

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 12, 2024

Jacob Whritenour
Tasman Geosciences
6855 W. 119th Ave.
Broomfield, CO 80020
RE: Noble - Lilli Unit 5SESW
Work Order #2405446

Enclosed are the results of analyses for samples received by Summit Scientific on 05/29/24 17:44. 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 written in a cursive, flowing style.

Natalie Tessier For Paul Shrewsbury
President



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

Project: Noble - Lilli Unit 5SESW

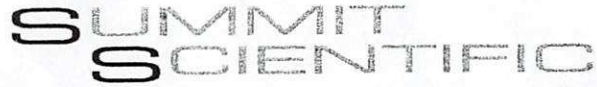
Project Number: UWRWE-A1788-ABN

Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
4" Riser9A@5'	2405446-01	Soil	05/29/24 13:18	05/29/24 17:44
3" Riser10B@5'	2405446-02	Soil	05/29/24 13:20	05/29/24 17:44
BKG01@5'	2405446-03	Soil	05/29/24 13:31	05/29/24 17:44



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

Lab ID	Page 1 of 1
2405446	

Send Data To:		Send Invoice To:
Client: Noble/Tasman	Project Manager: Jake Whritenour	Company: Chevron
Address: 6855 W. 119th Ave.	E-Mail: Jwhritenour@tasman-geo.com	Project Name/Location: Lill Unit - 5 SESW
City/State/Zip: Broomfield/CO/ 80020		AFE#: UWRWE - A1788-ABN
Phone:	Project Name: Lill Unit - 5 SESW	PO/Billing Codes:
Sampler Name: Conor Lovell	Project Number:	Contact: Dan Peterson ^{CL} Cole Moore

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instruction				
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN	1,2,4 & 1,3,5-TMBs	TDS, Cl, SO4	TPH-915	PAH-915		Boron	Metals-915	EC, SAR, pH	
1	4" Riser 9A ES'	5/29/24	1318	3			3							X	X		X	X	X	X		
2	3" Riser 10B ES'		1320											-	-		-	-	-	-		
3	8x60L ES'		1331																			
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						

Relinquished by: <i>CJH</i>	Date/Time: 5/29/24 1600	Received by: Tasman Lock Box	Date/Time: 5/29/24 1600	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: TasmanLockBox	Date/Time: 5/29/24 1744	Received by: <i>DJH</i>	Date/Time: 5/29/24 1744	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb. <i>X</i>	
Temperature Upon Receipt: 12.9	Corrected Temperature: <i>G</i>	IR gun #: <i>1</i>	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2405446

Client: Nobel Tisman Client Project ID: Lill: unit-5 SESW

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

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

Temp (°C) 12.9 Thermometer # 1

	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"/>	
If custody seals are present, are they intact? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on DCE
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

5/29/24
Date/Time



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

Project: Noble - Lilli Unit 5SESW
Project Number: UWRWE-A1788-ABN
Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

4" Riser9A@5'
2405446-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/29/24 13:18**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHE0968	05/31/24	06/01/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/29/24 13:18**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0457	114 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0422	105 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0404	101 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/29/24 13:18**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHE0972	05/31/24	06/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/29/24 13:18**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.26	58.1 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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4" Riser9A@5'
2405446-01 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **05/29/24 13:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0913	05/30/24	05/31/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0117	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0121	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0305	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.0100	0.00500	"	"	"	"	"	"	
Chrysene	0.0189	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0130	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.00922	0.00500	"	"	"	"	"	"	
Pyrene	0.0275	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/29/24 13:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0198	59.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0197	59.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/29/24 13:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHE0921	05/30/24	06/11/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/29/24 13:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Lilli Unit 5SESW
Project Number: UWRWE-A1788-ABN
Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

**4" Riser9A@5'
2405446-01 (Soil)**

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.78	0.200	mg/kg dry	1	BHE0976	05/31/24	06/06/24	EPA 6020B
Barium	274	0.400	"	"	"	"	"	"
Cadmium	0.375	0.200	"	"	"	"	"	"
Copper	8.45	0.400	"	"	"	"	"	"
Lead	13.8	0.200	"	"	"	"	"	"
Nickel	7.67	0.400	"	"	"	"	"	"
Silver	0.0321	0.0200	"	"	"	"	"	"
Zinc	35.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/29/24 13:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHE0916	05/30/24	05/30/24	EPA 7196A	

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

Date Sampled: **05/29/24 13:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	379	0.0500	mg/L dry	1	BHE0980	05/31/24	06/04/24	EPA 6020B	
Magnesium	14.5	0.0500	"	"	"	"	"	"	
Sodium	5.35	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/29/24 13:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0734	0.00100	units	1	BHF0109	06/05/24	06/05/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/29/24 13:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Reported:
06/12/24 08:31

4" Riser9A@5'
2405446-01 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	81.3	%	1	BHF0045	06/03/24	06/04/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/29/24 13:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.172	0.0100	mmhos/cm	1	BHE0984	05/31/24	06/04/24	EPA 120.1	

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

Date Sampled: **05/29/24 13:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.87		pH Units	1	BHE0983	05/31/24	06/04/24	EPA 9045D	

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Project: Noble - Lilli Unit 5SESW
Project Number: UWRWE-A1788-ABN
Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

3" Riser10B@5'
2405446-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/29/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHE0968	05/31/24	06/01/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/29/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0496	124 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0430	108 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0392	98.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/29/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHE0972	05/31/24	06/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/29/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	6.74	53.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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3" Riser10B@5'
2405446-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/29/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0913	05/30/24	05/31/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0139	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0118	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0295	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.00993	0.00500	"	"	"	"	"	"	
Chrysene	0.0218	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0188	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.00953	0.00500	"	"	"	"	"	"	
Pyrene	0.0362	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/29/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0196	58.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0178	53.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/29/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHE0921	05/30/24	06/11/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/29/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Reported:
06/12/24 08:31

3" Riser10B@5'
2405446-02 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.85	0.200	mg/kg dry	1	BHE0976	05/31/24	06/06/24	EPA 6020B
Barium	263	0.400	"	"	"	"	"	"
Cadmium	0.391	0.200	"	"	"	"	"	"
Copper	8.67	0.400	"	"	"	"	"	"
Lead	12.3	0.200	"	"	"	"	"	"
Nickel	8.03	0.400	"	"	"	"	"	"
Silver	0.0317	0.0200	"	"	"	"	"	"
Zinc	57.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/29/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHE0916	05/30/24	05/30/24	EPA 7196A	

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

Date Sampled: **05/29/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	342	0.0500	mg/L dry	1	BHE0980	05/31/24	06/04/24	EPA 6020B	
Magnesium	13.3	0.0500	"	"	"	"	"	"	
Sodium	4.52	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/29/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0652	0.00100	units	1	BHF0109	06/05/24	06/05/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/29/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: UWRWE-A1788-ABN
Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

3" Riser10B@5'
2405446-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	84.3	%	1	BHF0045	06/03/24	06/04/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/29/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.169	0.0100	mmhos/cm	1	BHE0984	05/31/24	06/04/24	EPA 120.1	

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

Date Sampled: **05/29/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.85		pH Units	1	BHE0983	05/31/24	06/04/24	EPA 9045D	

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Project Number: UWRWE-A1788-ABN
Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

BKG01@5'
2405446-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **05/29/24 13:31**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.84	0.200	mg/kg dry	1	BHE0976	05/31/24	06/06/24	EPA 6020B	
Barium	281	0.400	"	"	"	"	"	"	
Cadmium	0.391	0.200	"	"	"	"	"	"	
Copper	8.22	0.400	"	"	"	"	"	"	
Lead	12.9	0.200	"	"	"	"	"	"	
Nickel	8.50	0.400	"	"	"	"	"	"	
Silver	0.0274	0.0200	"	"	"	"	"	"	
Zinc	33.1	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/29/24 13:31**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHE0916	05/30/24	05/30/24	EPA 7196A	

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

Date Sampled: **05/29/24 13:31**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	38.5	0.0500	mg/L dry	1	BHE0980	05/31/24	06/04/24	EPA 6020B	
Magnesium	7.14	0.0500	"	"	"	"	"	"	
Sodium	27.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/29/24 13:31**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	1.06	0.00100	units	1	BHF0109	06/05/24	06/05/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: Noble - Lilli Unit 5SESW
Project Number: UWRWE-A1788-ABN
Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

BKG01@5'
2405446-03 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/29/24 13:31**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	88.3			%	1	BHF0045	06/03/24	06/04/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/29/24 13:31**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.453	0.0100		mmhos/cm	1	BHE0984	05/31/24	06/04/24	EPA 120.1	

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

Date Sampled: **05/29/24 13:31**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.61			pH Units	1	BHE0983	05/31/24	06/04/24	EPA 9045D	

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Project: Noble - Lilli Unit 5SESW
Project Number: UWRWE-A1788-ABN
Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BHE0968 - EPA 5030 Soil MS

Blank (BHE0968-BLK1)

Prepared: 05/31/24 Analyzed: 06/01/24

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
Naphthalene	ND	0.0038	"								
Gasoline Range Hydrocarbons	ND	0.50	"								
Surrogate: 1,2-Dichloroethane-d4	0.0443		"	0.0400		111	50-150				
Surrogate: Toluene-d8	0.0414		"	0.0400		104	50-150				
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		99.0	50-150				

LCS (BHE0968-BS1)

Prepared: 05/31/24 Analyzed: 06/01/24

Benzene	0.0944	0.0020	mg/kg	0.100		94.4	70-130				
Toluene	0.116	0.0050	"	0.100		116	70-130				
Ethylbenzene	0.103	0.0050	"	0.100		103	70-130				
m,p-Xylene	0.203	0.010	"	0.200		102	70-130				
o-Xylene	0.102	0.0050	"	0.100		102	70-130				
1,2,4-Trimethylbenzene	0.0964	0.0050	"	0.100		96.4	70-130				
1,3,5-Trimethylbenzene	0.0978	0.0050	"	0.100		97.8	70-130				
Naphthalene	0.0847	0.0038	"	0.100		84.7	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0440		"	0.0400		110	50-150				
Surrogate: Toluene-d8	0.0445		"	0.0400		111	50-150				
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.4	50-150				

Matrix Spike (BHE0968-MS1)

Source: 2405445-01

Prepared: 05/31/24 Analyzed: 06/01/24

Benzene	0.0816	0.0020	mg/kg	0.100	ND	81.6	70-130				
Toluene	0.0957	0.0050	"	0.100	ND	95.7	70-130				
Ethylbenzene	0.0836	0.0050	"	0.100	ND	83.6	70-130				
m,p-Xylene	0.169	0.010	"	0.200	ND	84.5	70-130				
o-Xylene	0.0820	0.0050	"	0.100	ND	82.0	70-130				
1,2,4-Trimethylbenzene	0.0753	0.0050	"	0.100	ND	75.3	70-130				
1,3,5-Trimethylbenzene	0.0766	0.0050	"	0.100	ND	76.6	70-130				
Naphthalene	0.0669	0.0038	"	0.100	ND	66.9	70-130				QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0437		"	0.0400		109	50-150				
Surrogate: Toluene-d8	0.0431		"	0.0400		108	50-150				
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		99.1	50-150				

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Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

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

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

Batch BHE0968 - EPA 5030 Soil MS

Matrix Spike Dup (BHE0968-MSD1)	Source: 2405445-01			Prepared: 05/31/24 Analyzed: 06/01/24						
Benzene	0.0761	0.0020	mg/kg	0.100	ND	76.1	70-130	7.00	30	
Toluene	0.0923	0.0050	"	0.100	ND	92.3	70-130	3.67	30	
Ethylbenzene	0.0804	0.0050	"	0.100	ND	80.4	70-130	3.92	30	
m,p-Xylene	0.161	0.010	"	0.200	ND	80.4	70-130	4.97	30	
o-Xylene	0.0794	0.0050	"	0.100	ND	79.4	70-130	3.31	30	
1,2,4-Trimethylbenzene	0.0709	0.0050	"	0.100	ND	70.9	70-130	6.03	30	
1,3,5-Trimethylbenzene	0.0729	0.0050	"	0.100	ND	72.9	70-130	4.94	30	
Naphthalene	0.0635	0.0038	"	0.100	ND	63.5	70-130	5.29	30	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0484		"	0.0400		121	50-150			
Surrogate: Toluene-d8	0.0436		"	0.0400		109	50-150			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400		98.2	50-150			

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Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BHE0972 - EPA 3550A

Blank (BHE0972-BLK1)

Prepared: 05/31/24 Analyzed: 06/01/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	8.17		"	12.5		65.4		30-150		

LCS (BHE0972-BS1)

Prepared: 05/31/24 Analyzed: 06/01/24

C10-C28 (DRO)	417	50	mg/kg	500		83.4		70-130		
Surrogate: <i>o</i> -Terphenyl	10.4		"	12.5		83.1		30-150		

Matrix Spike (BHE0972-MS1)

Source: 2405445-01

Prepared: 05/31/24 Analyzed: 06/01/24

C10-C28 (DRO)	312	50	mg/kg	500	29.2	56.6		70-130		QM-07
Surrogate: <i>o</i> -Terphenyl	8.03		"	12.5		64.2		30-150		

Matrix Spike Dup (BHE0972-MSD1)

Source: 2405445-01

Prepared: 05/31/24 Analyzed: 06/01/24

C10-C28 (DRO)	398	50	mg/kg	500	29.2	73.7		70-130	24.1	20	QR-04
Surrogate: <i>o</i> -Terphenyl	8.13		"	12.5		65.0		30-150			

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Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

PAH by EPA Method 8270D SIM - Quality Control

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

Batch BHE0913 - EPA 5030 Soil MS

Blank (BHE0913-BLK1)

Prepared: 05/30/24 Analyzed: 05/31/24

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	0.0250		"	0.0333	74.9	40-150				
Surrogate: Fluoranthene-d10	0.0290		"	0.0333	86.9	40-150				

LCS (BHE0913-BS1)

Prepared: 05/30/24 Analyzed: 05/31/24

Acenaphthene	0.0228	0.00500	mg/kg	0.0333	68.3	31-137				
Anthracene	0.0231	0.00500	"	0.0333	69.3	30-120				
Benzo (a) anthracene	0.0246	0.00500	"	0.0333	73.9	30-120				
Benzo (a) pyrene	0.0210	0.00500	"	0.0333	63.1	30-120				
Benzo (b) fluoranthene	0.0225	0.00500	"	0.0333	67.5	30-120				
Benzo (k) fluoranthene	0.0224	0.00500	"	0.0333	67.1	30-120				
Chrysene	0.0236	0.00500	"	0.0333	70.7	30-120				
Dibenz (a,h) anthracene	0.0166	0.00500	"	0.0333	49.8	30-120				
Fluoranthene	0.0229	0.00500	"	0.0333	68.8	30-120				
Fluorene	0.0238	0.00500	"	0.0333	71.5	30-120				
Indeno (1,2,3-cd) pyrene	0.0180	0.00500	"	0.0333	54.1	30-120				
Pyrene	0.0263	0.00500	"	0.0333	79.0	35-142				
1-Methylnaphthalene	0.0261	0.00500	"	0.0333	78.3	35-142				
2-Methylnaphthalene	0.0344	0.00500	"	0.0333	103	35-142				
Surrogate: 2-Methylnaphthalene-d10	0.0204		"	0.0333	61.1	40-150				
Surrogate: Fluoranthene-d10	0.0213		"	0.0333	63.9	40-150				

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Project Number: UWRWE-A1788-ABN
Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

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 BHE0913 - EPA 5030 Soil MS

Matrix Spike (BHE0913-MS1)	Source: 2405421-01			Prepared: 05/30/24 Analyzed: 05/31/24						
Acenaphthene	0.0179	0.00500	mg/kg	0.0333	ND	53.7	31-137			
Anthracene	0.0177	0.00500	"	0.0333	ND	53.1	30-120			
Benzo (a) anthracene	0.0201	0.00500	"	0.0333	ND	60.2	30-120			
Benzo (a) pyrene	0.0171	0.00500	"	0.0333	ND	51.3	30-120			
Benzo (b) fluoranthene	0.0181	0.00500	"	0.0333	ND	54.2	30-120			
Benzo (k) fluoranthene	0.0179	0.00500	"	0.0333	ND	53.8	30-120			
Chrysene	0.0199	0.00500	"	0.0333	ND	59.7	30-120			
Dibenz (a,h) anthracene	0.0136	0.00500	"	0.0333	ND	40.8	30-120			
Fluoranthene	0.0177	0.00500	"	0.0333	ND	53.2	30-120			
Fluorene	0.0162	0.00500	"	0.0333	ND	48.6	30-120			
Indeno (1,2,3-cd) pyrene	0.0164	0.00500	"	0.0333	ND	49.1	30-120			
Pyrene	0.0222	0.00500	"	0.0333	ND	66.6	35-142			
1-Methylnaphthalene	0.0183	0.00500	"	0.0333	ND	54.8	15-130			
2-Methylnaphthalene	0.0180	0.00500	"	0.0333	ND	54.1	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0150</i>		<i>"</i>	<i>0.0333</i>		<i>44.9</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0169</i>		<i>"</i>	<i>0.0333</i>		<i>50.8</i>	<i>40-150</i>			

Matrix Spike Dup (BHE0913-MSD1)	Source: 2405421-01			Prepared: 05/30/24 Analyzed: 05/31/24						
Acenaphthene	0.0204	0.00500	mg/kg	0.0333	ND	61.1	31-137	12.8	30	
Anthracene	0.0191	0.00500	"	0.0333	ND	57.4	30-120	7.77	30	
Benzo (a) anthracene	0.0214	0.00500	"	0.0333	ND	64.1	30-120	6.28	30	
Benzo (a) pyrene	0.0180	0.00500	"	0.0333	ND	54.1	30-120	5.27	30	
Benzo (b) fluoranthene	0.0189	0.00500	"	0.0333	ND	56.8	30-120	4.76	30	
Benzo (k) fluoranthene	0.0186	0.00500	"	0.0333	ND	55.7	30-120	3.54	30	
Chrysene	0.0205	0.00500	"	0.0333	ND	61.5	30-120	3.02	30	
Dibenz (a,h) anthracene	0.0144	0.00500	"	0.0333	ND	43.3	30-120	5.87	30	
Fluoranthene	0.0189	0.00500	"	0.0333	ND	56.6	30-120	6.13	30	
Fluorene	0.0189	0.00500	"	0.0333	ND	56.7	30-120	15.4	30	
Indeno (1,2,3-cd) pyrene	0.0164	0.00500	"	0.0333	ND	49.3	30-120	0.386	30	
Pyrene	0.0238	0.00500	"	0.0333	ND	71.5	35-142	7.19	30	
1-Methylnaphthalene	0.0196	0.00500	"	0.0333	ND	59.0	15-130	7.33	50	
2-Methylnaphthalene	0.0240	0.00500	"	0.0333	ND	72.1	15-130	28.5	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0166</i>		<i>"</i>	<i>0.0333</i>		<i>49.7</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0181</i>		<i>"</i>	<i>0.0333</i>		<i>54.4</i>	<i>40-150</i>			

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Project: Noble - Lilli Unit 5SESW
Project Number: UWRWE-A1788-ABN
Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
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Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD	Limit	Notes
		Limit	Units			%REC	Limits			

Batch BHE0921 - EPA 3050B

Blank (BHE0921-BLK1)		Prepared: 05/30/24 Analyzed: 06/11/24								
Boron	ND	2.00	mg/L							
LCS (BHE0921-BS1)		Prepared: 05/30/24 Analyzed: 06/11/24								
Boron	4.67	2.00	mg/L	5.00		93.4	80-120			
Duplicate (BHE0921-DUP1)		Source: 2405423-01		Prepared: 05/30/24 Analyzed: 06/11/24						
Boron	0.180	2.00	mg/L		0.193			7.31	20	
Matrix Spike (BHE0921-MS1)		Source: 2405423-01		Prepared: 05/30/24 Analyzed: 06/11/24						
Boron	5.19	2.00	mg/L	4.98	0.193	100	75-125			
Matrix Spike Dup (BHE0921-MSD1)		Source: 2405423-01		Prepared: 05/30/24 Analyzed: 06/11/24						
Boron	5.05	2.00	mg/L	4.98	0.193	97.5	75-125	2.79	25	

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Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHE0976 - EPA 3050B

Blank (BHE0976-BLK1)

Prepared: 05/31/24 Analyzed: 06/06/24

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 (BHE0976-BS1)

Prepared: 05/31/24 Analyzed: 06/06/24

Arsenic	42.0	0.200	mg/kg wet	39.1	107	80-120
Barium	42.2	0.400	"	39.1	108	80-120
Cadmium	2.08	0.200	"	1.95	106	80-120
Copper	41.6	0.400	"	39.1	107	80-120
Lead	21.0	0.200	"	19.5	107	80-120
Nickel	41.5	0.400	"	39.1	106	80-120
Silver	2.02	0.0200	"	1.95	103	80-120
Zinc	40.5	0.400	"	39.1	104	80-120
Selenium	3.97	0.260	"	3.91	102	80-120

Duplicate (BHE0976-DUP1)

Source: 2405443-01

Prepared: 05/31/24 Analyzed: 06/06/24

Arsenic	1.24	0.200	mg/kg dry	1.08	13.5	20
Barium	62.7	0.400	"	54.7	13.7	20
Cadmium	0.140	0.200	"	0.117	17.8	20
Copper	4.73	0.400	"	4.37	7.89	20
Lead	9.13	0.200	"	8.58	6.24	20
Nickel	4.84	0.400	"	4.30	11.8	20
Silver	0.0230	0.0200	"	0.0221	4.05	20
Zinc	20.1	0.400	"	17.9	11.7	20
Selenium	ND	0.260	"	ND		20

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Project Number: UWRWE-A1788-ABN
Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

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 BHE0976 - EPA 3050B

Matrix Spike (BHE0976-MS1)	Source: 2405443-01			Prepared: 05/31/24 Analyzed: 06/06/24								
Arsenic	31.5	0.200	mg/kg dry	42.0	1.08	72.3	75-125					QM-07
Barium	109	0.400	"	42.0	54.7	129	75-125					QM-07
Cadmium	2.46	0.200	"	2.10	0.117	112	75-125					
Copper	48.3	0.400	"	42.0	4.37	105	75-125					
Lead	33.8	0.200	"	21.0	8.58	120	75-125					
Nickel	48.8	0.400	"	42.0	4.30	106	75-125					
Silver	2.14	0.0200	"	2.10	0.0221	101	75-125					
Zinc	64.4	0.400	"	42.0	17.9	111	75-125					
Selenium	3.62	0.260	"	4.20	ND	86.3	75-125					

Matrix Spike Dup (BHE0976-MSD1)	Source: 2405443-01			Prepared: 05/31/24 Analyzed: 06/06/24								
Arsenic	30.0	0.200	mg/kg dry	42.0	1.08	69.0	75-125	4.59	25			QM-05
Barium	105	0.400	"	42.0	54.7	119	75-125	4.17	25			
Cadmium	2.29	0.200	"	2.10	0.117	104	75-125	7.07	25			
Copper	45.7	0.400	"	42.0	4.37	98.5	75-125	5.53	25			
Lead	33.2	0.200	"	21.0	8.58	117	75-125	1.64	25			
Nickel	46.0	0.400	"	42.0	4.30	99.2	75-125	6.09	25			
Silver	2.10	0.0200	"	2.10	0.0221	98.8	75-125	2.20	25			
Zinc	61.7	0.400	"	42.0	17.9	104	75-125	4.28	25			
Selenium	3.46	0.260	"	4.20	ND	82.5	75-125	4.52	25			

Post Spike (BHE0976-PS1)	Source: 2405443-01			Prepared: 05/31/24 Analyzed: 06/06/24								
Arsenic	73.4		ug/l	100	2.74	70.7	75-125					QM-01
Barium	249		"	100	139	110	75-125					
Cadmium	5.21		"	5.00	0.296	98.3	75-125					
Copper	107		"	100	11.1	95.7	75-125					
Lead	72.1		"	50.0	21.7	101	75-125					
Nickel	108		"	100	10.9	96.9	75-125					
Silver	5.04		"	5.00	0.0560	99.7	75-125					
Zinc	141		"	100	45.3	95.7	75-125					
Selenium	8.68		"	10.0	0.176	85.1	75-125					

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

Project: Noble - Lilli Unit 5SESW
Project Number: UWRWE-A1788-ABN
Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

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 BHE0916 - 3060A Mod

Blank (BHE0916-BLK1)

Prepared & Analyzed: 05/30/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHE0916-BS1)

Prepared & Analyzed: 05/30/24

Chromium, Hexavalent 25.8 0.30 mg/kg wet 25.0 103 80-120

Duplicate (BHE0916-DUP1)

Source: 2405415-01

Prepared & Analyzed: 05/30/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHE0916-MS1)

Source: 2405415-01

Prepared & Analyzed: 05/30/24

Chromium, Hexavalent 28.3 0.30 mg/kg dry 26.6 ND 106 75-125

Matrix Spike Dup (BHE0916-MSD1)

Source: 2405415-01

Prepared & Analyzed: 05/30/24

Chromium, Hexavalent 29.0 0.30 mg/kg dry 26.6 ND 109 75-125 2.60 20

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Tasman Geosciences
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Project: Noble - Lilli Unit 5SESW
Project Number: UWRWE-A1788-ABN
Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

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

Summit Scientific

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

Batch BHE0980 - General Preparation

Blank (BHE0980-BLK1)

Prepared: 05/31/24 Analyzed: 06/04/24

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

LCS (BHE0980-BS1)

Prepared: 05/31/24 Analyzed: 06/04/24

Calcium	5.44	0.0500	mg/L wet	5.00	109	70-130				
Magnesium	5.18	0.0500	"	5.00	104	70-130				
Sodium	5.19	0.0500	"	5.00	104	70-130				

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Project: Noble - Lilli Unit 5SESW

Project Number: UWRWE-A1788-ABN
Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

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 BHF0045 - General Preparation

Duplicate (BHF0045-DUP1)	Source: 2405446-01	Prepared: 06/03/24	Analyzed: 06/04/24		
% Solids	81.2	%	81.3	0.152	20

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Broomfield CO, 80020

Project: Noble - Lilli Unit 5SESW
Project Number: UWRWE-A1788-ABN
Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

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 BHE0984 - General Preparation

Blank (BHE0984-BLK1)

Prepared: 05/31/24 Analyzed: 06/04/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHE0984-BS1)

Prepared: 05/31/24 Analyzed: 06/04/24

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

Duplicate (BHE0984-DUP1)

Source: 2405421-01

Prepared: 05/31/24 Analyzed: 06/04/24

Specific Conductance (EC) 0.0906 0.0100 mmhos/cm 0.0913 0.748 20

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

Project: Noble - Lilli Unit 5SESW

Project Number: UWRWE-A1788-ABN
Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

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 BHE0983 - General Preparation

LCS (BHE0983-BS1)

Prepared: 05/31/24 Analyzed: 06/04/24

pH	9.13	pH Units	9.18	99.5	95-105
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Duplicate (BHE0983-DUP1)

Source: 2405421-01

Prepared: 05/31/24 Analyzed: 06/04/24

pH	8.99	pH Units	9.09	1.11	20
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Lilli Unit 5SESW

Project Number: UWRWE-A1788-ABN
Project Manager: Jacob Whritenour

Reported:
06/12/24 08:31

Notes and Definitions

- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- 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.
- 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