

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 02, 2024

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Gutterson State CC20-04

Work Order #2406051

Enclosed are the results of analyses for samples received by Summit Scientific on 06/05/24 18:03. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial 'J' and a distinct 'W'.

Jacob Wood For Paul Shrewsbury
President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Guttersen State CC20-04

Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01-01@2'	2406051-01	Soil	06/05/24 09:47	06/05/24 18:03
FL01-02@2'	2406051-02	Soil	06/05/24 10:00	06/05/24 18:03
FL01-03@2'	2406051-03	Soil	06/05/24 10:05	06/05/24 18:03
FL01-06@2'	2406051-04	Soil	06/05/24 10:26	06/05/24 18:03

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

Lab ID	Page 1 of 1
2406051	

Client: Noble / Tasman	Send Data To: Project Manager: Jake Whritenour	Send Invoice To: Company: Chevron
Address: 6855 W. 119th Ave	E-Mail: Jwhritenour@tasman-geo.com	Project Name/Location: Guttersen State CC70-04
City/State/Zip: Broomfield, CO 80020		AFE#: UWRWE- A3676-ABU
Phone: 978-857-4408	Project Name: Guttersen State CC70-04	PO/Billing Codes:
Sampler Name: Matthew Wentzel	Project Number:	Contact: Miguel Barron

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested							Special Instructions				
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS		Metals - 915	HOLD		
1	FL01-01@2'	6.5.24	0947	3			X			X				X	X	X	X	X	X	X		pH, EC, SAR by saturated paste
2	FL01-02@2'	I	1000	I			I			I				I	I	I	I	I	I	I		
3	FL01-03@2'	I	1005	I			I			I				I	I	I	I	I	I	I		
4	FL01-06@2'	I	1026	I			I			I				I	I	I	I	I	I	I		
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						

Relinquished by: 	Date/Time: 6.5.24 1415	Received by: Tasman Lock Box	Date/Time: 6.5.24 1415	TAT Business Days	Field DO	Notes:
Relinquished by: Tasman Lock Box	Date/Time: 6.5.24 1803	Received by: 	Date/Time: 6.5.24 1803	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 93	Corrected Temperature: 93	IR gun #:	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2406051

Client: Noble Farm Client Project ID: Gutteresen State CC20-04

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

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

Temp (°C) Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>cooling</u>
If custody seals are present, are they intact? ⁽¹⁾	<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 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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

AS
Custodian Printed Name

6/5/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Gutttersen State CC20-04

Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

FL01-01@2'
2406051-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/05/24 09:47**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHF0155	06/06/24	06/07/24	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: **06/05/24 09:47**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0506	127 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0419	105 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/05/24 09:47**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHF0157	06/06/24	06/07/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **06/05/24 09:47**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	12.3	98.7 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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2406051-01 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **06/05/24 09:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.00696	0.00500	mg/kg	1	BHF0136	06/06/24	06/06/24	EPA 8270D SIM	
Anthracene	0.0161	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0504	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0316	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0485	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.0153	0.00500	"	"	"	"	"	"	
Chrysene	0.0471	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0999	0.00500	"	"	"	"	"	"	
Fluorene	0.00806	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.0807	0.00500	"	"	"	"	"	"	
Pyrene	0.152	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/05/24 09:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0272	81.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0252	75.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/05/24 09:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0147	06/06/24	06/11/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/05/24 09:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.54	0.200	mg/kg dry	1	BHF0153	06/06/24	06/08/24	EPA 6020B	

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Project: Noble - Guttarsen State CC20-04

Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

FL01-01@2'
2406051-01 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Barium	42.1	0.400	mg/kg dry	1	BHF0153	06/06/24	06/08/24	EPA 6020B	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.90	0.400	"	"	"	"	"	"	
Lead	4.52	0.200	"	"	"	"	"	"	
Nickel	3.70	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	16.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/05/24 09:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0150	06/06/24	06/06/24	EPA 7196A	

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

Date Sampled: **06/05/24 09:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	66.3	0.0500	mg/L dry	1	BHF0066	06/06/24	06/10/24	EPA 6020B	
Magnesium	13.1	0.0500	"	"	"	"	"	"	
Sodium	5.82	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/05/24 09:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.171	0.00100	units	1	BHF0290	06/11/24	06/11/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/05/24 09:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Reported:
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FL01-01@2'
2406051-01 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	95.3	%	1	BHF0151	06/06/24	06/06/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/05/24 09:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.146	0.0100	mmhos/cm	1	BHF0144	06/06/24	06/07/24	EPA 120.1	

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

Date Sampled: **06/05/24 09:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.97		pH Units	1	BHF0143	06/06/24	06/07/24	EPA 9045D	

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Reported:
07/02/24 11:11

FL01-02@2'
2406051-02 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/05/24 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHF0155	06/06/24	06/07/24	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: **06/05/24 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0452	113 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0396	99.1 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0411	103 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/05/24 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHF0157	06/06/24	06/07/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **06/05/24 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.9	95.4 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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FL01-02@2'
2406051-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/05/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0136	06/06/24	06/07/24	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: **06/05/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0250	75.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0215	64.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/05/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0147	06/06/24	06/11/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/05/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

FL01-02@2'
2406051-02 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.63	0.200	mg/kg dry	1	BHF0153	06/06/24	06/08/24	EPA 6020B	
Barium	41.1	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.85	0.400	"	"	"	"	"	"	
Lead	3.73	0.200	"	"	"	"	"	"	
Nickel	3.14	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	12.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/05/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0150	06/06/24	06/06/24	EPA 7196A	

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

Date Sampled: **06/05/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	116	0.0500	mg/L dry	1	BHF0066	06/06/24	06/10/24	EPA 6020B	
Magnesium	19.1	0.0500	"	"	"	"	"	"	
Sodium	5.56	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/05/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.126	0.00100	units	1	BHF0290	06/11/24	06/11/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: Noble - Gutterson State CC20-04

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Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

FL01-02@2'
2406051-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/05/24 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	94.4			%	1	BHF0151	06/06/24	06/06/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/05/24 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.126	0.0100		mmhos/cm	1	BHF0144	06/06/24	06/07/24	EPA 120.1	

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

Date Sampled: **06/05/24 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.67			pH Units	1	BHF0143	06/06/24	06/07/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Guttersen State CC20-04

Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

FL01-03@2'
2406051-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/05/24 10:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHF0155	06/06/24	06/07/24	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: **06/05/24 10:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0461	115 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0384	96.0 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0413	103 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/05/24 10:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHF0157	06/06/24	06/07/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **06/05/24 10:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.5	92.0 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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FL01-03@2'
2406051-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/05/24 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0136	06/06/24	06/07/24	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: **06/05/24 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0244	73.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0213	63.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/05/24 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0147	06/06/24	06/11/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/05/24 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Reported:
07/02/24 11:11

FL01-03@2'
2406051-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.52	0.200	mg/kg dry	1	BHF0153	06/06/24	06/08/24	EPA 6020B	
Barium	41.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.41	0.400	"	"	"	"	"	"	
Lead	4.11	0.200	"	"	"	"	"	"	
Nickel	3.71	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	15.6	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/05/24 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0150	06/06/24	06/06/24	EPA 7196A	

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

Date Sampled: **06/05/24 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	147	0.0500	mg/L dry	1	BHF0066	06/06/24	06/10/24	EPA 6020B	
Magnesium	32.7	0.0500	"	"	"	"	"	"	
Sodium	2.02	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/05/24 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0392	0.00100	units	1	BHF0290	06/11/24	06/11/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Reported:
07/02/24 11:11

FL01-03@2'
2406051-03 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/05/24 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.1		%	1	BHF0151	06/06/24	06/06/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/05/24 10:05**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0664	0.0100	mmhos/cm	1	BHF0144	06/06/24	06/07/24	EPA 120.1	

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

Date Sampled: **06/05/24 10:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.36		pH Units	1	BHF0143	06/06/24	06/07/24	EPA 9045D	

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Project: Noble - Guttersen State CC20-04

Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

FL01-06@2'
2406051-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/05/24 10:26**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BHF0155	06/06/24	06/07/24	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	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/05/24 10:26**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0432	108 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0367	91.6 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0390	97.6 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/05/24 10:26**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0157	06/06/24	06/07/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/05/24 10:26**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	12.9	103 %	30-150	"	"	"	"	"	

PAH by EPA Method 8270D SIM

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FL01-06@2'
2406051-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/05/24 10:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.0219	0.00500	mg/kg	1	BHF0136	06/06/24	06/07/24	EPA 8270D SIM	
Anthracene	0.0364	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0504	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0293	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0447	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.0158	0.00500	"	"	"	"	"	"	
Chrysene	0.0474	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.117	0.00500	"	"	"	"	"	"	
Fluorene	0.0234	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.0737	0.00500	"	"	"	"	"	"	
Pyrene	0.152	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/05/24 10:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0223	67.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0217	65.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/05/24 10:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0147	06/06/24	06/11/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/05/24 10:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.31	0.200	mg/kg dry	1	BHF0153	06/06/24	06/08/24	EPA 6020B	

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FL01-06@2'
2406051-04 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Barium	32.2	0.400	mg/kg dry	1	BHF0153	06/06/24	06/08/24	EPA 6020B	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.19	0.400	"	"	"	"	"	"	
Lead	3.16	0.200	"	"	"	"	"	"	
Nickel	2.32	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	9.14	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/05/24 10:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0150	06/06/24	06/06/24	EPA 7196A	

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

Date Sampled: **06/05/24 10:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	43.5	0.0500	mg/L dry	1	BHF0066	06/06/24	06/10/24	EPA 6020B	
Magnesium	10.9	0.0500	"	"	"	"	"	"	
Sodium	2.09	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/05/24 10:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0734	0.00100	units	1	BHF0290	06/11/24	06/11/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/05/24 10:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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FL01-06@2'
2406051-04 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	97.0	%	1	BHF0151	06/06/24	06/06/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/05/24 10:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0291	0.0100	mmhos/cm	1	BHF0144	06/06/24	06/07/24	EPA 120.1	

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

Date Sampled: **06/05/24 10:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.87		pH Units	1	BHF0143	06/06/24	06/07/24	EPA 9045D	

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FL01-06@2'
2406051-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

I-04, O-04, O-05

Date Sampled: **06/05/24 10:26**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Naphthalene	ND	0.0038		mg/kg	1	BHF0724	06/24/24	06/25/24	EPA 8260B	

Date Sampled: **06/05/24 10:26**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0349	87.2 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0372	92.9 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0375	93.7 %		50-150		"	"	"	"	

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Reported:
07/02/24 11:11

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 BHF0155 - EPA 5030 Soil MS

Blank (BHF0155-BLK1)

Prepared: 06/06/24 Analyzed: 06/07/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0441		"	0.0400		110	50-150			
Surrogate: Toluene-d8	0.0430		"	0.0400		107	50-150			
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400		102	50-150			

LCS (BHF0155-BS1)

Prepared: 06/06/24 Analyzed: 06/07/24

Benzene	0.0972	0.0020	mg/kg	0.100		97.2	70-130			
Toluene	0.115	0.0050	"	0.100		115	70-130			
Ethylbenzene	0.106	0.0050	"	0.100		106	70-130			
m,p-Xylene	0.211	0.010	"	0.200		106	70-130			
o-Xylene	0.106	0.0050	"	0.100		106	70-130			
1,2,4-Trimethylbenzene	0.104	0.0050	"	0.100		104	70-130			
1,3,5-Trimethylbenzene	0.102	0.0050	"	0.100		102	70-130			
Naphthalene	0.0953	0.0038	"	0.100		95.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0437		"	0.0400		109	50-150			
Surrogate: Toluene-d8	0.0437		"	0.0400		109	50-150			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.4	50-150			

Matrix Spike (BHF0155-MS1)

Source: 2406036-01

Prepared: 06/06/24 Analyzed: 06/07/24

Benzene	0.0898	0.0020	mg/kg	0.100	ND	89.8	70-130			
Toluene	0.0964	0.0050	"	0.100	ND	96.4	70-130			
Ethylbenzene	0.0879	0.0050	"	0.100	ND	87.9	70-130			
m,p-Xylene	0.177	0.010	"	0.200	ND	88.7	70-130			
o-Xylene	0.0888	0.0050	"	0.100	ND	88.8	70-130			
1,2,4-Trimethylbenzene	0.0828	0.0050	"	0.100	ND	82.8	70-130			
1,3,5-Trimethylbenzene	0.0828	0.0050	"	0.100	ND	82.8	70-130			
Naphthalene	0.0685	0.0038	"	0.100	ND	68.5	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0422		"	0.0400		105	50-150			
Surrogate: Toluene-d8	0.0422		"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.8	50-150			

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Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

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 BHF0155 - EPA 5030 Soil MS

Matrix Spike Dup (BHF0155-MSD1)	Source: 2406036-01			Prepared: 06/06/24		Analyzed: 06/07/24				
Benzene	0.0926	0.0020	mg/kg	0.100	ND	92.6	70-130	2.96	30	
Toluene	0.0998	0.0050	"	0.100	ND	99.8	70-130	3.46	30	
Ethylbenzene	0.0946	0.0050	"	0.100	ND	94.6	70-130	7.43	30	
m,p-Xylene	0.189	0.010	"	0.200	ND	94.6	70-130	6.43	30	
o-Xylene	0.0935	0.0050	"	0.100	ND	93.5	70-130	5.13	30	
1,2,4-Trimethylbenzene	0.0865	0.0050	"	0.100	ND	86.5	70-130	4.40	30	
1,3,5-Trimethylbenzene	0.0875	0.0050	"	0.100	ND	87.5	70-130	5.49	30	
Naphthalene	0.0753	0.0038	"	0.100	ND	75.3	70-130	9.52	30	
Surrogate: 1,2-Dichloroethane-d4	0.0384		"	0.0400		96.1	50-150			
Surrogate: Toluene-d8	0.0424		"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene	0.0392		"	0.0400		97.9	50-150			

Batch BHF0724 - EPA 5030 Soil MS

Blank (BHF0724-BLK1)				Prepared: 06/24/24		Analyzed: 06/25/24				
Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0424		"	0.0400		106	50-150			
Surrogate: Toluene-d8	0.0384		"	0.0400		95.9	50-150			
Surrogate: 4-Bromofluorobenzene	0.0346		"	0.0400		86.6	50-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Guttersen State CC20-04

Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

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 BHF0724 - EPA 5030 Soil MS

LCS (BHF0724-BS1)

Prepared: 06/24/24 Analyzed: 06/25/24

Benzene	0.0874	0.0020	mg/kg	0.100		87.4	70-130			
Toluene	0.110	0.0050	"	0.100		110	70-130			
Ethylbenzene	0.0996	0.0050	"	0.100		99.6	70-130			
m,p-Xylene	0.202	0.010	"	0.200		101	70-130			
o-Xylene	0.103	0.0050	"	0.100		103	70-130			
1,2,4-Trimethylbenzene	0.0998	0.0050	"	0.100		99.8	70-130			
1,3,5-Trimethylbenzene	0.0913	0.0050	"	0.100		91.3	70-130			
Naphthalene	0.0923	0.0038	"	0.100		92.3	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0397</i>		<i>"</i>	<i>0.0400</i>		<i>99.2</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0501</i>		<i>"</i>	<i>0.0400</i>		<i>125</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0383</i>		<i>"</i>	<i>0.0400</i>		<i>95.8</i>	<i>50-150</i>			

Matrix Spike (BHF0724-MS1)

Source: 2406318-41

Prepared: 06/24/24 Analyzed: 06/25/24

Benzene	0.0721	0.0020	mg/kg	0.100	ND	72.1	70-130			
Toluene	0.0764	0.0050	"	0.100	ND	76.4	70-130			
Ethylbenzene	0.0699	0.0050	"	0.100	ND	69.9	70-130			QM-07
m,p-Xylene	0.144	0.010	"	0.200	ND	72.0	70-130			
o-Xylene	0.0740	0.0050	"	0.100	ND	74.0	70-130			
1,2,4-Trimethylbenzene	0.0705	0.0050	"	0.100	ND	70.5	70-130			
1,3,5-Trimethylbenzene	0.0612	0.0050	"	0.100	ND	61.2	70-130			QM-07
Naphthalene	0.0656	0.0038	"	0.100	ND	65.6	70-130			QM-07
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0428</i>		<i>"</i>	<i>0.0400</i>		<i>107</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0381</i>		<i>"</i>	<i>0.0400</i>		<i>95.2</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0384</i>		<i>"</i>	<i>0.0400</i>		<i>96.0</i>	<i>50-150</i>			

Matrix Spike Dup (BHF0724-MSD1)

Source: 2406318-41

Prepared: 06/24/24 Analyzed: 06/25/24

Benzene	0.0764	0.0020	mg/kg	0.100	ND	76.4	70-130	5.82	30	
Toluene	0.0807	0.0050	"	0.100	ND	80.7	70-130	5.54	30	
Ethylbenzene	0.0752	0.0050	"	0.100	ND	75.2	70-130	7.20	30	
m,p-Xylene	0.155	0.010	"	0.200	ND	77.4	70-130	7.31	30	
o-Xylene	0.0796	0.0050	"	0.100	ND	79.6	70-130	7.35	30	
1,2,4-Trimethylbenzene	0.0768	0.0050	"	0.100	ND	76.8	70-130	8.56	30	
1,3,5-Trimethylbenzene	0.0678	0.0050	"	0.100	ND	67.8	70-130	10.3	30	QM-07
Naphthalene	0.0707	0.0038	"	0.100	ND	70.7	70-130	7.52	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0427</i>		<i>"</i>	<i>0.0400</i>		<i>107</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0369</i>		<i>"</i>	<i>0.0400</i>		<i>92.2</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0397</i>		<i>"</i>	<i>0.0400</i>		<i>99.2</i>	<i>50-150</i>			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Guttersen State CC20-04
Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

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 BHF0157 - EPA 3550A

Blank (BHF0157-BLK1)

Prepared & Analyzed: 06/06/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	15.6		"	12.5		124		30-150			

LCS (BHF0157-BS1)

Prepared & Analyzed: 06/06/24

C10-C28 (DRO)	589	50	mg/kg	500		118		70-130			
Surrogate: <i>o</i> -Terphenyl	14.6		"	12.5		117		30-150			

Matrix Spike (BHF0157-MS1)

Source: 2406049-04

Prepared & Analyzed: 06/06/24

C10-C28 (DRO)	509	50	mg/kg	500	33.5	95.1		70-130			
Surrogate: <i>o</i> -Terphenyl	12.0		"	12.5		96.2		30-150			

Matrix Spike Dup (BHF0157-MSD1)

Source: 2406049-04

Prepared & Analyzed: 06/06/24

C10-C28 (DRO)	604	50	mg/kg	500	33.5	114		70-130	17.1	20	
Surrogate: <i>o</i> -Terphenyl	15.7		"	12.5		125		30-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Guttersen State CC20-04
Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

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 BHF0136 - EPA 5030 Soil MS

Blank (BHF0136-BLK1)

Prepared & Analyzed: 06/06/24

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	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0215</i>		<i>"</i>	<i>0.0333</i>		<i>64.4</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0292</i>		<i>"</i>	<i>0.0333</i>		<i>87.7</i>	<i>40-150</i>			

LCS (BHF0136-BS1)

Prepared & Analyzed: 06/06/24

Acenaphthene	0.0244	0.00500	mg/kg	0.0333		73.1	31-137			
Anthracene	0.0261	0.00500	"	0.0333		78.3	30-120			
Benzo (a) anthracene	0.0271	0.00500	"	0.0333		81.2	30-120			
Benzo (a) pyrene	0.0232	0.00500	"	0.0333		69.7	30-120			
Benzo (b) fluoranthene	0.0258	0.00500	"	0.0333		77.5	30-120			
Benzo (k) fluoranthene	0.0270	0.00500	"	0.0333		81.1	30-120			
Chrysene	0.0275	0.00500	"	0.0333		82.4	30-120			
Dibenz (a,h) anthracene	0.0231	0.00500	"	0.0333		69.2	30-120			
Fluoranthene	0.0261	0.00500	"	0.0333		78.4	30-120			
Fluorene	0.0260	0.00500	"	0.0333		77.9	30-120			
Indeno (1,2,3-cd) pyrene	0.0302	0.00500	"	0.0333		90.5	30-120			
Pyrene	0.0322	0.00500	"	0.0333		96.6	35-142			
1-Methylnaphthalene	0.0192	0.00500	"	0.0333		57.7	35-142			
2-Methylnaphthalene	0.0195	0.00500	"	0.0333		58.5	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0195</i>		<i>"</i>	<i>0.0333</i>		<i>58.6</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0273</i>		<i>"</i>	<i>0.0333</i>		<i>82.0</i>	<i>40-150</i>			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Gutterson State CC20-04

Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

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 BHF0136 - EPA 5030 Soil MS

Matrix Spike (BHF0136-MS1)	Source: 2406037-01			Prepared & Analyzed: 06/06/24								
Acenaphthene	0.0558	0.00500	mg/kg	0.0333	ND	167	31-137					QM-01
Anthracene	0.318	0.00500	"	0.0333	ND	955	30-120					QM-01
Benzo (a) anthracene	0.0870	0.00500	"	0.0333	0.0369	150	30-120					QM-01
Benzo (a) pyrene	0.0171	0.00500	"	0.0333	ND	51.4	30-120					
Benzo (b) fluoranthene	0.0208	0.00500	"	0.0333	ND	62.4	30-120					
Benzo (k) fluoranthene	0.0105	0.00500	"	0.0333	ND	31.4	30-120					
Chrysene	0.0194	0.00500	"	0.0333	0.0205	NR	30-120					QM-01
Dibenz (a,h) anthracene	0.0328	0.00500	"	0.0333	ND	98.4	30-120					
Fluoranthene	0.0258	0.00500	"	0.0333	0.0149	32.9	30-120					
Fluorene	0.196	0.00500	"	0.0333	0.240	NR	30-120					QM-01
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	0.0333	ND		30-120					QM-01
Pyrene	0.0475	0.00500	"	0.0333	0.0258	65.1	35-142					
1-Methylnaphthalene	0.269	0.00500	"	0.0333	0.332	NR	15-130					QM-01
2-Methylnaphthalene	0.240	0.00500	"	0.0333	0.308	NR	15-130					QM-01
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.00708</i>		"	<i>0.0333</i>		<i>21.2</i>	<i>40-150</i>					<i>QM-01</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0183</i>		"	<i>0.0333</i>		<i>54.9</i>	<i>40-150</i>					

Matrix Spike Dup (BHF0136-MSD1)	Source: 2406037-01			Prepared & Analyzed: 06/06/24								
Acenaphthene	0.0582	0.00500	mg/kg	0.0333	ND	175	31-137	4.33	30			QM-01
Anthracene	0.334	0.00500	"	0.0333	ND	1000	30-120	4.91	30			QM-01
Benzo (a) anthracene	0.101	0.00500	"	0.0333	0.0369	191	30-120	14.5	30			QM-01
Benzo (a) pyrene	0.0173	0.00500	"	0.0333	ND	51.8	30-120	0.628	30			
Benzo (b) fluoranthene	0.0148	0.00500	"	0.0333	ND	44.3	30-120	33.8	30			QM-01
Benzo (k) fluoranthene	0.0123	0.00500	"	0.0333	ND	36.8	30-120	15.7	30			
Chrysene	0.0607	0.00500	"	0.0333	0.0205	121	30-120	103	30			QM-01
Dibenz (a,h) anthracene	0.0453	0.00500	"	0.0333	ND	136	30-120	32.0	30			QM-01
Fluoranthene	0.0243	0.00500	"	0.0333	0.0149	28.4	30-120	6.02	30			QM-01
Fluorene	0.231	0.00500	"	0.0333	0.240	NR	30-120	16.6	30			QM-01
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	0.0333	ND		30-120		30			QM-01
Pyrene	0.0471	0.00500	"	0.0333	0.0258	63.8	35-142	0.885	30			
1-Methylnaphthalene	0.222	0.00500	"	0.0333	0.332	NR	15-130	19.1	50			QM-01
2-Methylnaphthalene	0.214	0.00500	"	0.0333	0.308	NR	15-130	11.3	50			QM-01
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.00643</i>		"	<i>0.0333</i>		<i>19.3</i>	<i>40-150</i>					<i>QM-01</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0170</i>		"	<i>0.0333</i>		<i>50.9</i>	<i>40-150</i>					

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Guttersen State CC20-04

Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

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 BHF0454 - EPA 5030 Soil MS

Blank (BHF0454-BLK1)

Prepared & Analyzed: 06/17/24

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	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0255</i>		"	<i>0.0333</i>		<i>76.6</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0308</i>		"	<i>0.0333</i>		<i>92.3</i>	<i>40-150</i>			

LCS (BHF0454-BS1)

Prepared & Analyzed: 06/17/24

Acenaphthene	0.0245	0.00500	mg/kg	0.0333		73.6	31-137			
Anthracene	0.0250	0.00500	"	0.0333		75.0	30-120			
Benzo (a) anthracene	0.0255	0.00500	"	0.0333		76.5	30-120			
Benzo (a) pyrene	0.0233	0.00500	"	0.0333		69.9	30-120			
Benzo (b) fluoranthene	0.0234	0.00500	"	0.0333		70.3	30-120			
Benzo (k) fluoranthene	0.0245	0.00500	"	0.0333		73.4	30-120			
Chrysene	0.0256	0.00500	"	0.0333		76.7	30-120			
Dibenz (a,h) anthracene	0.0218	0.00500	"	0.0333		65.5	30-120			
Fluoranthene	0.0246	0.00500	"	0.0333		73.7	30-120			
Fluorene	0.0247	0.00500	"	0.0333		74.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0217	0.00500	"	0.0333		65.0	30-120			
Pyrene	0.0275	0.00500	"	0.0333		82.4	35-142			
1-Methylnaphthalene	0.0224	0.00500	"	0.0333		67.2	35-142			
2-Methylnaphthalene	0.0216	0.00500	"	0.0333		64.9	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0224</i>		"	<i>0.0333</i>		<i>67.3</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0264</i>		"	<i>0.0333</i>		<i>79.2</i>	<i>40-150</i>			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Guttersen State CC20-04

Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

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 BHF0454 - EPA 5030 Soil MS

Matrix Spike (BHF0454-MS1)	Source: 2406196-01			Prepared & Analyzed: 06/17/24						
Acenaphthene	0.0214	0.00500	mg/kg	0.0333	ND	64.3	31-137			
Anthracene	0.0225	0.00500	"	0.0333	ND	67.6	30-120			
Benzo (a) anthracene	0.0224	0.00500	"	0.0333	ND	67.2	30-120			
Benzo (a) pyrene	0.0205	0.00500	"	0.0333	ND	61.4	30-120			
Benzo (b) fluoranthene	0.0203	0.00500	"	0.0333	ND	61.0	30-120			
Benzo (k) fluoranthene	0.0212	0.00500	"	0.0333	ND	63.6	30-120			
Chrysene	0.0221	0.00500	"	0.0333	ND	66.3	30-120			
Dibenz (a,h) anthracene	0.0188	0.00500	"	0.0333	ND	56.4	30-120			
Fluoranthene	0.0212	0.00500	"	0.0333	ND	63.7	30-120			
Fluorene	0.0224	0.00500	"	0.0333	ND	67.2	30-120			
Indeno (1,2,3-cd) pyrene	0.0183	0.00500	"	0.0333	ND	55.0	30-120			
Pyrene	0.0241	0.00500	"	0.0333	ND	72.2	35-142			
1-Methylnaphthalene	0.0210	0.00500	"	0.0333	ND	62.9	15-130			
2-Methylnaphthalene	0.0203	0.00500	"	0.0333	ND	60.9	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0213		"	0.0333		63.8	40-150			
Surrogate: Fluoranthene-d10	0.0231		"	0.0333		69.2	40-150			

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Guttersen State CC20-04

Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

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 BHF0147 - EPA 3050B

Blank (BHF0147-BLK1)

Prepared: 06/06/24 Analyzed: 06/10/24

Boron ND 2.00 mg/L

LCS (BHF0147-BS1)

Prepared: 06/06/24 Analyzed: 06/10/24

Boron 4.88 2.00 mg/L 5.00 97.6 80-120

Duplicate (BHF0147-DUP1)

Source: 2406049-01

Prepared: 06/06/24 Analyzed: 06/10/24

Boron 0.479 2.00 mg/L 0.214 76.4 20 QR-01

Matrix Spike (BHF0147-MS1)

Source: 2406049-01

Prepared: 06/06/24 Analyzed: 06/11/24

Boron 5.18 2.00 mg/L 5.02 0.214 98.9 75-125

Matrix Spike Dup (BHF0147-MSD1)

Source: 2406049-01

Prepared: 06/06/24 Analyzed: 06/11/24

Boron 5.14 2.00 mg/L 5.02 0.214 98.0 75-125 0.893 25

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Guttersen State CC20-04

Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHF0153 - EPA 3050B

Blank (BHF0153-BLK1)

Prepared: 06/06/24 Analyzed: 06/08/24

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 (BHF0153-BS1)

Prepared: 06/06/24 Analyzed: 06/08/24

Arsenic	37.2	0.200	mg/kg wet	40.0	92.9	80-120
Barium	38.5	0.400	"	40.0	96.1	80-120
Cadmium	1.94	0.200	"	2.00	97.1	80-120
Copper	37.9	0.400	"	40.0	94.8	80-120
Lead	19.4	0.200	"	20.0	97.2	80-120
Nickel	37.6	0.400	"	40.0	94.0	80-120
Silver	1.93	0.0200	"	2.00	96.6	80-120
Zinc	37.3	0.400	"	40.0	93.3	80-120
Selenium	4.22	0.260	"	4.00	106	80-120

Duplicate (BHF0153-DUP1)

Source: 2406036-03

Prepared: 06/06/24 Analyzed: 06/08/24

Arsenic	3.34	0.200	mg/kg dry	3.58	7.01	20
Barium	105	0.400	"	89.7	15.3	20
Cadmium	0.202	0.200	"	0.196	2.97	20
Copper	9.91	0.400	"	9.61	3.11	20
Lead	8.05	0.200	"	7.66	4.94	20
Nickel	10.8	0.400	"	10.5	2.45	20
Silver	0.0464	0.0200	"	0.0368	23.0	20
Zinc	35.7	0.400	"	40.7	13.1	20
Selenium	ND	0.260	"	ND		20

QR-01

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Gutterson State CC20-04

Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

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 BHF0153 - EPA 3050B

Matrix Spike (BHF0153-MS1)

Source: 2406036-03

Prepared: 06/06/24 Analyzed: 06/08/24

Arsenic	43.5	0.200	mg/kg dry	43.4	3.58	91.9	75-125			
Barium	131	0.400	"	43.4	89.7	94.8	75-125			
Cadmium	2.33	0.200	"	2.17	0.196	98.4	75-125			
Copper	49.4	0.400	"	43.4	9.61	91.6	75-125			
Lead	27.8	0.200	"	21.7	7.66	92.7	75-125			
Nickel	51.1	0.400	"	43.4	10.5	93.4	75-125			
Silver	2.10	0.0200	"	2.17	0.0368	95.1	75-125			
Zinc	77.3	0.400	"	43.4	40.7	84.3	75-125			
Selenium	4.74	0.260	"	4.34	ND	109	75-125			

Matrix Spike Dup (BHF0153-MSD1)

Source: 2406036-03

Prepared: 06/06/24 Analyzed: 06/08/24

Arsenic	46.4	0.200	mg/kg dry	46.2	3.58	92.7	75-125	6.42	25
Barium	136	0.400	"	46.2	89.7	101	75-125	4.05	25
Cadmium	2.49	0.200	"	2.31	0.196	99.5	75-125	6.58	25
Copper	52.4	0.400	"	46.2	9.61	92.7	75-125	5.88	25
Lead	29.9	0.200	"	23.1	7.66	96.4	75-125	7.38	25
Nickel	54.5	0.400	"	46.2	10.5	95.3	75-125	6.44	25
Silver	2.27	0.0200	"	2.31	0.0368	96.6	75-125	7.49	25
Zinc	79.7	0.400	"	46.2	40.7	84.6	75-125	3.12	25
Selenium	4.71	0.260	"	4.62	ND	102	75-125	0.670	25

Summit Scientific

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Tasman Geosciences
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Project: Noble - Gutterson State CC20-04

Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BHF0150 - 3060A Mod

Blank (BHF0150-BLK1)

Prepared & Analyzed: 06/06/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHF0150-BS1)

Prepared & Analyzed: 06/06/24

Chromium, Hexavalent 25.4 0.30 mg/kg wet 25.0 101 80-120

Duplicate (BHF0150-DUP1)

Source: 2406037-03

Prepared & Analyzed: 06/06/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHF0150-MS1)

Source: 2406037-03

Prepared & Analyzed: 06/06/24

Chromium, Hexavalent 27.4 0.30 mg/kg dry 28.2 ND 97.2 75-125

Matrix Spike Dup (BHF0150-MSD1)

Source: 2406037-03

Prepared & Analyzed: 06/06/24

Chromium, Hexavalent 28.6 0.30 mg/kg dry 28.2 ND 102 75-125 4.43 20

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Gutterson State CC20-04

Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

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 BHF0066 - General Preparation

Blank (BHF0066-BLK1)

Prepared: 06/04/24 Analyzed: 06/10/24

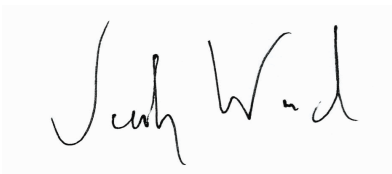
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BHF0066-BS1)

Prepared: 06/04/24 Analyzed: 06/10/24

Calcium	5.78	0.0500	mg/L wet	5.00		116	70-130			
Magnesium	5.05	0.0500	"	5.00		101	70-130			
Sodium	5.07	0.0500	"	5.00		101	70-130			

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Gutterson State CC20-04

Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

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 BHF0151 - General Preparation


Duplicate (BHF0151-DUP1)

Source: 2406049-01

Prepared & Analyzed: 06/06/24

% Solids	95.6		%		95.1			0.549	20	
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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Guttersen State CC20-04

Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

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

Summit Scientific

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

Batch BHF0144 - General Preparation

Blank (BHF0144-BLK1)

Prepared: 06/06/24 Analyzed: 06/07/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHF0144-BS1)

Prepared: 06/06/24 Analyzed: 06/07/24

Specific Conductance (EC) 0.153 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BHF0144-DUP1)

Source: 2406037-03

Prepared: 06/06/24 Analyzed: 06/07/24

Specific Conductance (EC) 0.835 0.0100 mmhos/cm 0.838 0.299 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Guttersen State CC20-04

Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

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 BHF0143 - General Preparation

LCS (BHF0143-BS1)

Prepared: 06/06/24 Analyzed: 06/07/24

pH	9.27	pH Units	9.18	101	95-105
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Duplicate (BHF0143-DUP1)

Source: 2406037-03

Prepared: 06/06/24 Analyzed: 06/07/24

pH	8.38	pH Units	8.40	0.238	20
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Guttersen State CC20-04

Project Number: UWRWE-A3676-ABN
Project Manager: Jacob Whritenour

Reported:
07/02/24 11:11

Notes and Definitions

- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- 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-01 The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
- O-05 This sample was extracted outside of the EPA recommended holding time.
- O-04 This sample was analyzed above the recommended temperature.
- I-04 Sample was analyzed out of recommended holding time per clients request.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference