

**TABLE 1**  
**FIELD DATA SUMMARY TABLE**  
**NOBLE 100322**  
**GOLLNER T4N-R67W-S27 L02, WELD COUNTY, COLORADO**  
**REM # 31728**

Sample ID	Sample Date	Depth (ft)	GPS Data		PDOP Value	VOC Concentration (ppm)
			Latitude	Longitude		
AST-0.5FT	07/10/2024	0.5FT	40.2885875	-104.87167	0.8	5.5
PWV B-5FT	07/10/2024	5FT	40.2886258	-104.87170	1.0	0.6
PWV E-4FT	07/10/2024	4FT	40.2886269	-104.87168	0.8	2410
SEP DL-3FT	07/10/2024	3FT	40.2888030	-104.87173	0.9	0.0

1. Global Positioning System (GPS) data is provided in decimal degrees using North American Datum (NAD) 83 UTMZone 13 North.

2. Volatile organic compound (VOC) concentrations are measured in the field using a photoionization detector (PID).

PDOP = Position Dilution of Precision

ppm = Parts per million

in. = Inches

ft. = Feet

bgs = Below ground surface

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

= Material excavated and transported off site for disposal.

TABLE 2  
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA  
NOBLE 100322  
GOLLNER T4N-R67W-S27 L02, WELD COUNTY, COLORADO  
REM # 31728

Sample ID	Sample Date	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	1,2,4-Trimethyl-Benzene (mg/kg)	1,3,5-Trimethyl-Benzene (mg/kg)	Naphthalene (mg/kg)	TPH (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500	500**		
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500	500**		
AST-0.5FT	07/10/2024	0.5FT	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.50	<50	<50
PWV B-5FT	07/10/2024	5FT	<0.0020	<0.0050	<0.0050	<0.010	<b>0.014</b>	<b>0.0089</b>	<0.0038	95	<0.50	95	<50
PWV E-4FT	07/10/2024	4FT	<0.0020	<0.0050	0.060	<b>5.2</b>	<b>6.7</b>	<b>4.3</b>	<b>0.16</b>	<b>2430</b>	<b>290</b>	<b>1900</b>	<b>240</b>
SEP FL-3FT	07/10/2024	3FT	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.50	<50	<50

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

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

3. \* Indicates laboratory minimum detection limit in excess of SSL

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

NA - Not analyzed

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

= Material excavated and transported off site for disposal.

TABLE 3  
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA  
NOBLE 100322  
GOLLNER T4N-R67W-S27 L02, WELD COUNTY, COLORADO  
REM # 31728

Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3- cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
AST-0.5FT	07/10/2024	0.5FT	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
PWV B-5FT	07/10/2024	5FT	<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	0.00555
PWV E-4FT	07/10/2024	4FT	0.0565	<0.00500	<0.00500	<0.00500	0.00630	<0.00500	0.0383	<0.00500	0.0157	0.110	<0.00500	0.0452	<b>0.691</b>	<b>1.97</b>
SEP FL-3FT	07/10/2024	3FT	<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	0.00747

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

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

3. \* Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed

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

  = Material excavated and transported off site for disposal.

**TABLE 4**  
**SUMMARY OF SOIL SUITABILITY FOR RECLAMATION**  
**NOBLE 100322**  
**GOLLNER T4N-R67W-S27 L02, WELD COUNTY, COLORADO**  
**REM # 31728**

Sample ID	Sample Date	Depth (ft)	pH (Standard Units)	EC (mmhos/cm)	SAR (Standard Units)	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
AST-0.5FT	07/10/2024	0.5FT	<b>8.57</b>	0.0804	0.0328	<2.00
PWV B-5FT	07/10/2024	5FT	<b>8.35</b>	0.579	3.76	<2.00
PWV E-4FT	07/10/2024	4FT	<b>9.01</b>	0.147	0.944	<2.00
SEP FL-3FT	07/10/2024	3FT	<b>8.72</b>	0.350	1.24	<2.00

1. Bold faced values exceed the ECMC Table 915-1 limit(s)
2. Blue highlighted soil analytical values indicate a regulatory exceedance

NA - Not analyzed

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

TABLE 5  
SUMMARY OF METALS IN SOIL CHEMISTRY DATA  
NOBLE 100322  
GOLLNER T4N-R67W-S27 L02, WELD COUNTY, COLORADO  
REM # 31728

Sample ID	Sample Date	Depth (ft)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
AST-0.5FT	07/10/2024	0.5FT	<b>6.02</b>	<b>187</b>	<b>0.425</b>	<0.30	7.12	<b>14.2</b>	7.29	<0.260	0.0631	25.6
PWV B-5FT	07/10/2024	5FT	<b>6.21</b>	<b>186</b>	0.274	<0.30	5.92	9.99	6.23	<0.260	0.0492	268
PWV E-4FT	07/10/2024	4FT	<b>5.17</b>	<b>155</b>	0.278	<0.30	6.59	12.1	6.81	<0.260	0.0568	108
SEP FL-3FT	07/10/2024	3FT	<b>5.62</b>	<b>126</b>	0.237	<0.30	6.46	9.72	6.99	<0.260	0.0743	23.4

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

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

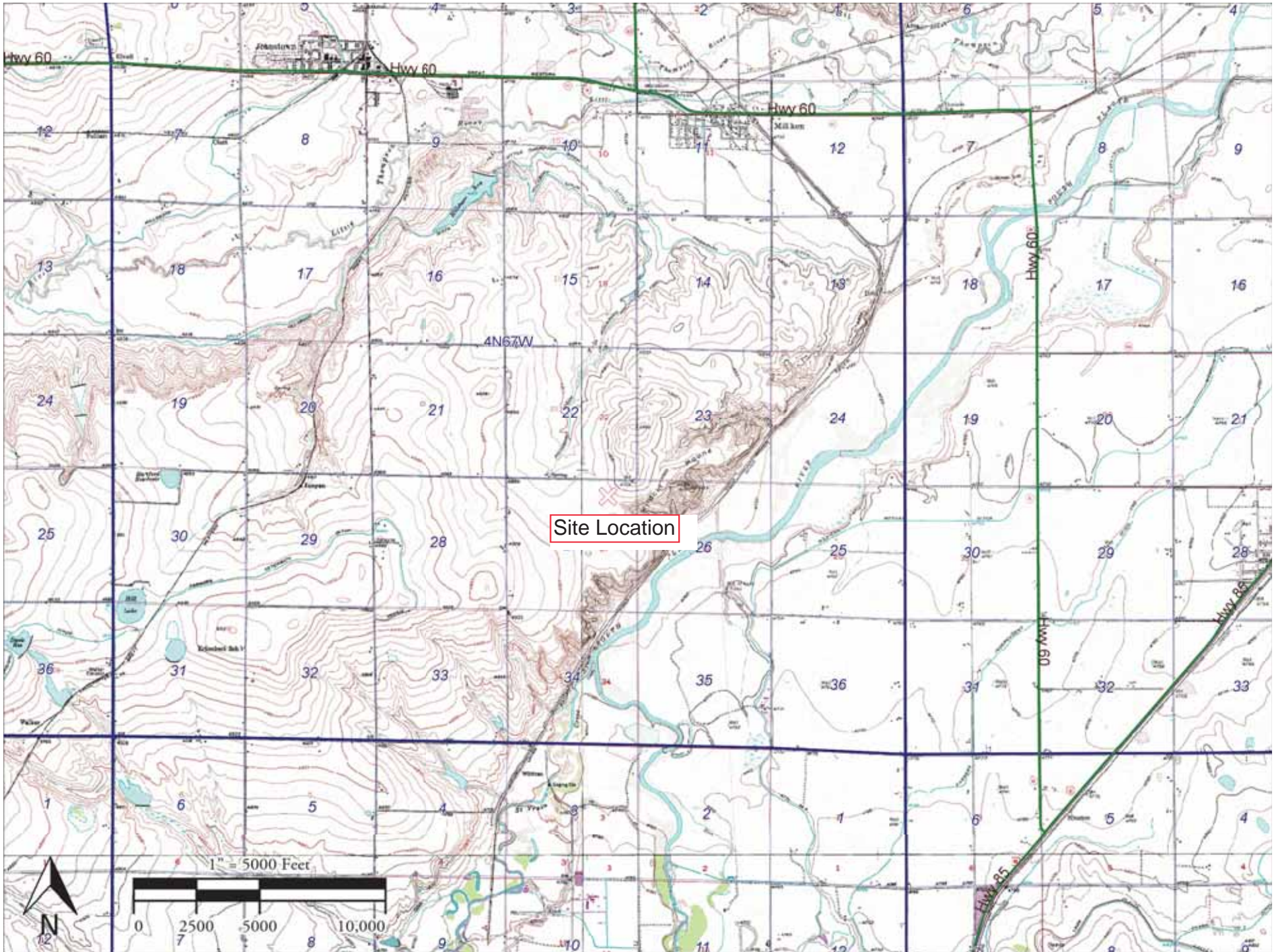
\* Indicates laboratory minimum detection limit in excess of SSL

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= Material excavated and transported off site for disposal.

# Gollner T4N-R67W-S27 L02



# Gollner T4N-R67W-S27 L02

Date of Incident: 7/22/2024

API #/Facility #: 328418

Legal Description: NWNE sec. 27, T4N, R67W

Latitude/Longitude: 40.2886258, -104.87170

Remediation # 31728

Fremont No: C024-139

● Proposed SI Sample Location

## Legend

- Impacted sample locations
- Sample locations

FLARE02-0.5FT

FLARE01-0.5FT

SEP DL-3FT

MH-0.5FT

PWV N-4FT

PWV P-5FT

PWV E-4FT

PWV W-4FT

PWV S-4FT

AST01 0.5FT

Google Earth

Image © 2024 Airbus



80 ft



**Description:**

#1-PWV E-4Ft - No visual staining, slight odor



**Description:**

#2-PWV B-5Ft - No visual staining or odor

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 22, 2024

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Gollner T4N-R67W-S27 L02

Work Order #2407143

Enclosed are the results of analyses for samples received by Summit Scientific on 07/11/24 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is fluid and cursive, written in a professional style.

Natalie Tessier For Paul Shrewsbury

President



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN

Project Manager: Paul Henchan

**Reported:**  
07/22/24 07:21

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST-0.5FT	2407143-01	Soil	07/10/24 14:55	07/11/24 16:30
PWV E-4FT	2407143-02	Soil	07/10/24 15:00	07/11/24 16:30
PWV B-5FT	2407143-03	Soil	07/10/24 15:05	07/11/24 16:30
SEP DL-3FT	2407143-04	Soil	07/10/24 15:10	07/11/24 16:30

Summit Scientific

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



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

Lab ID 2407143 Page 1 of 1

Client: Fremont Environmental		Project Manager: Paul Henehan		Company: <u>Noble</u>	
Address:		E-Mail: Fremont Distribution List		Project Name/Location:	
City/State/Zip:				AFE#:	
Phone: 303-261-6246		Project Name: <u>Gallner TW-R67W-527102</u>		PO/Billing Codes: <u>UWRWE-A3585-ABN</u>	
Sampler Name: Stanley Gilbert		Project Number:		Contact: <u>Mike Montoya</u>	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested							Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX, TMBs, Naph.	TPH	PAH (915)	EC, SAR, Ph, Boron	Metals (915)		TDS, Chloride, Sulfate	HOLD
1	AST-0.5FT	7/10/24	14:55	2			X			X				X	X	X	X	X		
2	PWV E-4FT	I	15:00	I			I			I				I	I	I	I	I		
3	PWV B-5FT	I	15:05	I			I			I				I	I	I	I	I		
4	SEP DL-3FT	I	15:10	I			I			I				I	I	I	I	I		
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by: <u>[Signature]</u>	Date/Time: <u>7/10/24 17:20</u>	Received by: <u>Summit North</u>	Date/Time: <u>7/10/24 17:20</u>	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <u>52</u>	Date/Time: <u>7/12/24 16:50</u>	Received by: <u>[Signature]</u>	Date/Time: <u>7/12/24 16:50</u>	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: <u>7.9</u>	Corrected Temperature: <u>8</u>	IR gun #:	HNO3 lot #:			

S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 2407143

Client: Fremont

Client Project ID: Gollner T4N-ROTW-S27 102

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

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

Temp (°C) 7.9 Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	once
If custody seals are present, are they intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	no times
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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

AS  
Custodian Printed Name

7/11/24  
Date/Time



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
Project Manager: Paul Henchan

**Reported:**  
07/22/24 07:21

**AST-0.5FT**  
**2407143-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/10/24 14:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHG0341	07/12/24	07/13/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **07/10/24 14:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0383	95.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0397	99.3 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0425	106 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/10/24 14:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHG0344	07/12/24	07/13/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **07/10/24 14:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.47	75.8 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
Project Manager: Paul Henchan

**Reported:**  
07/22/24 07:21

**AST-0.5FT**  
**2407143-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **07/10/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0331	07/12/24	07/13/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/10/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0215	64.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0184	55.1 %	40-150		"	"	"	"	

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

Date Sampled: **07/10/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0340	07/12/24	07/13/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **07/10/24 14:55**

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

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
Project Manager: Paul Henchan

**Reported:**  
07/22/24 07:21

**AST-0.5FT**  
**2407143-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	6.02	0.200	mg/kg dry	1	BHG0346	07/12/24	07/16/24	EPA 6020B	
Barium	187	0.400	"	"	"	"	"	"	
Cadmium	0.425	0.200	"	"	"	"	"	"	
Copper	7.12	0.400	"	"	"	"	"	"	
Lead	14.2	0.200	"	"	"	"	"	"	
Nickel	7.29	0.400	"	"	"	"	"	"	
Silver	0.0631	0.0200	"	"	"	"	"	"	
Zinc	25.6	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **07/10/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0379	07/15/24	07/15/24	EPA 7196A	

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

Date Sampled: **07/10/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	40.0	0.0500	mg/L dry	1	BHG0339	07/12/24	07/16/24	EPA 6020B	
Magnesium	7.22	0.0500	"	"	"	"	"	"	
Sodium	0.859	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **07/10/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0328	0.00100	units	1	BHG0421	07/16/24	07/16/24	Calculation	

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

Date Sampled: **07/10/24 14:55**

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

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 07/22/24 07:21

**AST-0.5FT**  
**2407143-01 (Soil)**

**Summit Scientific**

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

% Solids	85.6	%	1	BHG0337	07/12/24	07/12/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **07/10/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.0804</b>	0.0100	mmhos/cm	1	BHG0357	07/12/24	07/15/24	EPA 120.1	

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

Date Sampled: **07/10/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.57</b>		pH Units	1	BHG0358	07/12/24	07/15/24	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
Project Manager: Paul Henchan

**Reported:**  
07/22/24 07:21

**PWV E-4FT**  
**2407143-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHG0341	07/12/24	07/13/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.060</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>5.2</b>	0.10	"	10	"	"	07/13/24	"	
<b>1,2,4-Trimethylbenzene</b>	<b>6.7</b>	0.050	"	"	"	"	"	"	E
<b>1,3,5-Trimethylbenzene</b>	<b>4.3</b>	0.050	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.16</b>	0.0038	"	1	"	"	07/13/24	"	
<b>Gasoline Range Hydrocarbons</b>	<b>290</b>	5.0	"	10	"	"	07/13/24	"	

Date Sampled: **07/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0345	86.3 %	50-150	"	"	"	07/13/24	"	
Surrogate: Toluene-d8	0.118	295 %	50-150	"	"	"	"	"	S-02
Surrogate: 4-Bromofluorobenzene	0.183	457 %	50-150	"	"	"	"	"	S-02

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>1900</b>	50	mg/kg	1	BHG0344	07/12/24	07/13/24	EPA 8015M	
<b>C28-C36 (ORO)</b>	<b>240</b>	50	"	"	"	"	"	"	

Date Sampled: **07/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.34	58.7 %	30-150	"	"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Fremont Environmental  
PO Box 1289  
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Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
Project Manager: Paul Henchan

**Reported:**  
07/22/24 07:21

**PWV E-4FT**  
**2407143-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **07/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Acenaphthene</b>	<b>0.0565</b>	0.00500	mg/kg	1	BHG0331	07/12/24	07/13/24	EPA 8270D SIM	O-02
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>0.00630</b>	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.0383</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.0157</b>	0.00500	"	"	"	"	"	"	
<b>Fluorene</b>	<b>0.110</b>	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.0452</b>	0.00500	"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.691</b>	0.00500	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>1.97</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **07/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.00696	20.9 %	40-150		"	"	"	"	S-04
Surrogate: Fluoranthene-d10	0.0145	43.5 %	40-150		"	"	"	"	

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

Date Sampled: **07/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0340	07/12/24	07/13/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **07/10/24 15:00**

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

Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
Project Manager: Paul Henchan

**Reported:**  
07/22/24 07:21

**PWV E-4FT**  
**2407143-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	5.17	0.200	mg/kg dry	1	BHG0346	07/12/24	07/16/24	EPA 6020B
Barium	155	0.400	"	"	"	"	"	"
Cadmium	0.278	0.200	"	"	"	"	"	"
Copper	6.59	0.400	"	"	"	"	"	"
Lead	12.1	0.200	"	"	"	"	"	"
Nickel	6.81	0.400	"	"	"	"	"	"
Silver	0.0568	0.0200	"	"	"	"	"	"
Zinc	108	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **07/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0379	07/15/24	07/15/24	EPA 7196A	

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

Date Sampled: **07/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	69.8	0.0500	mg/L dry	1	BHG0339	07/12/24	07/16/24	EPA 6020B	
Magnesium	8.23	0.0500	"	"	"	"	"	"	
Sodium	31.3	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **07/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.944	0.00100	units	1	BHG0421	07/16/24	07/16/24	Calculation	

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

Date Sampled: **07/10/24 15:00**

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

Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 07/22/24 07:21

**PWV E-4FT**  
**2407143-02 (Soil)**

**Summit Scientific**

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

% Solids	81.5	%	1	BHG0337	07/12/24	07/12/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **07/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.147	0.0100	mmhos/cm	1	BHG0357	07/12/24	07/15/24	EPA 120.1	

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

Date Sampled: **07/10/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.01		pH Units	1	BHG0358	07/12/24	07/15/24	EPA 9045D	

Summit Scientific

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
Project Manager: Paul Henchan

**Reported:**  
07/22/24 07:21

**PWV B-5FT**  
**2407143-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/10/24 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHG0341	07/12/24	07/16/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>0.014</b>	0.0050	"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>0.0089</b>	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/10/24 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0487	122 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0439	110 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0416	104 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/10/24 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>95</b>	50	mg/kg	1	BHG0344	07/12/24	07/13/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/10/24 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.24	73.9 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
Project Manager: Paul Henchan

**Reported:**  
07/22/24 07:21

**PWV B-5FT**  
**2407143-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **07/10/24 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0331	07/12/24	07/13/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.00555</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **07/10/24 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0228	68.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0141	42.4 %	40-150		"	"	"	"	

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

Date Sampled: **07/10/24 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0340	07/12/24	07/13/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **07/10/24 15:05**

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 - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
Project Manager: Paul Henchan

**Reported:**  
07/22/24 07:21

**PWV B-5FT**  
**2407143-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	6.21	0.200	mg/kg dry	1	BHG0346	07/12/24	07/16/24	EPA 6020B
Barium	186	0.400	"	"	"	"	"	"
Cadmium	0.274	0.200	"	"	"	"	"	"
Copper	5.92	0.400	"	"	"	"	"	"
Lead	9.99	0.200	"	"	"	"	"	"
Nickel	6.23	0.400	"	"	"	"	"	"
Silver	0.0492	0.0200	"	"	"	"	"	"
Zinc	268	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **07/10/24 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0379	07/15/24	07/15/24	EPA 7196A	

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

Date Sampled: **07/10/24 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	26.8	0.0500	mg/L dry	1	BHG0339	07/12/24	07/16/24	EPA 6020B	
Magnesium	3.34	0.0500	"	"	"	"	"	"	
Sodium	77.6	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **07/10/24 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.76	0.00100	units	1	BHG0421	07/16/24	07/16/24	Calculation	

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

Date Sampled: **07/10/24 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 PO Box 1289  
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Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 07/22/24 07:21

**PWV B-5FT**  
**2407143-03 (Soil)**

**Summit Scientific**

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

% Solids	83.5	%	1	BHG0337	07/12/24	07/12/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **07/10/24 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.579	0.0100	mmhos/cm	1	BHG0357	07/12/24	07/15/24	EPA 120.1	

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

Date Sampled: **07/10/24 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.35		pH Units	1	BHG0358	07/12/24	07/15/24	EPA 9045D	

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
Project Manager: Paul Henchan

**Reported:**  
07/22/24 07:21

**SEP DL-3FT**  
**2407143-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/10/24 15:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHG0341	07/12/24	07/13/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **07/10/24 15:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0446	112 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0405	101 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0433	108 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/10/24 15:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHG0344	07/12/24	07/13/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **07/10/24 15:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.60	68.8 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
Project Manager: Paul Henchan

**Reported:**  
07/22/24 07:21

**SEP DL-3FT**  
**2407143-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **07/10/24 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0331	07/12/24	07/13/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.00747</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **07/10/24 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0224	67.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0211	63.2 %	40-150		"	"	"	"	

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

Date Sampled: **07/10/24 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0340	07/12/24	07/13/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **07/10/24 15:10**

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 - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
Project Manager: Paul Henchan

**Reported:**  
07/22/24 07:21

**SEP DL-3FT**  
**2407143-04 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	5.62	0.200	mg/kg dry	1	BHG0346	07/12/24	07/16/24	EPA 6020B	
Barium	126	0.400	"	"	"	"	"	"	
Cadmium	0.237	0.200	"	"	"	"	"	"	
Copper	6.46	0.400	"	"	"	"	"	"	
Lead	9.72	0.200	"	"	"	"	"	"	
Nickel	6.99	0.400	"	"	"	"	"	"	
Silver	0.0743	0.0200	"	"	"	"	"	"	
Zinc	23.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **07/10/24 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0379	07/15/24	07/15/24	EPA 7196A	

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

Date Sampled: **07/10/24 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	18.1	0.0500	mg/L dry	1	BHG0339	07/12/24	07/16/24	EPA 6020B	
Magnesium	6.40	0.0500	"	"	"	"	"	"	
Sodium	24.2	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **07/10/24 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.24	0.00100	units	1	BHG0421	07/16/24	07/16/24	Calculation	

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

Date Sampled: **07/10/24 15:10**

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 - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 07/22/24 07:21

**SEP DL-3FT**  
**2407143-04 (Soil)**

**Summit Scientific**

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

% Solids	86.9	%	1	BHG0337	07/12/24	07/12/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **07/10/24 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.350	0.0100	mmhos/cm	1	BHG0357	07/12/24	07/15/24	EPA 120.1	

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

Date Sampled: **07/10/24 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.72		pH Units	1	BHG0358	07/12/24	07/15/24	EPA 9045D	

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PO Box 1289  
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Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
Project Manager: Paul Henchan

**Reported:**  
07/22/24 07:21

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

#### Summit Scientific

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

#### Batch BHG0341 - EPA 5030 Soil MS

##### Blank (BHG0341-BLK1)

Prepared & Analyzed: 07/12/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0447		"	0.0400		112	50-150			
<i>Surrogate: Toluene-d8</i>	0.0402		"	0.0400		100	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0415		"	0.0400		104	50-150			

##### LCS (BHG0341-BS1)

Prepared & Analyzed: 07/12/24

Benzene	0.101	0.0020	mg/kg	0.100		101	70-130			
Toluene	0.117	0.0050	"	0.100		117	70-130			
Ethylbenzene	0.114	0.0050	"	0.100		114	70-130			
m,p-Xylene	0.226	0.010	"	0.200		113	70-130			
o-Xylene	0.110	0.0050	"	0.100		110	70-130			
1,2,4-Trimethylbenzene	0.109	0.0050	"	0.100		109	70-130			
1,3,5-Trimethylbenzene	0.111	0.0050	"	0.100		111	70-130			
Naphthalene	0.0960	0.0038	"	0.100		96.0	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0404		"	0.0400		101	50-150			
<i>Surrogate: Toluene-d8</i>	0.0411		"	0.0400		103	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0398		"	0.0400		99.4	50-150			

##### Matrix Spike (BHG0341-MS1)

Source: 2407123-01

Prepared & Analyzed: 07/12/24

Benzene	0.0930	0.0020	mg/kg	0.100	ND	93.0	70-130			
Toluene	0.106	0.0050	"	0.100	ND	106	70-130			
Ethylbenzene	0.0985	0.0050	"	0.100	ND	98.5	70-130			
m,p-Xylene	0.193	0.010	"	0.200	ND	96.3	70-130			
o-Xylene	0.0977	0.0050	"	0.100	ND	97.7	70-130			
1,2,4-Trimethylbenzene	0.0891	0.0050	"	0.100	ND	89.1	70-130			
1,3,5-Trimethylbenzene	0.0890	0.0050	"	0.100	ND	89.0	70-130			
Naphthalene	0.0870	0.0038	"	0.100	ND	87.0	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0466		"	0.0400		116	50-150			
<i>Surrogate: Toluene-d8</i>	0.0402		"	0.0400		101	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0397		"	0.0400		99.2	50-150			

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Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 07/22/24 07:21

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

**Summit Scientific**

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

**Batch BHG0341 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (BHG0341-MSD1)</b>	<b>Source: 2407123-01</b>			<b>Prepared &amp; Analyzed: 07/12/24</b>						
Benzene	0.0895	0.0020	mg/kg	0.100	ND	89.5	70-130	3.91	30	
Toluene	0.119	0.0050	"	0.100	ND	119	70-130	11.3	30	
Ethylbenzene	0.113	0.0050	"	0.100	ND	113	70-130	13.7	30	
m,p-Xylene	0.221	0.010	"	0.200	ND	110	70-130	13.5	30	
o-Xylene	0.107	0.0050	"	0.100	ND	107	70-130	8.81	30	
1,2,4-Trimethylbenzene	0.0987	0.0050	"	0.100	ND	98.7	70-130	10.3	30	
1,3,5-Trimethylbenzene	0.100	0.0050	"	0.100	ND	100	70-130	12.0	30	
Naphthalene	0.0878	0.0038	"	0.100	ND	87.8	70-130	0.927	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0354</i>		<i>"</i>	<i>0.0400</i>		<i>88.5</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>		<i>98.1</i>	<i>50-150</i>			

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Project: Noble - Gollner T4N-R67W-S27 L02  
 Project Number: UWRWE-A3585-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 07/22/24 07:21

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

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

**Batch BHG0344 - EPA 3550A**

**Blank (BHG0344-BLK1)**

Prepared: 07/12/24 Analyzed: 07/13/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	11.6		"	12.5		93.0	30-150				

**LCS (BHG0344-BS1)**

Prepared: 07/12/24 Analyzed: 07/13/24

C10-C28 (DRO)	558	50	mg/kg	500		112	70-130				
Surrogate: <i>o</i> -Terphenyl	13.7		"	12.5		110	30-150				

**Matrix Spike (BHG0344-MS1)**

Source: 2407123-01

Prepared: 07/12/24 Analyzed: 07/13/24

C10-C28 (DRO)	500	50	mg/kg	500	ND	100	70-130				
Surrogate: <i>o</i> -Terphenyl	11.6		"	12.5		92.7	30-150				

**Matrix Spike Dup (BHG0344-MSD1)**

Source: 2407123-01

Prepared: 07/12/24 Analyzed: 07/13/24

C10-C28 (DRO)	423	50	mg/kg	500	ND	84.6	70-130	16.8	20		
Surrogate: <i>o</i> -Terphenyl	9.91		"	12.5		79.3	30-150				

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Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
Project Manager: Paul Henchan

**Reported:**  
07/22/24 07:21

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

**Summit Scientific**

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

**Batch BHG0331 - EPA 5030 Soil MS**

**Blank (BHG0331-BLK1)**

Prepared & Analyzed: 07/12/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0302		"	0.0333	90.5	40-150				
Surrogate: Fluoranthene-d10	0.0276		"	0.0333	82.8	40-150				

**LCS (BHG0331-BS1)**

Prepared & Analyzed: 07/12/24

Acenaphthene	0.0263	0.00500	mg/kg	0.0333	78.8	31-137				
Anthracene	0.0254	0.00500	"	0.0333	76.3	30-120				
Benzo (a) anthracene	0.0267	0.00500	"	0.0333	80.2	30-120				
Benzo (a) pyrene	0.0237	0.00500	"	0.0333	71.1	30-120				
Benzo (b) fluoranthene	0.0238	0.00500	"	0.0333	71.5	30-120				
Benzo (k) fluoranthene	0.0247	0.00500	"	0.0333	74.2	30-120				
Chrysene	0.0267	0.00500	"	0.0333	80.1	30-120				
Dibenz (a,h) anthracene	0.0220	0.00500	"	0.0333	66.1	30-120				
Fluoranthene	0.0253	0.00500	"	0.0333	75.9	30-120				
Fluorene	0.0263	0.00500	"	0.0333	79.0	30-120				
Indeno (1,2,3-cd) pyrene	0.0217	0.00500	"	0.0333	65.2	30-120				
Pyrene	0.0329	0.00500	"	0.0333	98.8	35-142				
1-Methylnaphthalene	0.0295	0.00500	"	0.0333	88.5	35-142				
2-Methylnaphthalene	0.0281	0.00500	"	0.0333	84.2	35-142				
Surrogate: 2-Methylnaphthalene-d10	0.0293		"	0.0333	87.8	40-150				
Surrogate: Fluoranthene-d10	0.0262		"	0.0333	78.6	40-150				

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Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
Project Manager: Paul Henchan

**Reported:**  
07/22/24 07:21

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

**Summit Scientific**

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

**Batch BHG0331 - EPA 5030 Soil MS**

<b>Matrix Spike (BHG0331-MS1)</b>	<b>Source: 2407125-01</b>			<b>Prepared &amp; Analyzed: 07/12/24</b>							
Acenaphthene	0.0183	0.00500	mg/kg	0.0333	ND	54.8	31-137				
Anthracene	0.0191	0.00500	"	0.0333	ND	57.4	30-120				
Benzo (a) anthracene	0.0191	0.00500	"	0.0333	ND	57.3	30-120				
Benzo (a) pyrene	0.0170	0.00500	"	0.0333	ND	50.9	30-120				
Benzo (b) fluoranthene	0.0164	0.00500	"	0.0333	ND	49.2	30-120				
Benzo (k) fluoranthene	0.0169	0.00500	"	0.0333	ND	50.6	30-120				
Chrysene	0.0187	0.00500	"	0.0333	ND	56.1	30-120				
Dibenz (a,h) anthracene	0.0144	0.00500	"	0.0333	ND	43.3	30-120				
Fluoranthene	0.0169	0.00500	"	0.0333	ND	50.6	30-120				
Fluorene	0.0187	0.00500	"	0.0333	ND	56.1	30-120				
Indeno (1,2,3-cd) pyrene	0.0154	0.00500	"	0.0333	ND	46.1	30-120				
Pyrene	0.0210	0.00500	"	0.0333	ND	63.0	35-142				
1-Methylnaphthalene	0.0201	0.00500	"	0.0333	ND	60.2	15-130				
2-Methylnaphthalene	0.0196	0.00500	"	0.0333	ND	58.8	15-130				
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0198</i>		<i>"</i>	<i>0.0333</i>		<i>59.4</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0174</i>		<i>"</i>	<i>0.0333</i>		<i>52.2</i>	<i>40-150</i>				

<b>Matrix Spike Dup (BHG0331-MSD1)</b>	<b>Source: 2407125-01</b>			<b>Prepared &amp; Analyzed: 07/12/24</b>							
Acenaphthene	0.0195	0.00500	mg/kg	0.0333	ND	58.5	31-137	6.44	30		
Anthracene	0.0198	0.00500	"	0.0333	ND	59.3	30-120	3.18	30		
Benzo (a) anthracene	0.0194	0.00500	"	0.0333	ND	58.1	30-120	1.37	30		
Benzo (a) pyrene	0.0171	0.00500	"	0.0333	ND	51.2	30-120	0.476	30		
Benzo (b) fluoranthene	0.0165	0.00500	"	0.0333	ND	49.6	30-120	0.714	30		
Benzo (k) fluoranthene	0.0168	0.00500	"	0.0333	ND	50.4	30-120	0.443	30		
Chrysene	0.0188	0.00500	"	0.0333	ND	56.3	30-120	0.333	30		
Dibenz (a,h) anthracene	0.0171	0.00500	"	0.0333	ND	51.3	30-120	17.1	30		
Fluoranthene	0.0193	0.00500	"	0.0333	ND	57.8	30-120	13.3	30		
Fluorene	0.0195	0.00500	"	0.0333	ND	58.6	30-120	4.35	30		
Indeno (1,2,3-cd) pyrene	0.0160	0.00500	"	0.0333	ND	48.1	30-120	4.29	30		
Pyrene	0.0216	0.00500	"	0.0333	ND	64.8	35-142	2.90	30		
1-Methylnaphthalene	0.0236	0.00500	"	0.0333	ND	70.7	15-130	16.1	50		
2-Methylnaphthalene	0.0213	0.00500	"	0.0333	ND	63.8	15-130	8.26	50		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0222</i>		<i>"</i>	<i>0.0333</i>		<i>66.6</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0201</i>		<i>"</i>	<i>0.0333</i>		<i>60.4</i>	<i>40-150</i>				

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 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 07/22/24 07:21

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

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

**Batch BHG0340 - EPA 3050B**

**Blank (BHG0340-BLK1)**

Prepared: 07/12/24 Analyzed: 07/13/24

Boron ND 2.00 mg/L

**LCS (BHG0340-BS1)**

Prepared: 07/12/24 Analyzed: 07/13/24

Boron 4.98 2.00 mg/L 5.00 99.6 80-120

**Duplicate (BHG0340-DUP1)**

Source: 2407137-01

Prepared: 07/12/24 Analyzed: 07/13/24

Boron 0.0521 2.00 mg/L 0.106 67.8 20 QR-01

**Matrix Spike (BHG0340-MS1)**

Source: 2407137-01

Prepared: 07/12/24 Analyzed: 07/13/24

Boron 5.08 2.00 mg/L 5.02 0.106 99.0 75-125

**Matrix Spike Dup (BHG0340-MSD1)**

Source: 2407137-01

Prepared: 07/12/24 Analyzed: 07/13/24

Boron 5.34 2.00 mg/L 5.02 0.106 104 75-125 4.96 25

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Project Number: UWRWE-A3585-ABN  
Project Manager: Paul Henchan

**Reported:**  
07/22/24 07:21

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

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

**Batch BHG0346 - EPA 3050B**

**Blank (BHG0346-BLK1)**

Prepared: 07/12/24 Analyzed: 07/17/24

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

**LCS (BHG0346-BS1)**

Prepared: 07/12/24 Analyzed: 07/17/24

Arsenic	38.6	0.200	mg/kg wet	40.0	96.4	80-120
Barium	39.0	0.400	"	40.0	97.5	80-120
Cadmium	1.93	0.200	"	2.00	96.4	80-120
Copper	40.3	0.400	"	40.0	101	80-120
Lead	19.1	0.200	"	20.0	95.4	80-120
Nickel	40.4	0.400	"	40.0	101	80-120
Silver	1.92	0.0200	"	2.00	96.0	80-120
Zinc	39.5	0.400	"	40.0	98.7	80-120
Selenium	3.71	0.260	"	4.00	92.7	80-120

**Duplicate (BHG0346-DUP1)**

Source: 2407142-02

Prepared: 07/12/24 Analyzed: 07/17/24

Arsenic	5.83	0.200	mg/kg dry	5.41	7.40	20	
Barium	226	0.400	"	140	47.2	20	QR-03
Cadmium	0.322	0.200	"	0.288	11.1	20	
Copper	6.78	0.400	"	6.82	0.662	20	
Lead	11.0	0.200	"	11.0	0.160	20	
Nickel	7.85	0.400	"	7.57	3.63	20	
Silver	0.0555	0.0200	"	0.0475	15.5	20	
Zinc	25.5	0.400	"	24.9	2.68	20	
Selenium	ND	0.260	"	ND		20	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
Project Manager: Paul Henchan

**Reported:**  
07/22/24 07:21

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

**Summit Scientific**

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

**Batch BHG0346 - EPA 3050B**

**Matrix Spike (BHG0346-MS1)**

Source: 2407142-02

Prepared: 07/12/24 Analyzed: 07/17/24

Arsenic	55.7	0.200	mg/kg dry	53.3	5.41	94.3	75-125			
Barium	266	0.400	"	53.3	140	237	75-125			QM-07
Cadmium	2.87	0.200	"	2.67	0.288	97.0	75-125			
Copper	32.0	0.400	"	53.3	6.82	47.2	75-125			QM-05
Lead	35.8	0.200	"	26.7	11.0	92.8	75-125			
Nickel	33.1	0.400	"	53.3	7.57	47.8	75-125			QM-05
Silver	2.54	0.0200	"	2.67	0.0475	93.4	75-125			
Zinc	51.5	0.400	"	53.3	24.9	49.9	75-125			QM-05
Selenium	3.78	0.260	"	5.33	ND	70.8	75-125			QM-07

**Matrix Spike Dup (BHG0346-MSD1)**

Source: 2407142-02

Prepared: 07/12/24 Analyzed: 07/17/24

Arsenic	53.5	0.200	mg/kg dry	50.9	5.41	94.5	75-125	4.00	25	
Barium	213	0.400	"	50.9	140	145	75-125	21.8	25	QM-07
Cadmium	2.69	0.200	"	2.54	0.288	94.3	75-125	6.69	25	
Copper	30.4	0.400	"	50.9	6.82	46.3	75-125	5.14	25	QM-05
Lead	34.5	0.200	"	25.4	11.0	92.5	75-125	3.44	25	
Nickel	31.6	0.400	"	50.9	7.57	47.2	75-125	4.63	25	QM-05
Silver	2.39	0.0200	"	2.54	0.0475	92.3	75-125	5.85	25	
Zinc	49.7	0.400	"	50.9	24.9	48.9	75-125	3.47	25	QM-05
Selenium	3.44	0.260	"	5.09	ND	67.5	75-125	9.41	25	QM-07

**Post Spike (BHG0346-PS1)**

Source: 2407142-02

Prepared: 07/12/24 Analyzed: 07/17/24

Arsenic	113		ug/l	100	10.1	103	75-125			
Barium	381		"	100	262	119	75-125			
Cadmium	5.62		"	5.00	0.540	102	75-125			
Copper	61.8		"	100	12.8	49.0	75-125			QM-01
Lead	71.0		"	50.0	20.6	101	75-125			
Nickel	63.9		"	100	14.2	49.7	75-125			QM-01
Silver	5.11		"	5.00	0.0890	100	75-125			
Zinc	99.4		"	100	46.6	52.8	75-125			QM-01
Selenium	8.46		"	10.0	0.205	82.5	75-125			

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Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 07/22/24 07:21

**Hexavalent Chromium by EPA Method 7196 - Quality Control**  
**Summit Scientific**

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

**Batch BHG0379 - 3060A Mod**

**Blank (BHG0379-BLK1)**

Prepared & Analyzed: 07/15/24

Chromium, Hexavalent      ND      0.30 mg/kg wet

**LCS (BHG0379-BS1)**

Prepared & Analyzed: 07/15/24

Chromium, Hexavalent      25.2      0.30 mg/kg wet      25.0      101      80-120

**Duplicate (BHG0379-DUP1)**

**Source: 2407143-01**

Prepared & Analyzed: 07/15/24

Chromium, Hexavalent      ND      0.30 mg/kg dry      ND      20

**Matrix Spike (BHG0379-MS1)**

**Source: 2407143-01**

Prepared & Analyzed: 07/15/24

Chromium, Hexavalent      28.3      0.30 mg/kg dry      29.2      ND      96.8      75-125

**Matrix Spike Dup (BHG0379-MSD1)**

**Source: 2407143-01**

Prepared & Analyzed: 07/15/24

Chromium, Hexavalent      28.7      0.30 mg/kg dry      29.2      ND      98.2      75-125      1.44      20

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Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 07/22/24 07:21

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

**Summit Scientific**

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

**Batch BHG0339 - General Preparation**

**Blank (BHG0339-BLK1)**

Prepared: 07/12/24 Analyzed: 07/16/24

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

**LCS (BHG0339-BS1)**

Prepared: 07/12/24 Analyzed: 07/16/24

Calcium	5.07	0.0500	mg/L wet	5.00	101	70-130				
Magnesium	5.47	0.0500	"	5.00	109	70-130				
Sodium	5.61	0.0500	"	5.00	112	70-130				

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Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 07/22/24 07:21

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

**Summit Scientific**

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

**Batch BHG0337 - General Preparation**

**Duplicate (BHG0337-DUP1)**

**Source: 2406108-04**

Prepared & Analyzed: 07/12/24

% Solids	84.3		%		85.1			0.905	20	
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Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 07/22/24 07:21

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

**Summit Scientific**

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

**Batch BHG0357 - General Preparation**

**Blank (BHG0357-BLK1)**

Prepared: 07/12/24 Analyzed: 07/15/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BHG0357-BS1)**

Prepared: 07/12/24 Analyzed: 07/15/24

Specific Conductance (EC) 0.151 0.0100 mmhos/cm 0.150 101 95-105

**Duplicate (BHG0357-DUP1)**

Source: 2407142-01

Prepared: 07/12/24 Analyzed: 07/15/24

Specific Conductance (EC) 0.202 0.0100 mmhos/cm 0.204 1.28 20

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 PO Box 1289  
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Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 07/22/24 07:21

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

**Summit Scientific**

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

**Batch BHG0358 - General Preparation**

**LCS (BHG0358-BS1)**

Prepared: 07/12/24 Analyzed: 07/15/24

pH	9.13	pH Units	9.18	99.5	95-105
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**Duplicate (BHG0358-DUP1)**

Source: 2407142-01

Prepared: 07/12/24 Analyzed: 07/15/24

pH	8.51	pH Units	8.62	1.28	20
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Summit Scientific

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Fremont Environmental  
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Project: Noble - Gollner T4N-R67W-S27 L02

Project Number: UWRWE-A3585-ABN  
Project Manager: Paul Henchan

**Reported:**  
07/22/24 07:21

### Notes and Definitions

- S-04 A sample matrix effect prevented complete surrogate recovery.
- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
- QM-01 The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
- O-02 Due to matrix interference, the sample cannot be accurately quantitated. The reported result is qualitative.
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference