhos/cm	1	BHB0732	02/22/24	02/25/24	EPA 120.1	

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

Date Sampled: **02/15/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.58		pH Units	1	BHB0730	02/22/24	02/25/24	EPA 9045D	

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Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG06@5.0'**  
**2402287-11 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHB0920	02/29/24	03/01/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	1.31	0.180		mg/kg dry	1	BHD0325	04/10/24	04/12/24	EPA 6020B	
Barium	37.6	0.360		"	"	"	"	"	"	
Cadmium	ND	0.180		"	"	"	"	"	"	
Copper	2.69	0.360		"	"	"	"	"	"	
Lead	2.27	0.180		"	"	"	"	"	"	
Nickel	3.79	0.360		"	"	"	"	"	"	
Silver	ND	0.0180		"	"	"	"	"	"	
Zinc	10.6	0.360		"	"	"	"	"	"	
Selenium	ND	0.234		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	2.50	0.0500		mg/L dry	1	BHB0673	02/21/24	02/29/24	EPA 6020B	
Magnesium	1.78	0.0500		"	"	"	"	"	"	
Sodium	1.05	0.0500		"	"	"	"	"	"	

Summit Scientific

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Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG06@5.0'**  
**2402287-11 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.124	0.00100	units	1	BHC0013	03/01/24	03/01/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.1		%	1	BHB0854	02/27/24	02/28/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.694	0.0100	mmhos/cm	1	BHB0732	02/22/24	02/25/24	EPA 120.1	

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.42		pH Units	1	BHB0730	02/22/24	02/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
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Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG07@5.0'**  
**2402287-12 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHB0920	02/29/24	03/01/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	3.63	0.200		mg/kg dry	1	BHD0325	04/10/24	04/12/24	EPA 6020B	
Barium	162	0.400		"	"	"	"	"	"	
Cadmium	0.225	0.200		"	"	"	"	"	"	
Copper	13.2	0.400		"	"	"	"	"	"	
Lead	8.65	0.200		"	"	"	"	"	"	
Nickel	10.4	0.400		"	"	"	"	"	"	
Silver	0.0523	0.0200		"	"	"	"	"	"	
Zinc	28.3	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	7.46	0.0500		mg/L dry	1	BHB0673	02/21/24	02/29/24	EPA 6020B	
Magnesium	2.56	0.0500		"	"	"	"	"	"	
Sodium	2.68	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental  
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Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG07@5.0'**  
**2402287-12 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.216	0.00100	units	1	BHC0013	03/01/24	03/01/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.9		%	1	BHB0854	02/27/24	02/28/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.242	0.0100	mmhos/cm	1	BHB0732	02/22/24	02/25/24	EPA 120.1	

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.15		pH Units	1	BHB0730	02/22/24	02/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG08@5.0'**  
**2402287-13 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHB0920	02/29/24	03/01/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	<b>0.742</b>	0.200	mg/kg dry	1	BHD0325	04/10/24	04/12/24	EPA 6020B	
Barium	<b>23.1</b>	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	<b>2.07</b>	0.400	"	"	"	"	"	"	
Lead	<b>1.65</b>	0.200	"	"	"	"	"	"	
Nickel	<b>2.64</b>	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	<b>7.93</b>	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	<b>1.34</b>	0.0500	mg/L dry	1	BHB0673	02/21/24	02/29/24	EPA 6020B	
Magnesium	<b>1.56</b>	0.0500	"	"	"	"	"	"	
Sodium	<b>1.14</b>	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG08@5.0'**  
**2402287-13 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.159	0.00100	units	1	BHC0013	03/01/24	03/01/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.9		%	1	BHB0854	02/27/24	02/28/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.19	0.0100	mmhos/cm	1	BHB0732	02/22/24	02/25/24	EPA 120.1	

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.12		pH Units	1	BHB0730	02/22/24	02/25/24	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG09@5.0'**  
**2402287-14 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHB0920	02/29/24	03/01/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	2.39	0.200		mg/kg dry	1	BHD0325	04/10/24	04/12/24	EPA 6020B	
Barium	73.7	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	6.94	0.400		"	"	"	"	"	"	
Lead	5.23	0.200		"	"	"	"	"	"	
Nickel	6.72	0.400		"	"	"	"	"	"	
Silver	0.0287	0.0200		"	"	"	"	"	"	
Zinc	18.8	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	4.89	0.0500		mg/L dry	1	BHB0673	02/21/24	02/29/24	EPA 6020B	
Magnesium	1.34	0.0500		"	"	"	"	"	"	
Sodium	3.84	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG09@5.0'**  
**2402287-14 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.397	0.00100	units	1	BHC0013	03/01/24	03/01/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.8		%	1	BHB0854	02/27/24	02/28/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.10	0.0100	mmhos/cm	1	BHB0732	02/22/24	02/25/24	EPA 120.1	

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.90		pH Units	1	BHB0730	02/22/24	02/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG10@5.0'**  
**2402287-15 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHB0920	02/29/24	03/01/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	1.60	0.200		mg/kg dry	1	BHD0325	04/10/24	04/12/24	EPA 6020B	
Barium	25.2	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	4.41	0.400		"	"	"	"	"	"	
Lead	3.07	0.200		"	"	"	"	"	"	
Nickel	4.66	0.400		"	"	"	"	"	"	
Silver	ND	0.0200		"	"	"	"	"	"	
Zinc	13.3	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

**I-04**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0615	04/18/24	04/18/24	EPA 7196A	

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	2.38	0.0500		mg/L dry	1	BHB0673	02/21/24	02/29/24	EPA 6020B	
Magnesium	0.877	0.0500		"	"	"	"	"	"	
Sodium	0.505	0.0500		"	"	"	"	"	"	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**BKG10@5.0'**  
**2402287-15 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0711	0.00100	units	1	BHC0013	03/01/24	03/01/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.3		%	1	BHB0854	02/27/24	02/28/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.06	0.0100	mmhos/cm	1	BHB0732	02/22/24	02/25/24	EPA 120.1	

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

Date Sampled: **02/14/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.84		pH Units	1	BHB0730	02/22/24	02/25/24	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

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

#### Summit Scientific

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

#### Batch BHB0920 - EPA 3050B

##### Blank (BHB0920-BLK1)

Prepared: 02/29/24 Analyzed: 03/01/24

Boron	ND	2.00	mg/L
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##### LCS (BHB0920-BS1)

Prepared: 02/29/24 Analyzed: 03/01/24

Boron	5.21	2.00	mg/L	5.00	104	80-120
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##### Duplicate (BHB0920-DUP1)

Source: 2402062-04

Prepared: 02/29/24 Analyzed: 03/01/24

Boron	0.635	2.00	mg/L	0.634	0.124	20
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##### Matrix Spike (BHB0920-MS1)

Source: 2402062-04

Prepared: 02/29/24 Analyzed: 03/01/24

Boron	5.77	2.00	mg/L	5.00	0.634	103	75-125
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##### Matrix Spike Dup (BHB0920-MSD1)

Source: 2402062-04

Prepared: 02/29/24 Analyzed: 03/01/24

Boron	5.75	2.00	mg/L	5.00	0.634	102	75-125	0.340	25
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Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BHD0325 - EPA 3050B**

**Blank (BHD0325-BLK1)**

Prepared: 04/10/24 Analyzed: 04/12/24

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	"

**LCS (BHD0325-BS1)**

Prepared: 04/10/24 Analyzed: 04/12/24

Arsenic	37.2	0.200	mg/kg wet	40.0	93.1	80-120
Barium	37.6	0.400	"	40.0	94.0	80-120
Cadmium	1.89	0.200	"	2.00	94.6	80-120
Copper	37.7	0.400	"	40.0	94.2	80-120
Lead	18.6	0.200	"	20.0	92.9	80-120
Nickel	37.1	0.400	"	40.0	92.8	80-120
Silver	1.90	0.0200	"	2.00	94.9	80-120
Zinc	38.5	0.400	"	40.0	96.2	80-120
Selenium	4.03	0.260	"	4.00	101	80-120

**Duplicate (BHD0325-DUP1)**

Source: 2402238-21

Prepared: 04/10/24 Analyzed: 04/12/24

Arsenic	7.13	0.200	mg/kg dry	7.27	1.97	20
Barium	16.4	0.400	"	16.2	0.947	20
Cadmium	0.219	0.200	"	0.197	10.6	20
Copper	4.86	0.400	"	4.80	1.39	20
Lead	4.46	0.200	"	4.26	4.51	20
Nickel	3.52	0.400	"	3.60	2.01	20
Silver	0.00944	0.0200	"	0.00616	42.1	20
Zinc	9.29	0.400	"	8.41	9.97	20
Selenium	0.503	0.260	"	0.430	15.6	20

QR-01

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BHD0325 - EPA 3050B**

**Matrix Spike (BHD0325-MS1)**

Source: 2402238-21

Prepared: 04/10/24 Analyzed: 04/12/24

Arsenic	42.3	0.200	mg/kg dry	39.3	7.27	89.0	75-125
Barium	51.0	0.400	"	39.3	16.2	88.4	75-125
Cadmium	2.05	0.200	"	1.97	0.197	94.3	75-125
Copper	41.2	0.400	"	39.3	4.80	92.4	75-125
Lead	21.1	0.200	"	19.7	4.26	85.6	75-125
Nickel	39.5	0.400	"	39.3	3.60	91.4	75-125
Silver	1.95	0.0200	"	1.97	0.00616	98.7	75-125
Zinc	39.9	0.400	"	39.3	8.41	80.0	75-125
Selenium	4.49	0.260	"	3.93	0.430	103	75-125

**Matrix Spike Dup (BHD0325-MSD1)**

Source: 2402238-21

Prepared: 04/10/24 Analyzed: 04/12/24

Arsenic	44.1	0.200	mg/kg dry	39.3	7.27	93.6	75-125	4.21	25
Barium	57.1	0.400	"	39.3	16.2	104	75-125	11.3	25
Cadmium	2.32	0.200	"	1.97	0.197	108	75-125	12.2	25
Copper	42.9	0.400	"	39.3	4.80	96.8	75-125	4.14	25
Lead	24.0	0.200	"	19.7	4.26	101	75-125	13.1	25
Nickel	41.1	0.400	"	39.3	3.60	95.4	75-125	3.94	25
Silver	2.15	0.0200	"	1.97	0.00616	109	75-125	10.0	25
Zinc	43.8	0.400	"	39.3	8.41	90.0	75-125	9.35	25
Selenium	5.15	0.260	"	3.93	0.430	120	75-125	13.6	25

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

**Hexavalent Chromium by EPA Method 7196 - Quality Control**  
**Summit Scientific**

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

**Batch BHD0615 - 3060A Mod**

**Blank (BHD0615-BLK1)**

Prepared & Analyzed: 04/18/24

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BHD0615-BS1)**

Prepared & Analyzed: 04/18/24

Chromium, Hexavalent 25.6 0.30 mg/kg wet 25.0 102 80-120

**Duplicate (BHD0615-DUP1)**

**Source: 2402287-01**

Prepared & Analyzed: 04/18/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BHD0615-MS1)**

**Source: 2402287-01**

Prepared & Analyzed: 04/18/24

Chromium, Hexavalent 28.5 0.30 mg/kg dry 28.0 ND 102 75-125

**Matrix Spike Dup (BHD0615-MSD1)**

**Source: 2402287-01**

Prepared & Analyzed: 04/18/24

Chromium, Hexavalent 28.5 0.30 mg/kg dry 28.0 ND 102 75-125 0.00 20

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

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

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

**Batch BHB0673 - General Preparation**

**Blank (BHB0673-BLK1)**

Prepared: 02/21/24 Analyzed: 02/29/24

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

**LCS (BHB0673-BS1)**

Prepared: 02/21/24 Analyzed: 02/29/24

Calcium	5.85	0.0500	mg/L wet	5.00	117	70-130
Magnesium	5.53	0.0500	"	5.00	111	70-130
Sodium	5.54	0.0500	"	5.00	111	70-130

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)

Project Number: UWRWE-A2137-ABN

Project Manager: Paul Henchan

**Reported:**

04/22/24 09:27

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

**Summit Scientific**

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

**Batch BHB0854 - General Preparation**

Duplicate (BHB0854-DUP1)		Source: 2402287-01		Prepared: 02/27/24 Analyzed: 02/28/24	
% Solids	89.3	%	89.2	0.204	20

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

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

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

**Batch BHB0732 - General Preparation**

**Blank (BHB0732-BLK1)**

Prepared: 02/22/24 Analyzed: 02/25/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BHB0732-BS1)**

Prepared: 02/22/24 Analyzed: 02/25/24

Specific Conductance (EC) 0.146 0.0100 mmhos/cm 0.150 97.3 95-105

**Duplicate (BHB0732-DUP1)**

**Source: 2402062-04**

Prepared: 02/22/24 Analyzed: 02/25/24

Specific Conductance (EC) 0.469 0.0100 mmhos/cm 0.466 0.727 20

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)

Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

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

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

**Batch BHB0730 - General Preparation**

**LCS (BHB0730-BS1)**

Prepared: 02/22/24 Analyzed: 02/25/24

pH	9.08	pH Units	9.18	98.9	95-105
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**Duplicate (BHB0730-DUP1)**

**Source: 2402062-04**

Prepared: 02/22/24 Analyzed: 02/25/24

pH	8.28	pH Units	8.35	0.842	20
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Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Hanson BC 0-64N67W 1NESE (Backgrounds)

Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
04/22/24 09:27

### Notes and Definitions

QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
I-04	Sample was analyzed out of recommended holding time per clients request.
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