

# **FREMONT ENVIRONMENTAL INC.**

November 16, 2023

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

Subject:       **Facility Closure Data Submittal**  
                  HANSEN BC O-64N67W 1NESE  
                  NESE Sec. 1, T4N, R67W  
                  Weld County, Colorado  
                  Fremont Project No. C023-232  
                  Facility # 333177, Remediation #22552


Dear Mr. Peterson:

As you requested, Fremont Environmental Inc. (Fremont) personnel conducted Facility Closure activities for the Noble Energy Inc. (Noble) Hansen BC O-64N67W 1NESE. Impacted soil was encountered during abandonment activities. Details of the Hansen BC O-64N67W 1NESE facility closure activities are documented in the attached Closure Report. Groundwater was not encountered during flowline abandonment activities.

Please contact me at (336) – 541-3048 if you require any additional information. Fremont appreciates the opportunity to provide this service.

Sincerely,

**FREMONT ENVIRONMENTAL INC.**



Aaron Otilar.  
Consultant

Attachments:

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

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

# Tank Battery Closure Checklist

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

Additional attachments (optional):		Pit Closure		Wellhead Closure		Flowline Closure		Partially Buried Vault Closure
Site Name & COGCC Facility Number:		Date:						Remediation Project #:
Associated Wells:		Age of Site:						Number of Photos Attached:
Location: (GPS coordinates of southeaster berm)								Estimated Facility Size (acres):
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)								
USCS Soil Type:					Estimated Depth to Groundwater:			
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)								
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)								
<b>Tanks</b>								
Tank Contents								
Size (barrels)								
Age								
Construction Material								
Tank type (AST/DRU, etc.)								
Visual Integrity of Tank								
Condition of tank footprint								
PID Readings								
Soil impacts present at valves or hatches?								
PID Readings								
Sample taken? Location/ Sample ID#								
Photo Number(s)								
Other observations regarding tanks:								
<b>Separators</b>								
Separator size								
Vertical or Horizontal								
Age								
Soil impacts observed? If yes,								
PID Readings								
Sample taken? Location/ Sample ID#								
Photo Number(s)								
Other observations regarding separators								
<b>Third Party Equipment</b>								
Type								
Age								

Third Party									
Removal Date									
Sample taken?									
PID Readings									
Photo Number(s)									
<b>Other Facility Equipment</b>									
Equipment type									
Equipment Condition									
Age									
Soil impacts observed during									
PID Readings									
Sample taken?									
Photo Number(s)									
Other observations regarding other facility or third party equipment:									
<b>Summary</b>									
Was impacted soil identified?									
<div> <div>No</div> <div>Yes - less than 10 cubic yards</div> <div>Yes - more than 10 cubic yards</div> </div>									
Total number of samples field screened:					Total number of samples collected:				
Highest PID Reading:					Total number of samples submitted to lab for analysis:				
If more than 10 cubic yards of impacted soil were observed:									
Vertical extent:					Estimated spill volume:				
Lateral extent:					Volume of soil removed:				
Is additional investigation required?									
Was groundwater encountered during the investigation?									
<div> <div>No</div> <div>Yes - not impacted or in contact with impacted soils</div> <div>Yes - groundwater impacted and/or in contact with impacted soils</div> </div>									
Measured depth to groundwater:					Was remedial groundwater removal conducted?      Yes      No				
Date Groundwater was encountered:					Commencement date of removal:				
Sheen on groundwater?      Yes      No					Volume of groundwater removed prior to sampling:				
Free product observed?      Yes      No					Volume of groundwater removed post sampling:				
Total number of samples collected:					Total Volume of groundwater removed:				
Total number of samples submitted to lab for analysis:									

## Buried or Partially Buried Vessel Closure Checklist

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

Additional attachments (optional):		Pit Closure		Wellhead Closure		Flowline Closure		Tank Battery Closure
Site Name & COGCC Facility Number:		Date:						Remediation Project #:
Associated Wells:		Age of Site:						Number of Photos Attached:
Location: (GPS coordinates of vault or southeastern tank berm for multiple)								Estimated Facility Size (acres):
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)								
USCS Soil Type:					Estimated Depth to Groundwater:			
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)								
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)								
<b>Buried or Partially Buried Vessels</b>								
Tank Contents								
Size (barrels)								
Age								
Construction Material								
Visual Integrity of Tank								
Condition of tank Foundation								
PID Readings								
Condition of Access Line								
PID Readings								
Sample taken? Location/Sample ID#								
Photo Number(s)								
Other observations regarding partially buried vessels:								
<b>Summary</b>								
Was impacted soil identified? <div style="display: flex; justify-content: space-between;"> <span>No</span> <span>Yes - less than 10 cubic yards</span> <span>Yes - more than 10 cubic yards</span> </div>								
Total number of samples field screened:					Total number of samples collected:			
Highest PID Reading:					Total number of samples submitted to lab for analysis:			
If more than 10 cubic yards of impacted soil were observed:								
Vertical extent:					Estimated spill volume:			
Lateral extent:					Volume of soil removed:			
Is additional investigation required?								
Was groundwater encountered during the investigation? <div style="display: flex; justify-content: space-between;"> <span>No</span> <span>Yes - not impacted or in contact with impacted soils</span> <span>Yes - groundwater impacted and/or in contact with impacted soils</span> </div>								
Measured depth to groundwater:					Was remedial groundwater removal conducted?    Yes    No			
Date Groundwater was encountered:					Commencement date of removal:			
Sheen on groundwater?                      Yes                      No					Volume of groundwater removed prior to sampling:			
Free product observed?                      Yes                      No					Volume of groundwater removed post sampling:			
Total number of samples collected:					Total Volume of groundwater removed:			
Total number of samples submitted to lab for analysis:								

**TABLE 1**  
**SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA**  
**NOBLE ENERGY INC.**  
**HANSEN BC O-64N67W 1NESE FACILITY, WELD COUNTY, COLORADO**  
**FREMONT PROJECT NO. C023-232**

Sample ID	Sample Date	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	1,2,4- Trimethyl- Benzene (mg/kg)	1,3,5- Trimethyl- Benzene (mg/kg)	Naphthalene (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
COGCC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500**		
COGCC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500**		
AST01@0-6"	08/22/2023	0-6"	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.50	<50
AST02@0-6"	08/22/2023	0-6"	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.50	<50
PWV01-BE@4'	08/22/2023	4'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.50	<50
PWV01-BW@4'	08/22/2023	4'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	140	<0.50	<50
PWV01-E@2'	08/22/2023	2'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.50	<50
PWV01-NE@2'	08/22/2023	2'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.50	<50
PWV01-NW@2'	08/22/2023	2'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	0.013	<0.0038	110	<0.50	<50
PWV01-SE@2'	08/22/2023	2'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.50	<50
PWV01-SW@2'	08/22/2023	2'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.50	<50
PWV01-W@2'	08/22/2023	2'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.50	<50
SEP01-DL@4'	08/22/2023	4'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.50	<50

Bold faced values exceed the COGCC Table 915-1 concentrations

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

\* Indicates laboratory minimum detection limit in excess of SSL

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

NA - Not analyzed

TABLE 2  
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA  
NOBLE ENERGY INC.  
HANSEN BC O-64N67W 1NE5E FACILITY, WELD COUNTY, COLORADO  
FREMONT PROJECT NO. C023-232

Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3- cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
COGCC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
COGCC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
AST01@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'	<0.00500	<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'	<0.00500	<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'	<0.00500	<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'	<0.00500	<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'	<0.00500	<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'	<0.00500	<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'	<0.00500	<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'	<0.00500	<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'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Bold faced values exceed the COGCC Table 915-1 concentrations

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

\* Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed

**TABLE 3**  
**SUMMARY OF SOIL SUITABILITY FOR RECLAMATION**  
**NOBLE ENERGY INC.**  
**HANSEN BC O-64N67W 1NESE FACILITY, WELD COUNTY, COLORADO**  
**FREMONT PROJECT NO. C023-232**

Sample ID	Sample Date	Depth (ft)	pH	EC (mmhos/cm)	SAR	Boron (mg/L)
COGCC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
AST01@0-6"	08/22/2023	0-6"	7.9	0.212	0.013	<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'	8.39	0.326	0.114	0.083
PWV01-BW@4'	08/22/2023	4'	9.00	0.670	1.41	0.152
PWV01-E@2'	08/22/2023	2'	8.14	0.411	0.271	0.234
PWV01-NE@2'	08/22/2023	2'	8.09	0.227	0.0199	<0.0100
PWV01-NW@2'	08/22/2023	2'	7.56	0.372	0.297	<0.0100
PWV01-SE@2'	08/22/2023	2'	7.38	4.25	1.25	0.359
PWV01-SW@2'	08/22/2023	2'	8.46	0.702	1.44	0.133
PWV01-W@2'	08/22/2023	2'	8.1	0.261	0.504	0.0782
SEP01-DL@4'	08/22/2023	4'	8.5	0.299	0.0808	<0.0100

Bold faced values exceed the COGCC Table 915-1 concentrations

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

NA - Not analyzed

**TABLE 4**  
**SUMMARY OF METALS IN SOIL CHEMISTRY DATA**  
**NOBLE ENERGY INC.**  
**HANSEN BC O-64N67W 1NESE FACILITY, WELD COUNTY, COLORADO**  
**FREMONT PROJECT NO. C023-232**

Sample ID	Sample Date	Depth (ft)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
COGCC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
COGCC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
AST01@0-6"	08/22/2023	0-6"	<b>5.20</b>	62.20	<0.200	<0.30	4.04	6.26	4.92	<0.260	<0.0200	22.70
AST02@0-6"	08/22/2023	0-6"	<b>1.36</b>	32.70	<0.200	<0.30	3.77	2.75	4.05	<0.260	<0.0200	14.10
PWV01-BE@4'	08/22/2023	4'	<b>6.66</b>	67.90	<0.200	<0.30	5.68	6.85	5.28	<0.260	0.02	30.00
PWV01-BW@4'	08/22/2023	4'	<b>7.52</b>	66.50	<0.200	<0.30	3.47	6.99	5.06	<0.260	0.02	23.00
PWV01-E@2'	08/22/2023	2'	<b>6.01</b>	70.00	<0.200	<0.30	9.54	7.07	5.35	<b>0.34</b>	0.02	44.80
PWV01-NE@2'	08/22/2023	2'	<b>6.28</b>	57.60	<0.200	<0.30	3.39	6.65	4.94	<0.260	<0.0200	22.30
PWV01-NW@2'	08/22/2023	2'	<b>6.45</b>	69.80	<0.200	<0.30	4.53	7.08	5.44	<0.260	0.02	25.60
PWV01-SE@2'	08/22/2023	2'	<b>3.60</b>	57.40	<0.200	<0.30	12.90	4.36	6.13	<b>0.51</b>	<0.0200	52.30
PWV01-SW@2'	08/22/2023	2'	<b>6.22</b>	77.60	<0.200	<0.30	8.53	6.72	5.54	<b>0.32</b>	0.03	40.40
PWV01-W@2'	08/22/2023	2'	<b>3.74</b>	64.30	<0.200	<0.30	4.68	4.93	4.84	<0.260	<0.0200	18.70
SEP01-DL@4'	08/22/2023	4'	<b>6.01</b>	58.50	<0.200	<0.30	3.78	6.02	4.55	<0.260	<0.0200	19.90

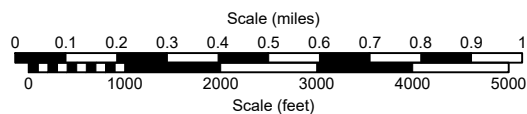
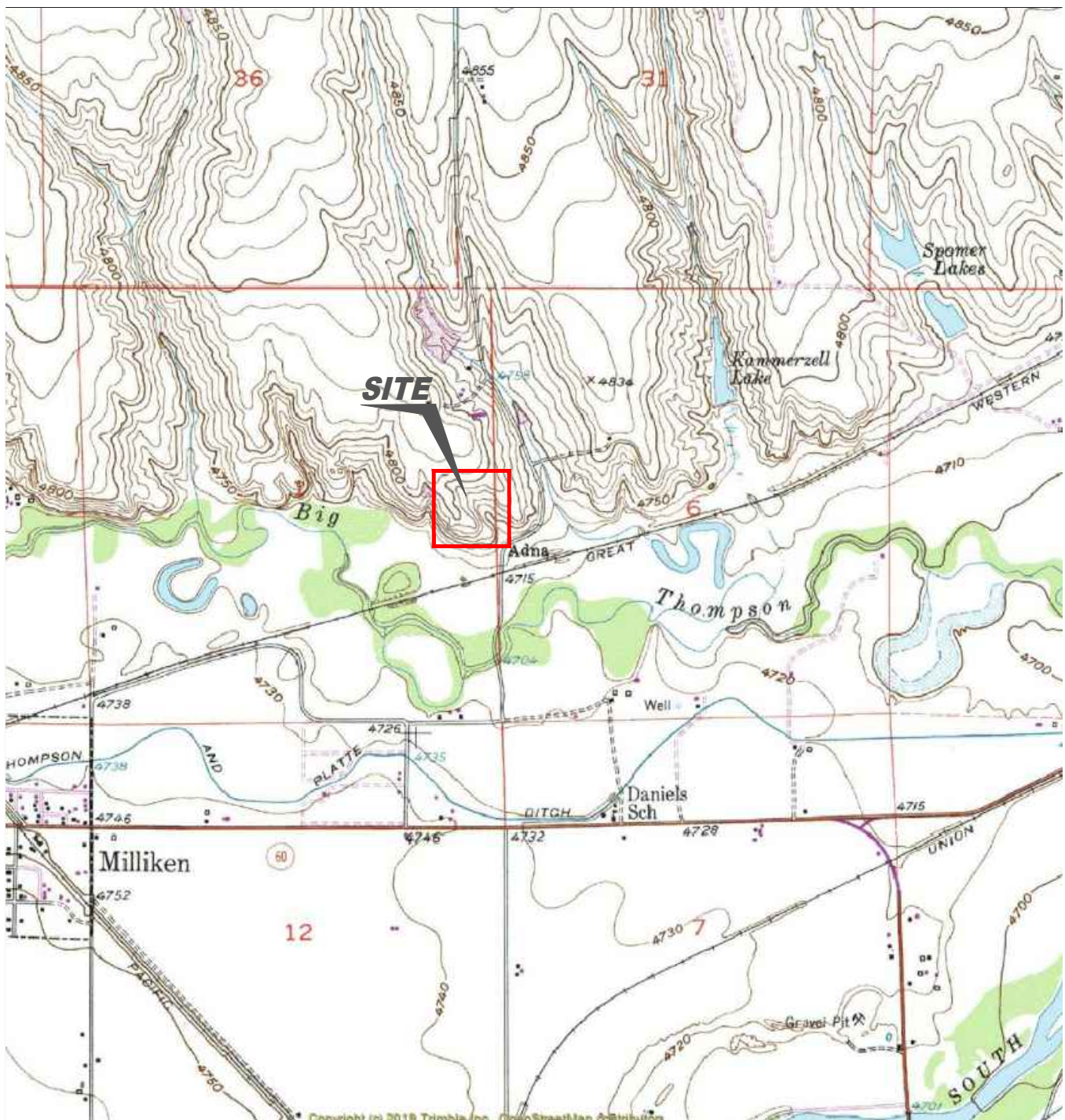
Bold faced values exceed the COGCC Table 915-1 concentrations

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

\* Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed





USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

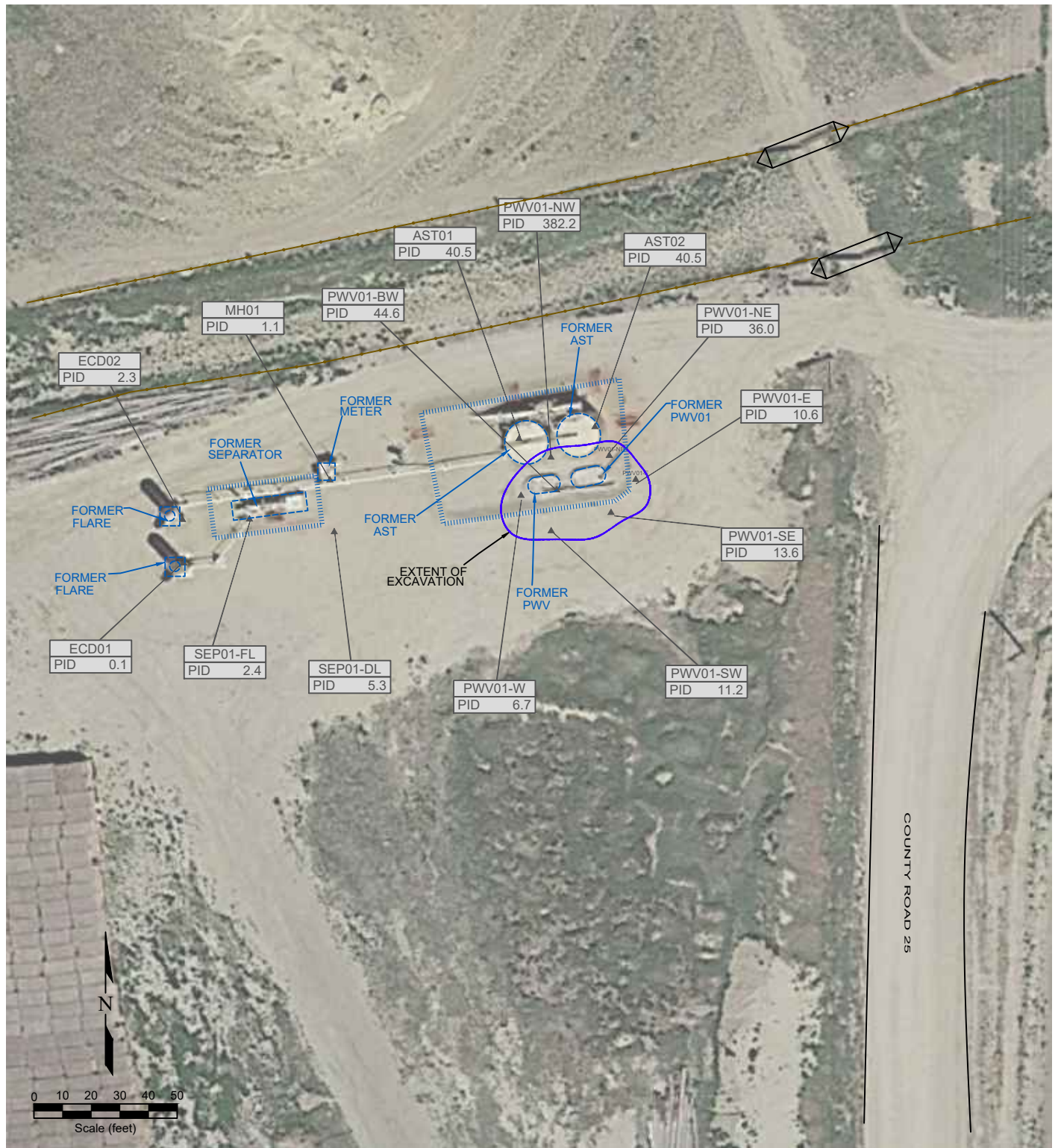
Figure 1  
**SITE LOCATION MAP**

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

Project No. <b>C023-232</b>	API #	Facility # <b>333177</b>
Date <b>11/16/23</b>	Remediation # <b>22552</b>	Filename <b>23232TF</b>








#### LEGEND

● WELLHEAD LOCATION	○ ABOVE GROUND STORAGE TANK	FORMER FACILITY	CONTAINMENT BERM
▲ PID READING LOCATION		BUILDING	CONTAINMENT WALL
PL01-01 (4) PID 0.0			EXTENT OF EXCAVATION
			FORMER FLOW LINE
			FENCE LINE

Figure 2  
SITE MAP

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

Project No. <b>C023-232</b>	API #	Facility # <b>333177</b>	
Date <b>11/17/23</b>	Remediation # <b>22552</b>	Filename <b>23232QF</b>	



# Photo Log



***Description:***

--

# Photo Log



***Description:***

--

Photo Log



*Description:*



Photo Log



*Description:*

Photo Log



*Description:*



# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 31, 2023

Paul Henchan

Fremont Environmental

PO Box 1289

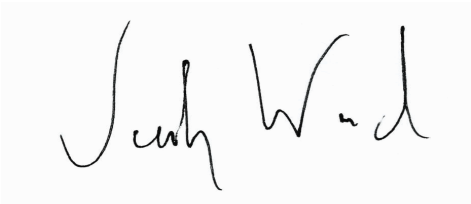
Wellington, CO 80549

RE: Noble - Hansen BCO-64N67W 1NESE Tank Battery

Work Order #2308501

Enclosed are the results of analyses for samples received by Summit Scientific on 08/22/23 16:05. 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 Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01@0-6"	2308501-01	Soil	08/22/23 11:05	08/22/23 16:05
AST02@0-6"	2308501-02	Soil	08/22/23 11:10	08/22/23 16:05
SEP01-DL@4'	2308501-03	Soil	08/22/23 11:15	08/22/23 16:05
PWV01-BE@4'	2308501-04	Soil	08/22/23 11:40	08/22/23 16:05
PWV01-E@2'	2308501-05	Soil	08/22/23 11:45	08/22/23 16:05
PWV01-W@2'	2308501-06	Soil	08/22/23 11:50	08/22/23 16:05
PWV01-NE@2'	2308501-07	Soil	08/22/23 11:55	08/22/23 16:05
PWV01-NW@2'	2308501-08	Soil	08/22/23 12:00	08/22/23 16:05
PWV01-SE@2'	2308501-09	Soil	08/22/23 12:05	08/22/23 16:05
PWV01-SW@2'	2308501-10	Soil	08/22/23 12:10	08/22/23 16:05
PWV01-BW@4'	2308501-11	Soil	08/22/23 12:15	08/22/23 16:05

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.*

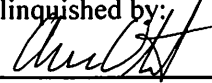

# SUMMIT SCIENTIFIC

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

Lab ID	Page 1 of 1
2308501	

<b>Send Data To:</b>		<b>Send Invoice To:</b>
Client: Fremont Environmental	Project Manager: Paul Henehan	Company: Noble/Chevron
Address: 8305 6th Street	E-Mail: Fremont Distribution List	Project Name/Location:
City/State/Zip: Wellington, CO, 80549		AFE#: UWRWF-A2137-ABN
Phone: 603-477-6907	Project Name: Hansen BC O-64N 67W IN FSE Tank Battery	PO/Billing Codes:
Sampler Name: Aaron Otilar	Project Number:	Contact: Mike Montoya

				Preservative				Matrix				Analysis Requested								Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 915	TPH (C6-C36)	PAH	SAR, EC, pH, Boron	TDS, Cl, SO4	Metals (915-1)		
1	ASTO100-6"	8/22/23	1105	2			2			X			X	X	X	X		X		
2	ASTO200-6"		1110																	
3	SEPO1-DLE4'		1115																	
4	PWV01-BEE4'		1140																	
5	PWV01-EE2'		1145																	
6	PWV01--WE2'		1150																	
7	PWV01-NE2'		1155																	
8	PWV01-NWE2'		1200																	
9	PWV01-SEE2'		1205																	
10	PWV01-SWE2'		1210																	
11	PWV01-BWE4'		1215																	
12	PWV01-DO																			
13																				
14																				
15																				

Relinquished by: 	Date/Time: 8/22/23 1605	Received by: Summit North	Date/Time: 8/22/23 1605	TAT Business Days	Field DO	Notes:
Relinquished by: 32	Date/Time:	Received by: 	Date/Time:	Same Day	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: 10.3	Corrected Temperature: 9	IR gun #: 1	HNO3 lot #:			

S<sub>2</sub>

## Sample Receipt Checklist

S2 Work Order# 2308501Client: FremontClient Project ID: Hansen BCO-GUN-67W INESEShipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #:

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

Matrix (Check all that apply)

Air

☐

Soil/Solid

☐

Water

☐

Other

☐

Temp (°C)

10.3

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature $< 6^{\circ}\text{C}$ ? <sup>(1)</sup> NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ICE
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 ( $\text{Fe}^{2+}$ ), Hexavalent Chromium ( $\text{Cr}^{6+}$ , 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Some sample names didn't completely match up
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, $\text{H}_2\text{SO}_4$ , NaOH, $\text{HNO}_3$ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH $\leq 2$ ? <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): <u>no time stamps</u>				
<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.				

Custodian Printed Name

Date/Time

AS

8/22/23

466



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**AST01@0-6"**  
**2308501-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGH0998	08/24/23	08/25/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0370	92.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0393	98.3 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGH1002	08/24/23	08/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	16.6	133 %	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 Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**AST01@0-6"**  
**2308501-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **08/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0977	08/24/23	08/24/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0236	70.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0162	48.5 %	40-150		"	"	"	"	

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

Date Sampled: **08/22/23 11:05**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGH0935	08/23/23	08/25/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/22/23 11:05**

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



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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**AST01@0-6"**  
**2308501-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	5.20	0.200	mg/kg dry	1	BGH0987	08/24/23	08/28/23	EPA 6020B
Barium	62.2	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.04	0.400	"	"	"	"	"	"
Lead	6.26	0.200	"	"	"	"	"	"
Nickel	4.92	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	22.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **08/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0929	08/23/23	08/24/23	EPA 7196A	

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

Date Sampled: **08/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	289	0.0552	mg/L dry	1	BGH1071	08/25/23	08/29/23	EPA 6020B	
Magnesium	8.76	0.0552	"	"	"	"	"	"	
Sodium	0.806	0.0552	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **08/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0127	0.00100	units	1	BGH1230	08/30/23	08/30/23	Calculation	

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

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**AST01@0-6"**  
**2308501-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.6		%	1	BGH0937	08/23/23	08/23/23	Calculation	

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

Date Sampled: **08/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.212	0.0100	mmhos/cm	1	BGH1109	08/28/23	08/28/23	EPA 120.1	

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

Date Sampled: **08/22/23 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.90		pH Units	1	BGH1108	08/28/23	08/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**AST02@0-6"**  
**2308501-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGH0998	08/24/23	08/25/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0364	90.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0385	96.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0369	92.3 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/22/23 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGH1002	08/24/23	08/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	13.5	108 %	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 Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**AST02@0-6"**  
**2308501-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **08/22/23 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0977	08/24/23	08/24/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0288	86.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0218	65.5 %	40-150		"	"	"	"	

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

Date Sampled: **08/22/23 11:10**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGH0935	08/23/23	08/25/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/22/23 11:10**

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



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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**AST02@0-6"**  
**2308501-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	1.36	0.200	mg/kg dry	1	BGH0987	08/24/23	08/28/23	EPA 6020B
Barium	32.7	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.77	0.400	"	"	"	"	"	"
Lead	2.75	0.200	"	"	"	"	"	"
Nickel	4.05	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	14.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **08/22/23 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0929	08/23/23	08/24/23	EPA 7196A	

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

Date Sampled: **08/22/23 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	83.1	0.0511	mg/L dry	1	BGH1071	08/25/23	08/29/23	EPA 6020B	
Magnesium	34.8	0.0511	"	"	"	"	"	"	
Sodium	1.37	0.0511	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **08/22/23 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0318	0.00100	units	1	BGH1230	08/30/23	08/30/23	Calculation	

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

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**AST02@0-6"**  
**2308501-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.8		%	1	BGH0937	08/23/23	08/23/23	Calculation	

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

Date Sampled: **08/22/23 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.360	0.0100	mmhos/cm	1	BGH1109	08/28/23	08/28/23	EPA 120.1	

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

Date Sampled: **08/22/23 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.35		pH Units	1	BGH1108	08/28/23	08/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**SEP01-DL@4'**  
**2308501-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGH0998	08/24/23	08/25/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0382	95.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0413	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0398	99.4 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGH1002	08/24/23	08/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	13.4	107 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**SEP01-DL@4'**  
**2308501-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0977	08/24/23	08/24/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0299	89.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0224	67.2 %	40-150		"	"	"	"	

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

Date Sampled: **08/22/23 11:15**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGH0935	08/23/23	08/25/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/22/23 11:15**

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

**Reported:**  
08/31/23 11:58

**SEP01-DL@4'**  
**2308501-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	6.01	0.200	mg/kg dry	1	BGH0987	08/24/23	08/28/23	EPA 6020B
Barium	58.5	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.78	0.400	"	"	"	"	"	"
Lead	6.02	0.200	"	"	"	"	"	"
Nickel	4.55	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	19.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0929	08/23/23	08/24/23	EPA 7196A	

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

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	201	0.0550	mg/L dry	1	BGH1071	08/25/23	08/29/23	EPA 6020B	
Magnesium	16.5	0.0550	"	"	"	"	"	"	
Sodium	4.43	0.0550	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0808	0.00100	units	1	BGH1230	08/30/23	08/30/23	Calculation	

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

Summit Scientific

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Fremont Environmental  
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Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**SEP01-DL@4'**  
**2308501-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.8		%	1	BGH0937	08/23/23	08/23/23	Calculation	

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

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.299	0.0100	mmhos/cm	1	BGH1109	08/28/23	08/28/23	EPA 120.1	

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

Date Sampled: **08/22/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.50		pH Units	1	BGH1108	08/28/23	08/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-BE@4'**  
**2308501-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 11:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGH0998	08/24/23	08/25/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0328	82.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0423	106 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0368	92.0 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/22/23 11:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGH1002	08/24/23	08/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	15.2	121 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-BE@4'**  
**2308501-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **08/22/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0977	08/24/23	08/24/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0252	75.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0192	57.7 %	40-150		"	"	"	"	

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

Date Sampled: **08/22/23 11:40**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0827</b>	0.0100	mg/L	1	BGH0935	08/23/23	08/25/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/22/23 11:40**

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

**Reported:**  
08/31/23 11:58

**PWV01-BE@4'**  
**2308501-04 (Soil)**

### Summit Scientific

#### Total Metals by EPA 6020B

Arsenic	6.66	0.200	mg/kg dry	1	BGH0987	08/24/23	08/28/23	EPA 6020B
Barium	67.9	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	5.68	0.400	"	"	"	"	"	"
Lead	6.85	0.200	"	"	"	"	"	"
Nickel	5.28	0.400	"	"	"	"	"	"
Silver	0.0234	0.0200	"	"	"	"	"	"
Zinc	30.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

#### Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/22/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0929	08/23/23	08/24/23	EPA 7196A	

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

Date Sampled: **08/22/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	211	0.0574	mg/L dry	1	BGH1071	08/25/23	08/29/23	EPA 6020B	
Magnesium	20.1	0.0574	"	"	"	"	"	"	
Sodium	6.45	0.0574	"	"	"	"	"	"	


#### Calculated Analysis

Date Sampled: **08/22/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.114	0.00100	units	1	BGH1230	08/30/23	08/30/23	Calculation	

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

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-BE@4'**  
**2308501-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.1		%	1	BGH0937	08/23/23	08/23/23	Calculation	

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

Date Sampled: **08/22/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.326	0.0100	mmhos/cm	1	BGH1109	08/28/23	08/28/23	EPA 120.1	

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

Date Sampled: **08/22/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.39		pH Units	1	BGH1108	08/28/23	08/28/23	EPA 9045D	

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Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-E@2'**  
**2308501-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGH0998	08/24/23	08/25/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0297	74.3 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0406	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0404	101 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/22/23 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGH1002	08/24/23	08/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.4	115 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-E@2'**  
**2308501-05 (Soil)**

### Summit Scientific

#### PAH by EPA Method 8270D SIM

Date Sampled: **08/22/23 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0977	08/24/23	08/24/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0276	82.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0163	49.0 %	40-150		"	"	"	"	

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

Date Sampled: **08/22/23 11:45**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.234</b>	0.0100	mg/L	1	BGH0935	08/23/23	08/25/23	EPA 6020B	

#### Total Metals by EPA 6020B

Date Sampled: **08/22/23 11:45**

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

**Reported:**  
08/31/23 11:58

**PWV01-E@2'**  
**2308501-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	6.01	0.200	mg/kg dry	1	BGH0987	08/24/23	08/28/23	EPA 6020B
Barium	70.0	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	9.54	0.400	"	"	"	"	"	"
Lead	7.07	0.200	"	"	"	"	"	"
Nickel	5.35	0.400	"	"	"	"	"	"
Silver	0.0229	0.0200	"	"	"	"	"	"
Zinc	44.8	0.400	"	"	"	"	"	"
Selenium	0.340	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **08/22/23 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0929	08/23/23	08/24/23	EPA 7196A	

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

Date Sampled: **08/22/23 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	180	0.0585	mg/L dry	1	BGH1071	08/25/23	08/29/23	EPA 6020B	
Magnesium	19.0	0.0585	"	"	"	"	"	"	
Sodium	14.3	0.0585	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **08/22/23 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.271	0.00100	units	1	BGH1230	08/30/23	08/30/23	Calculation	

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

Date Sampled: **08/22/23 11:45**

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

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-E@2'**  
**2308501-05 (Soil)**

**Summit Scientific**

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

% Solids	85.4	%	1	BGH0937	08/23/23	08/23/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **08/22/23 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.411	0.0100	mmhos/cm	1	BGH1109	08/28/23	08/28/23	EPA 120.1	

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

Date Sampled: **08/22/23 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.14		pH Units	1	BGH1108	08/28/23	08/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-W@2'**  
**2308501-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGH0998	08/24/23	08/25/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0331	82.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	98.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0384	96.1 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/22/23 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGH1002	08/24/23	08/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	13.1	105 %	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 Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-W@2'**  
**2308501-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **08/22/23 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0977	08/24/23	08/24/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0232	69.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0170	51.1 %	40-150		"	"	"	"	

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

Date Sampled: **08/22/23 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0782</b>	0.0100	mg/L	1	BGH0935	08/23/23	08/25/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/22/23 11:50**

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

**Reported:**  
08/31/23 11:58

**PWV01-W@2'**  
**2308501-06 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	3.74	0.200	mg/kg dry	1	BGH0987	08/24/23	08/28/23	EPA 6020B
Barium	64.3	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.68	0.400	"	"	"	"	"	"
Lead	4.93	0.200	"	"	"	"	"	"
Nickel	4.84	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	18.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **08/22/23 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0929	08/23/23	08/24/23	EPA 7196A	

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

Date Sampled: **08/22/23 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	108	0.0549	mg/L dry	1	BGH1071	08/25/23	08/29/23	EPA 6020B	
Magnesium	5.46	0.0549	"	"	"	"	"	"	
Sodium	19.8	0.0549	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **08/22/23 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.504	0.00100	units	1	BGH1230	08/30/23	08/30/23	Calculation	

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

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-W@2'**  
**2308501-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.0		%	1	BGH0937	08/23/23	08/23/23	Calculation	

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

Date Sampled: **08/22/23 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.261	0.0100	mmhos/cm	1	BGH1109	08/28/23	08/28/23	EPA 120.1	

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

Date Sampled: **08/22/23 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.10		pH Units	1	BGH1108	08/28/23	08/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-NE@2'**  
**2308501-07 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGH0998	08/24/23	08/25/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0376	94.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0388	97.0 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/22/23 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGH1002	08/24/23	08/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.2	97.5 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-NE@2'**  
**2308501-07 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **08/22/23 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0977	08/24/23	08/24/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/22/23 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0270	81.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0193	57.9 %	40-150		"	"	"	"	

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

Date Sampled: **08/22/23 11:55**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGH0935	08/23/23	08/25/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/22/23 11:55**

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

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-NE@2'**  
**2308501-07 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	6.28	0.200	mg/kg dry	1	BGH0987	08/24/23	08/28/23	EPA 6020B
Barium	57.6	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.39	0.400	"	"	"	"	"	"
Lead	6.65	0.200	"	"	"	"	"	"
Nickel	4.94	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	22.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **08/22/23 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0929	08/23/23	08/24/23	EPA 7196A	

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

Date Sampled: **08/22/23 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	191	0.0558	mg/L dry	1	BGH1071	08/25/23	08/29/23	EPA 6020B	
Magnesium	7.45	0.0558	"	"	"	"	"	"	
Sodium	1.03	0.0558	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **08/22/23 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0199	0.00100	units	1	BGH1230	08/30/23	08/30/23	Calculation	

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

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-NE@2'**  
**2308501-07 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.6		%	1	BGH0937	08/23/23	08/23/23	Calculation	

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

Date Sampled: **08/22/23 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.227	0.0100	mmhos/cm	1	BGH1109	08/28/23	08/28/23	EPA 120.1	

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

Date Sampled: **08/22/23 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.09		pH Units	1	BGH1108	08/28/23	08/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-NW@2'**  
**2308501-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 12:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGH0998	08/24/23	08/25/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>0.013</b>	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/22/23 12:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0310	77.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0408	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0422	105 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/22/23 12:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>C10-C28 (DRO)</b>	<b>110</b>	50	mg/kg	1	BGH1002	08/24/23	08/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/23 12:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.9	87.2 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
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Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-NW@2'**  
**2308501-08 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **08/22/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0977	08/24/23	08/24/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
<b>Fluorene</b>	<b>0.00964</b>	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.0692</b>	0.00500	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.112</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **08/22/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0355	106 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0140	42.1 %	40-150		"	"	"	"	

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

Date Sampled: **08/22/23 12:00**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGH0935	08/23/23	08/25/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/22/23 12:00**

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



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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-NW@2'**  
**2308501-08 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	6.45	0.200	mg/kg dry	1	BGH0987	08/24/23	08/28/23	EPA 6020B
Barium	69.8	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.53	0.400	"	"	"	"	"	"
Lead	7.08	0.200	"	"	"	"	"	"
Nickel	5.44	0.400	"	"	"	"	"	"
Silver	0.0228	0.0200	"	"	"	"	"	"
Zinc	25.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **08/22/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0929	08/23/23	08/24/23	EPA 7196A	

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

Date Sampled: **08/22/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	77.2	0.0569	mg/L dry	1	BGH1071	08/25/23	08/29/23	EPA 6020B	
Magnesium	8.45	0.0569	"	"	"	"	"	"	
Sodium	10.3	0.0569	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **08/22/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.297	0.00100	units	1	BGH1230	08/30/23	08/30/23	Calculation	

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

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-NW@2'**  
**2308501-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	87.8			%	1	BGH0937	08/23/23	08/23/23	Calculation	

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

Date Sampled: **08/22/23 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.372	0.0100		mmhos/cm	1	BGH1109	08/28/23	08/28/23	EPA 120.1	

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

Date Sampled: **08/22/23 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.56			pH Units	1	BGH1108	08/28/23	08/28/23	EPA 9045D	

Summit Scientific

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-SE@2'**  
**2308501-09 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGH0998	08/24/23	08/25/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/22/23 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0319	79.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0409	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0371	92.8 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/22/23 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGH1002	08/24/23	08/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/23 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.3	98.5 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-SE@2'**  
**2308501-09 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **08/22/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0977	08/24/23	08/24/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/22/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0228	68.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0154	46.1 %	40-150		"	"	"	"	

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

Date Sampled: **08/22/23 12:05**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.359</b>	0.0100	mg/L	1	BGH0935	08/23/23	08/25/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/22/23 12:05**

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

**Reported:**  
08/31/23 11:58

**PWV01-SE@2'**  
**2308501-09 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	3.60	0.200	mg/kg dry	1	BGH0987	08/24/23	08/28/23	EPA 6020B
Barium	57.4	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	12.9	0.400	"	"	"	"	"	"
Lead	4.36	0.200	"	"	"	"	"	"
Nickel	6.13	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	52.3	0.400	"	"	"	"	"	"
Selenium	0.508	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **08/22/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0929	08/23/23	08/24/23	EPA 7196A	

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

Date Sampled: **08/22/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	315	0.0579	mg/L dry	1	BGH1071	08/25/23	08/29/23	EPA 6020B	
Magnesium	165	0.0579	"	"	"	"	"	"	
Sodium	110	0.0579	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **08/22/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.25	0.00100	units	1	BGH1230	08/30/23	08/30/23	Calculation	

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

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-SE@2'**  
**2308501-09 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.3		%	1	BGH0937	08/23/23	08/23/23	Calculation	

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

Date Sampled: **08/22/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.25	0.0100	mmhos/cm	1	BGH1109	08/28/23	08/28/23	EPA 120.1	

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

Date Sampled: **08/22/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.38		pH Units	1	BGH1108	08/28/23	08/28/23	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-SW@2'**  
**2308501-10 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGH0998	08/24/23	08/25/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/22/23 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0392	98.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0454	114 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0352	88.1 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/22/23 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGH1002	08/24/23	08/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/23 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	16.2	129 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-SW@2'**  
**2308501-10 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **08/22/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0977	08/24/23	08/24/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/22/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0255	76.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0178	53.4 %	40-150		"	"	"	"	

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

Date Sampled: **08/22/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.133</b>	0.0100	mg/L	1	BGH0935	08/23/23	08/25/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/22/23 12:10**

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

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-SW@2'**  
**2308501-10 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	6.22	0.200	mg/kg dry	1	BGH0987	08/24/23	08/28/23	EPA 6020B
Barium	77.6	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	8.53	0.400	"	"	"	"	"	"
Lead	6.72	0.200	"	"	"	"	"	"
Nickel	5.54	0.400	"	"	"	"	"	"
Silver	0.0272	0.0200	"	"	"	"	"	"
Zinc	40.4	0.400	"	"	"	"	"	"
Selenium	0.321	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **08/22/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0929	08/23/23	08/24/23	EPA 7196A	

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

Date Sampled: **08/22/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	79.6	0.0577	mg/L dry	1	BGH1071	08/25/23	08/29/23	EPA 6020B	
Magnesium	11.7	0.0577	"	"	"	"	"	"	
Sodium	51.9	0.0577	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **08/22/23 12:10**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.44	0.00100	units	1	BGH1230	08/30/23	08/30/23	Calculation	

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

Date Sampled: **08/22/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-SW@2'**  
**2308501-10 (Soil)**

**Summit Scientific**

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

% Solids	86.7	%	1	BGH0937	08/23/23	08/23/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **08/22/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.702	0.0100	mmhos/cm	1	BGH1109	08/28/23	08/28/23	EPA 120.1	

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

Date Sampled: **08/22/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.46		pH Units	1	BGH1108	08/28/23	08/28/23	EPA 9045D	

Summit Scientific

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Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-BW@4'**  
**2308501-11 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 12:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGH0998	08/24/23	08/25/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/22/23 12:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0289	72.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0414	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0424	106 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/22/23 12:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	140	50	mg/kg	1	BGH1002	08/24/23	08/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/22/23 12:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	16.8	135 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-BW@4'**  
**2308501-11 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **08/22/23 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0977	08/24/23	08/24/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/22/23 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0213	64.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0175	52.4 %	40-150		"	"	"	"	

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

Date Sampled: **08/22/23 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.152</b>	0.0100	mg/L	1	BGH0935	08/23/23	08/25/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/22/23 12:15**

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

**Reported:**  
08/31/23 11:58

**PWV01-BW@4'**  
**2308501-11 (Soil)**

### Summit Scientific

#### Total Metals by EPA 6020B

Arsenic	7.52	0.200	mg/kg dry	1	BGH0987	08/24/23	08/28/23	EPA 6020B
Barium	66.5	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.47	0.400	"	"	"	"	"	"
Lead	6.99	0.200	"	"	"	"	"	"
Nickel	5.06	0.400	"	"	"	"	"	"
Silver	0.0235	0.0200	"	"	"	"	"	"
Zinc	23.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

#### Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/22/23 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0929	08/23/23	08/24/23	EPA 7196A	

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

Date Sampled: **08/22/23 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	344	0.0554	mg/L dry	1	BGH1071	08/25/23	08/29/23	EPA 6020B	
Magnesium	41.6	0.0554	"	"	"	"	"	"	
Sodium	104	0.0554	"	"	"	"	"	"	


#### Calculated Analysis

Date Sampled: **08/22/23 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.41	0.00100	units	1	BGH1230	08/30/23	08/30/23	Calculation	

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

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Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**PWV01-BW@4'**  
**2308501-11 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/22/23 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.3		%	1	BGH0937	08/23/23	08/23/23	Calculation	

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

Date Sampled: **08/22/23 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.670	0.0100	mmhos/cm	1	BGH1109	08/28/23	08/28/23	EPA 120.1	

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

Date Sampled: **08/22/23 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.00		pH Units	1	BGH1108	08/28/23	08/28/23	EPA 9045D	

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Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

## 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 BGH0998 - EPA 5030 Soil MS

##### Blank (BGH0998-BLK1)

Prepared: 08/24/23 Analyzed: 08/25/23

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0376		"	0.0400		94.0	50-150			
Surrogate: Toluene-d8	0.0387		"	0.0400		96.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0373		"	0.0400		93.3	50-150			

##### LCS (BGH0998-BS1)

Prepared: 08/24/23 Analyzed: 08/25/23

Benzene	0.0948	0.0020	mg/kg	0.100		94.8	70-130			
Toluene	0.0902	0.0050	"	0.100		90.2	70-130			
Ethylbenzene	0.0914	0.0050	"	0.100		91.4	70-130			
m,p-Xylene	0.204	0.010	"	0.200		102	70-130			
o-Xylene	0.0873	0.0050	"	0.100		87.3	70-130			
1,2,4-Trimethylbenzene	0.0921	0.0050	"	0.100		92.1	70-130			
1,3,5-Trimethylbenzene	0.0958	0.0050	"	0.100		95.8	70-130			
Naphthalene	0.103	0.0038	"	0.100		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0490		"	0.0400		122	50-150			
Surrogate: Toluene-d8	0.0394		"	0.0400		98.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0379		"	0.0400		94.6	50-150			

##### Matrix Spike (BGH0998-MS1)

Source: 2308483-01

Prepared: 08/24/23 Analyzed: 08/25/23

Benzene	0.0970	0.0020	mg/kg	0.100	ND	97.0	70-130			
Toluene	0.102	0.0050	"	0.100	ND	102	70-130			
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130			
m,p-Xylene	0.206	0.010	"	0.200	ND	103	70-130			
o-Xylene	0.0963	0.0050	"	0.100	ND	96.3	70-130			
1,2,4-Trimethylbenzene	0.0983	0.0050	"	0.100	ND	98.3	70-130			
1,3,5-Trimethylbenzene	0.0937	0.0050	"	0.100	ND	93.7	70-130			
Naphthalene	0.0923	0.0038	"	0.100	ND	92.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0368		"	0.0400		92.0	50-150			
Surrogate: Toluene-d8	0.0391		"	0.0400		97.7	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

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Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

## 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 BGH0998 - EPA 5030 Soil MS

Matrix Spike Dup (BGH0998-MSD1)	Source: 2308483-01			Prepared: 08/24/23 Analyzed: 08/25/23						
Benzene	0.0998	0.0020	mg/kg	0.100	ND	99.8	70-130	2.84	30	
Toluene	0.0946	0.0050	"	0.100	ND	94.6	70-130	7.98	30	
Ethylbenzene	0.103	0.0050	"	0.100	ND	103	70-130	3.59	30	
m,p-Xylene	0.213	0.010	"	0.200	ND	106	70-130	3.27	30	
o-Xylene	0.107	0.0050	"	0.100	ND	107	70-130	10.7	30	
1,2,4-Trimethylbenzene	0.102	0.0050	"	0.100	ND	102	70-130	3.54	30	
1,3,5-Trimethylbenzene	0.0980	0.0050	"	0.100	ND	98.0	70-130	4.48	30	
Naphthalene	0.0965	0.0038	"	0.100	ND	96.5	70-130	4.51	30	
Surrogate: 1,2-Dichloroethane-d4	0.0465		"	0.0400		116	50-150			
Surrogate: Toluene-d8	0.0391		"	0.0400		97.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0370		"	0.0400		92.6	50-150			

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

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

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

**Batch BGH1002 - EPA 3550A**

**Blank (BGH1002-BLK1)**

Prepared & Analyzed: 08/24/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	12.4		"	12.5		99.0	30-150			

**LCS (BGH1002-BS1)**

Prepared & Analyzed: 08/24/23

C10-C28 (DRO)	517	50	mg/kg	500		103	70-130			
Surrogate: o-Terphenyl	12.8		"	12.5		102	30-150			

**Matrix Spike (BGH1002-MS1)**

**Source: 2308483-01**

Prepared & Analyzed: 08/24/23

C10-C28 (DRO)	494	50	mg/kg	500	14.8	95.8	70-130			
Surrogate: o-Terphenyl	10.5		"	12.5		84.3	30-150			


**Matrix Spike Dup (BGH1002-MSD1)**

**Source: 2308483-01**

Prepared & Analyzed: 08/24/23

C10-C28 (DRO)	560	50	mg/kg	500	14.8	109	70-130	12.6	20	
Surrogate: o-Terphenyl	12.5		"	12.5		100	30-150			

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Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

### 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 BGH0977 - EPA 5030 Soil MS

##### Blank (BGH0977-BLK1)

Prepared & Analyzed: 08/24/23

Acenaphthene	ND	0.00500	mg/kg
Anthracene	ND	0.00500	"
Benzo (a) anthracene	ND	0.00500	"
Benzo (a) pyrene	ND	0.00500	"
Benzo (b) fluoranthene	ND	0.00500	"
Benzo (k) fluoranthene	ND	0.00500	"
Chrysene	ND	0.00500	"
Dibenz (a,h) anthracene	ND	0.00500	"
Fluoranthene	ND	0.00500	"
Fluorene	ND	0.00500	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"
Pyrene	ND	0.00500	"
1-Methylnaphthalene	ND	0.00500	"
2-Methylnaphthalene	ND	0.00500	"

Surrogate: 2-Methylnaphthalene-d10	0.0306	"	0.0333	91.7	40-150
Surrogate: Fluoranthene-d10	0.0285	"	0.0333	85.5	40-150

##### LCS (BGH0977-BS1)

Prepared & Analyzed: 08/24/23

Acenaphthene	0.0369	0.00500	mg/kg	0.0333	111	31-137
Anthracene	0.0358	0.00500	"	0.0333	107	30-120
Benzo (a) anthracene	0.0287	0.00500	"	0.0333	86.0	30-120
Benzo (a) pyrene	0.0339	0.00500	"	0.0333	102	30-120
Benzo (b) fluoranthene	0.0363	0.00500	"	0.0333	109	30-120
Benzo (k) fluoranthene	0.0354	0.00500	"	0.0333	106	30-120
Chrysene	0.0360	0.00500	"	0.0333	108	30-120
Dibenz (a,h) anthracene	0.0322	0.00500	"	0.0333	96.6	30-120
Fluoranthene	0.0353	0.00500	"	0.0333	106	30-120
Fluorene	0.0369	0.00500	"	0.0333	111	30-120
Indeno (1,2,3-cd) pyrene	0.0249	0.00500	"	0.0333	74.8	30-120
Pyrene	0.0374	0.00500	"	0.0333	112	35-142
1-Methylnaphthalene	0.0290	0.00500	"	0.0333	87.0	35-142
2-Methylnaphthalene	0.0402	0.00500	"	0.0333	120	35-142

Surrogate: 2-Methylnaphthalene-d10	0.0345	"	0.0333	104	40-150
Surrogate: Fluoranthene-d10	0.0326	"	0.0333	97.8	40-150

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Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

## 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 BGH0977 - EPA 5030 Soil MS

##### Matrix Spike (BGH0977-MS1)

Source: 2308501-01

Prepared & Analyzed: 08/24/23

Acenaphthene	0.0209	0.00500	mg/kg	0.0333	ND	62.8	31-137				
Anthracene	0.0221	0.00500	"	0.0333	ND	66.4	30-120				
Benzo (a) anthracene	0.0169	0.00500	"	0.0333	ND	50.8	30-120				
Benzo (a) pyrene	0.0179	0.00500	"	0.0333	ND	53.8	30-120				
Benzo (b) fluoranthene	0.0206	0.00500	"	0.0333	ND	61.9	30-120				
Benzo (k) fluoranthene	0.0216	0.00500	"	0.0333	ND	64.8	30-120				
Chrysene	0.0221	0.00500	"	0.0333	ND	66.4	30-120				
Dibenz (a,h) anthracene	0.0188	0.00500	"	0.0333	ND	56.5	30-120				
Fluoranthene	0.0216	0.00500	"	0.0333	ND	64.9	30-120				
Fluorene	0.0213	0.00500	"	0.0333	ND	63.9	30-120				
Indeno (1,2,3-cd) pyrene	0.0139	0.00500	"	0.0333	ND	41.8	30-120				
Pyrene	0.0238	0.00500	"	0.0333	ND	71.4	35-142				
1-Methylnaphthalene	0.0158	0.00500	"	0.0333	ND	47.5	15-130				
2-Methylnaphthalene	0.0230	0.00500	"	0.0333	ND	69.0	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0171		"	0.0333		51.2	40-150				
Surrogate: Fluoranthene-d10	0.0178		"	0.0333		53.4	40-150				

##### Matrix Spike Dup (BGH0977-MSD1)

Source: 2308501-01

Prepared & Analyzed: 08/24/23

Acenaphthene	0.0238	0.00500	mg/kg	0.0333	ND	71.5	31-137	12.9	30
Anthracene	0.0244	0.00500	"	0.0333	ND	73.3	30-120	9.94	30
Benzo (a) anthracene	0.0196	0.00500	"	0.0333	ND	58.9	30-120	14.8	30
Benzo (a) pyrene	0.0196	0.00500	"	0.0333	ND	58.7	30-120	8.67	30
Benzo (b) fluoranthene	0.0227	0.00500	"	0.0333	ND	68.0	30-120	9.36	30
Benzo (k) fluoranthene	0.0234	0.00500	"	0.0333	ND	70.3	30-120	8.21	30
Chrysene	0.0240	0.00500	"	0.0333	ND	72.0	30-120	8.11	30
Dibenz (a,h) anthracene	0.0213	0.00500	"	0.0333	ND	63.8	30-120	12.0	30
Fluoranthene	0.0240	0.00500	"	0.0333	ND	72.0	30-120	10.4	30
Fluorene	0.0239	0.00500	"	0.0333	ND	71.7	30-120	11.5	30
Indeno (1,2,3-cd) pyrene	0.0150	0.00500	"	0.0333	ND	45.1	30-120	7.66	30
Pyrene	0.0249	0.00500	"	0.0333	ND	74.8	35-142	4.63	30
1-Methylnaphthalene	0.0154	0.00500	"	0.0333	ND	46.2	15-130	2.79	50
2-Methylnaphthalene	0.0264	0.00500	"	0.0333	ND	79.2	15-130	13.7	50
Surrogate: 2-Methylnaphthalene-d10	0.0202		"	0.0333		60.6	40-150		
Surrogate: Fluoranthene-d10	0.0196		"	0.0333		58.7	40-150		

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**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 BGH0935 - EPA 3050B**

**Blank (BGH0935-BLK1)**

Prepared: 08/23/23 Analyzed: 08/25/23

Boron ND 0.0100 mg/L

**LCS (BGH0935-BS1)**

Prepared: 08/23/23 Analyzed: 08/25/23

Boron 5.20 0.0100 mg/L 5.00 104 80-120

**Duplicate (BGH0935-DUP1)**

**Source: 2308501-02**

Prepared: 08/23/23 Analyzed: 08/25/23

Boron ND 0.0100 mg/L ND 20

**Matrix Spike (BGH0935-MS1)**

**Source: 2308501-02**

Prepared: 08/23/23 Analyzed: 08/25/23

Boron 4.58 0.0100 mg/L 5.00 ND 91.5 75-125

**Matrix Spike Dup (BGH0935-MSD1)**

**Source: 2308501-02**

Prepared: 08/23/23 Analyzed: 08/25/23

Boron 4.61 0.0100 mg/L 5.00 ND 92.2 75-125 0.676 25

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Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
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Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**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 BGH0987 - EPA 3050B**

**Blank (BGH0987-BLK1)**

Prepared: 08/24/23 Analyzed: 08/28/23

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

**LCS (BGH0987-BS1)**

Prepared: 08/24/23 Analyzed: 08/28/23

Arsenic	40.6	0.200	mg/kg wet	40.0	102	80-120
Barium	46.7	0.400	"	40.0	117	80-120
Cadmium	2.28	0.200	"	2.00	114	80-120
Copper	46.8	0.400	"	40.0	117	80-120
Lead	23.0	0.200	"	20.0	115	80-120
Nickel	44.7	0.400	"	40.0	112	80-120
Silver	2.25	0.0200	"	2.00	112	80-120
Zinc	45.2	0.400	"	40.0	113	80-120

**Duplicate (BGH0987-DUP1)**

Source: 2308501-01

Prepared: 08/24/23 Analyzed: 08/28/23

Arsenic	4.83	0.200	mg/kg dry	5.20	7.25	20
Barium	62.1	0.400	"	62.2	0.275	20
Cadmium	0.159	0.200	"	0.171	7.49	20
Copper	4.06	0.400	"	4.04	0.349	20
Lead	6.17	0.200	"	6.26	1.45	20
Nickel	4.78	0.400	"	4.92	2.82	20
Silver	0.0190	0.0200	"	0.0194	2.30	20
Zinc	22.4	0.400	"	22.7	1.61	20
Selenium	ND	0.260	"	ND		200

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**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 BGH0987 - EPA 3050B**

Matrix Spike (BGH0987-MS1)		Source: 2308501-01			Prepared: 08/24/23		Analyzed: 08/28/23	
Arsenic	59.1	0.200	mg/kg dry	44.1	5.20	122	75-125	
Barium	119	0.400	"	44.1	62.2	129	75-125	QM-07
Cadmium	2.78	0.200	"	2.21	0.171	118	75-125	
Copper	39.2	0.400	"	44.1	4.04	79.7	75-125	
Lead	32.1	0.200	"	22.1	6.26	117	75-125	
Nickel	39.7	0.400	"	44.1	4.92	78.8	75-125	
Silver	2.52	0.0200	"	2.21	0.0194	113	75-125	
Zinc	57.5	0.400	"	44.1	22.7	78.7	75-125	

Matrix Spike Dup (BGH0987-MSD1)		Source: 2308501-01			Prepared: 08/24/23		Analyzed: 08/28/23	
Arsenic	58.9	0.200	mg/kg dry	44.1	5.20	122	75-125	0.382 25
Barium	119	0.400	"	44.1	62.2	130	75-125	0.285 25
Cadmium	2.76	0.200	"	2.21	0.171	117	75-125	0.653 25
Copper	39.3	0.400	"	44.1	4.04	80.0	75-125	0.360 25
Lead	32.5	0.200	"	22.1	6.26	119	75-125	1.17 25
Nickel	39.8	0.400	"	44.1	4.92	79.1	75-125	0.334 25
Silver	2.56	0.0200	"	2.21	0.0194	115	75-125	1.44 25
Zinc	58.0	0.400	"	44.1	22.7	79.8	75-125	0.866 25

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Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
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Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**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 BGH0929 - 3060A Mod**

**Blank (BGH0929-BLK1)**

Prepared: 08/23/23 Analyzed: 08/24/23

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BGH0929-BS1)**

Prepared: 08/23/23 Analyzed: 08/24/23

Chromium, Hexavalent 26.2 0.30 mg/kg wet 25.0 105 80-120

**Duplicate (BGH0929-DUP1)**

**Source: 2308482-01**

Prepared: 08/23/23 Analyzed: 08/24/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BGH0929-MS1)**

**Source: 2308482-01**

Prepared: 08/23/23 Analyzed: 08/24/23

Chromium, Hexavalent 27.4 0.30 mg/kg dry 27.2 ND 101 75-125

**Matrix Spike Dup (BGH0929-MSD1)**

**Source: 2308482-01**

Prepared: 08/23/23 Analyzed: 08/24/23

Chromium, Hexavalent 27.5 0.30 mg/kg dry 27.2 ND 101 75-125 0.396 20

Summit Scientific

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Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

**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 BGH1071 - General Preparation**

**Blank (BGH1071-BLK1)**

Prepared: 08/25/23 Analyzed: 08/29/23

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

**LCS (BGH1071-BS1)**

Prepared: 08/25/23 Analyzed: 08/29/23

Calcium	5.57	0.0500	mg/L wet	5.00	111	70-130
Magnesium	5.05	0.0500	"	5.00	101	70-130
Sodium	5.06	0.0500	"	5.00	101	70-130

Summit Scientific

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Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery

Project Number: UWRWE-A2137-ABN

Project Manager: Paul Henchan

**Reported:**

08/31/23 11:58

**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 BGH0937 - General Preparation**

**Duplicate (BGH0937-DUP1)**

**Source: 2308501-01**

**Prepared & Analyzed: 08/23/23**

% Solids	80.0	%	90.6	12.4	20
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PO Box 1289  
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery  
Project Number: UWRWE-A2137-ABN  
Project Manager: Paul Henchan

**Reported:**  
08/31/23 11:58

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

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

**Batch BGH1109 - General Preparation**

**Blank (BGH1109-BLK1)**

Prepared & Analyzed: 08/28/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BGH1109-BS1)**

Prepared & Analyzed: 08/28/23

Specific Conductance (EC) 0.156 0.0100 mmhos/cm 0.150 104 95-105

**Duplicate (BGH1109-DUP1)**

**Source: 2308501-01**

Prepared & Analyzed: 08/28/23

Specific Conductance (EC) 0.207 0.0100 mmhos/cm 0.212 2.34 20

Summit Scientific

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Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery

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

**Reported:**  
08/31/23 11:58

**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 BGH1108 - General Preparation**

**LCS (BGH1108-BS1)**

Prepared & Analyzed: 08/28/23

pH	9.20	pH Units	9.18	100	95-105
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**Duplicate (BGH1108-DUP1)**

**Source: 2308501-01**

Prepared & Analyzed: 08/28/23

pH	8.00	pH Units	7.90	1.26	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 Tank Battery

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

**Reported:**  
08/31/23 11:58

### Notes and Definitions

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