

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"	5.20	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"	1.36	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'	6.66	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'	7.52	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'	6.01	70.00	<0.200	<0.30	9.54	7.07	5.35	0.34	0.02	44.80
PWV01-NE@2'	08/22/2023	2'	6.28	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'	6.45	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'	3.60	57.40	<0.200	<0.30	12.90	4.36	6.13	0.51	<0.0200	52.30
PWV01-SW@2'	08/22/2023	2'	6.22	77.60	<0.200	<0.30	8.53	6.72	5.54	0.32	0.03	40.40
PWV01-W@2'	08/22/2023	2'	3.74	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'	6.01	58.50	<0.200	<0.30	3.78	6.02	4.55	<0.260	<0.0200	19.90

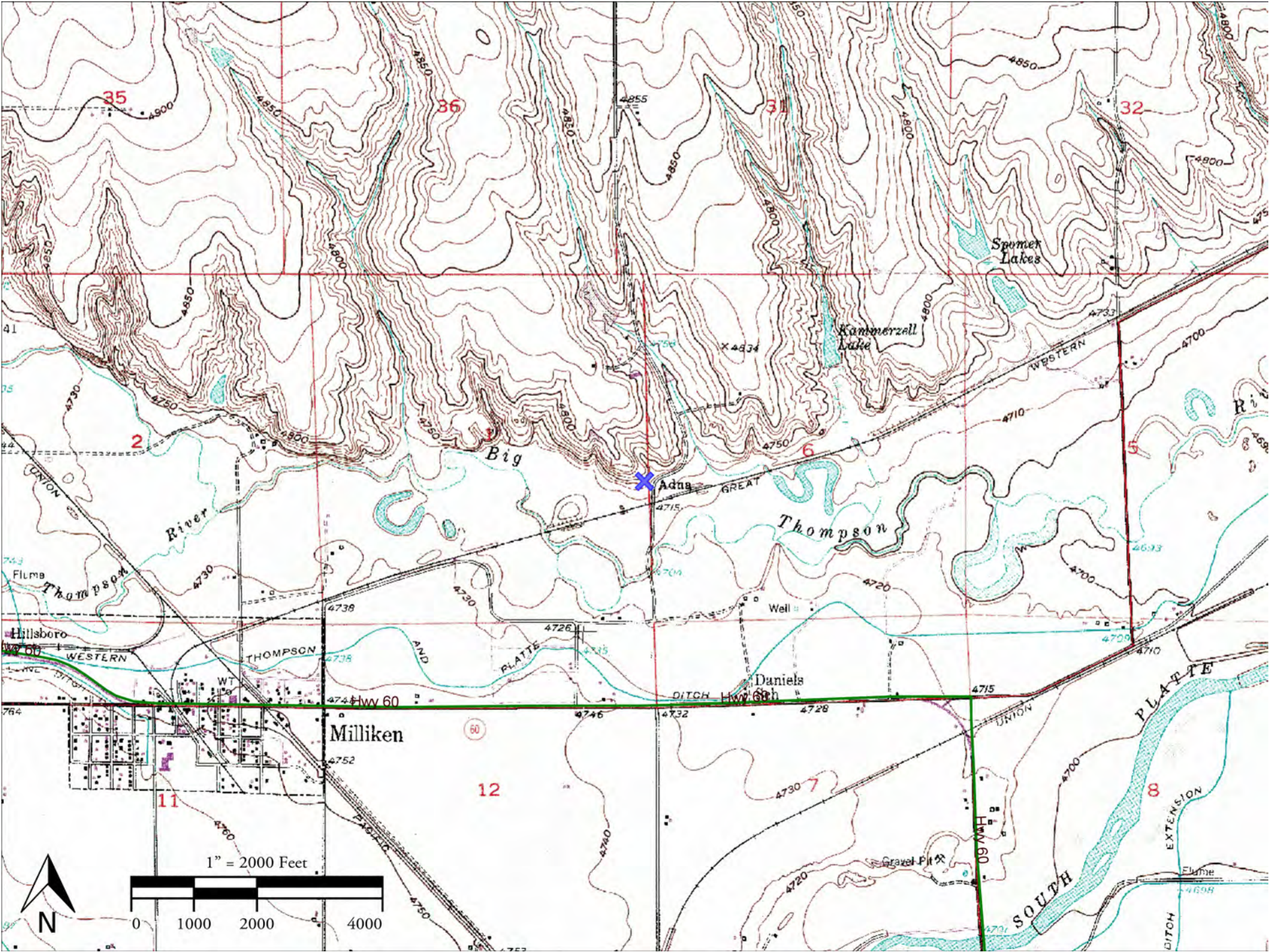
Bold faced values exceed the COGCC Table 915-1 concentrations

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

HANSEN BC O-64N67W 1NESE (Facility)



HANSEN BC O-64N67W 1NESE (Facility)

Facility # 333177
Remediation # 22552
40.339758, -104.830402
NESE S1 T4N R67W M6
CO23-232

Legend

⊙ Impacted Soil Samples

PWV-NW

Google Earth

100 ft



Photo Log



Description:

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Photo Log



Description:

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Photo Log



Description:

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Photo Log



Description:

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Photo Log



Description:

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Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 31, 2023

Paul Henchan

Fremont Environmental

PO Box 1289

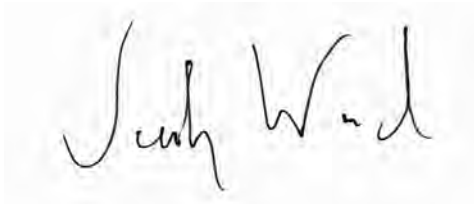
Wellington, CO 80549

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	

Send Data To:		Send Invoice To:
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 BCO-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	AST0100-6"	8/22/23	1105	2			2			X			X	X	X	X		X		
2	AST0200-6"		1110																	
3	SEP01-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-AO																			
13																				
14																				
15																				

Relinquished by:	Date/Time:	Received by:	Date/Time:	TAT Business Days	Field DO	Notes:
	8/22/23 1605	Summit North	8/22/23 1605	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
52				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 10.3	Corrected Temperature	IR gun #:	1	HNO3 lot #:		

S₂

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 $< 6^{\circ}\text{C}$? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? ⁽¹⁾	<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 (Fe^{2+}), Hexavalent Chromium (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? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input 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)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H_2SO_4 , NaOH, HNO_3 , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any): <u>no time stamps</u>				
⁽¹⁾ 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

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Hansen BCO-64N67W 1NESE 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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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

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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	

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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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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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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

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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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% 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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
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		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
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

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

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
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

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

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

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
Boron	0.0827	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)

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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	"	"	"	"	"	"	

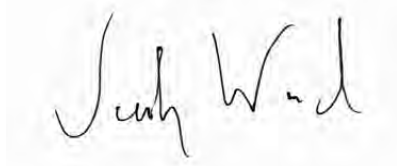
Calculated Analysis

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

Summit Scientific



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Reported:
08/31/23 11:58

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

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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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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

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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
Boron	0.234	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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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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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	

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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-W@2'
2308501-06 (Soil)

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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

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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
Boron	0.0782	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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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

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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

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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-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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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

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

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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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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	

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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

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	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.013	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							
C10-C28 (DRO)	110	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

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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	"	"	"	"	"	"	
Fluorene	0.00964	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0692	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.112	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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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

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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

Physical Parameters by APHA/ASTM/EPA Methods

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

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

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-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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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**

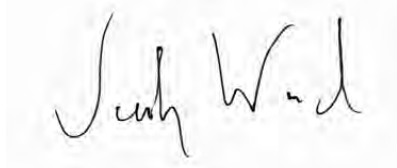
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.359	0.0100	mg/L	1	BGH0935	08/23/23	08/25/23	EPA 6020B	

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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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

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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	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	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	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

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

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

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-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
Boron	0.133	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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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

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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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

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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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

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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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
Boron	0.152	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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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	"	"	"	"	"	"	

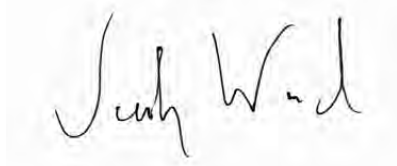
Calculated Analysis

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

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-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	

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

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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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

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			

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

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 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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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

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch 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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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

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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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 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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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

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

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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

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	QM-07
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	

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

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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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

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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Fremont Environmental	Project: Noble - Hansen BCO-64N67W 1NESE Tank Battery	
PO Box 1289	Project Number: UWRWE-A2137-ABN	Reported:
Wellington CO, 80549	Project Manager: Paul Henchan	08/31/23 11:58

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

Summit Scientific

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

Batch BGH0937 - General Preparation

Duplicate (BGH0937-DUP1)		Source: 2308501-01		Prepared & Analyzed: 08/23/23						
% Solids	80.0		%		90.6			12.4	20	

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

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

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

Batch 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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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

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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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