

Flowline Closure Checklist

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

Additional Attachments:		Tank Battery Closure		Wellhead Closure		Pit Closure		Partially Buried Vault Closure
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Site Name & COGCC Facility Number: Webster B06-07	Date: 5/1/2023	Remediation Project #: 22758
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Associated Wells:	Age of Site:	Number of Photos Attached: 1
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Starting point: (GPS coordinates and descriptions)
40.28795, -104.587499

End point: (GPS coordinates and descriptions)
40.429247, -104.58743

USCS Soil Type: SW	Estimated Depth to Groundwater: >4.5'
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Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)
None Observed

Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)
None Observed

Flowlines

Flowline type	Oil/Water/Gas			
Depth	~4			
Age				
Length	167'			
Construction Material	Steel			
Were flowlines pulled?	No			
Visual Integrity of lines	Good			
Visual impacts if trenched	N/A			
PID Readings if trenched	N/A			
Sample taken? Location/Sample ID#	Yes			
Photo Number(s)	1			

Other observations regarding on location flowlines:
Abandonment occurs from separator to wellhead

Summary

Was impacted soil identified? **No**

Total number of samples field screened: 1	Total number of samples collected: 1
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Highest PID Reading: 1.6	Total number of samples submitted to lab for analysis: 1
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If more than 10 cubic yards of impacted soil were observed:

Vertical extent:	Estimated spill volume:
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Lateral extent:	Volume of soil removed:
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Is additional investigation required?

Was groundwater encountered during the investigation?
No

Measured depth to groundwater:	Was remedial groundwater removal conducted?
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Date Groundwater was encountered:	Commencement date of removal:
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Sheen on groundwater?	Volume of groundwater removed prior to sampling:
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Free product observed?	Volume of groundwater removed post sampling:
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Total number of samples collected:	Total Volume of groundwater removed:
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Total number of samples submitted to lab for analysis:	
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Photographic Log



Equipment ID: FL01-B@4.5'		Equipment Type:		Equipment ID:		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions: Abandoned in place from here until wellhead				Notes/Conditions:			

**TABLE 1
SOIL SAMPLE LOCATIONS
NOBLE ENERGY, INC. WEBSTER B06-07**

Soil Sample ID	Date	PID (ppm)	Visual	Olfactory	Sample Type (Grab/Lab)	Latitude ¹	Longitude	PDOP
FL01-B@4.5'	05/01/23	1.6	No Staining	No Odor	Lab	40.42924993	-104.5874541	1.0

Notes:

PID = Photoionization detector

ppm = parts per million

PDOP = Position dilution of precision

HC = Hydrocarbon

1.) Latitude and longitude coordinates will be provided in decimal degrees with an accuracy and precision of 5 decimals of a degree using the North American Datum ("NAD") of 1983

TABLE 2
SOIL ANALYTICAL DATA
NOBLE ENERGY, INC. - WEBSTER B06-07

Soil Sample ID	Date	¹ Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1,2,4 - TMB (mg/kg)	1,3,5 - TMB (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL ²		1.2	490	5.8	58	30	27	2	500			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL ^{2,3}		0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500			0.55	6	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
FL01-B@4.5'	05/01/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Soil Sample ID	Date	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
Residential SSL ²		6 - 8.3	<6	<4mmhos/cm	2
FL01-B@4.5'	05/01/23	7.84	0.0954	0.364	0.243

Notes:

- Compounds referenced from 2 CCR 404-1, Table 915-1, effective January 15, 2021.
- Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
- SSLs are applicable if a pathway for communication with groundwater is present.

Definitions:

COGCC = Colorado Oil and Gas Conservation Commission
 TPH-GRO = Total petroleum hydrocarbons - gasoline range organics
 TPH-DRO = Total petroleum hydrocarbons - diesel range organics
 TPH-ORO = Total petroleum hydrocarbons - oil range organics
 mg/kg = Milligrams per kilogram
 SAR = Sodium Adsorption Ratio
 EC = Electrical Conductivity
 mmhos/cm = Millimhos per centimeter
 mg/L = Milligrams per liter
 < = Analytical result is less than the indicated laboratory reporting limit

1,2,4 - TMB = 1,2,4 Trimethylbenzene
 1,3,5 - TMB = 1,3,5 Trimethylbenzene
 Benz(a) = Benzanthracene
 Benzo(b) = Benzofluoranthene
 Benzo(k) = Benzofluoranthene
 Benzo(a) = Benzopyrene
 A,H = Dibenzoanthracene
 1,2,3-CD = Indenopyrene
 1-M = 1-methylnaphthalene
 2-M = 2-methylnaphthalene

Highlighted results are equal to or exceed the COGCC Table 915-1 standard



FL01-B@4.5'
(05/01/2023)
PID = 1.6 ppm

Legend

- - - Flowline Location
- + Soil Sample Location – Lab Analyzed (Collected via Trimble GPS)

Notes

- 1) All locations are approximate unless otherwise noted.
- 2) Buried infrastructure has been spatially projected.
- 3) Analytical results below laboratory detection limits or within compliance of COGCC Table 915-1 not shown.
- 4) Concentration in exceedance of COGCC table 915-1 soil standards indicated in **RED**.

GPS – Global Positioning System
 mg/kg – Milligrams per kilogram
 PID - Photoionization Detector
 ppm - parts per million

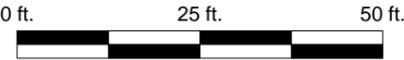


Image Source: Google Earth; Google 2020

DATE:	08/16/2023
DESIGNED BY:	JW
DRAWN BY:	HM



Tasman Geosciences, Inc.
 6855 W 119th Avenue
 Broomfield, CO 80020

**Noble Energy, Inc. – DJ Basin
 Webster B06-07**
 SENE, Section 6, Township 5 North, Range 64 West
 Weld County, Colorado

Flowline Closure & Soil
 Analytical Results Map
 (05/01/2023)

**FIGURE
 1**

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 11, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Webster B06-07

Work Order #2305019

Enclosed are the results of analyses for samples received by Summit Scientific on 05/01/23 18:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Scott Sheely For Paul Shrewsbury

President



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

Project: Noble - Webster B06-07

Project Number: UWRWE-A2944-ABN

Project Manager: Jacob Whritenour

Reported:
05/11/23 13:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01-B@4.5'	2305019-01	Soil	05/01/23 12:00	05/01/23 18:10

Summit Scientific

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

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: Webster B06-07
City/State/Zip: Broomfield, CO 80020		AFE#:
Phone: 303-261-6246	Project Name: Webster B06-07	PO/Billing Codes:
Sampler Name: Stanley Gilbert	Project Number: UWRWE-A2944-ABN	Contact: Wade Firestion

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	FLO1-B@4.5'	5/1/23	12:00	2			X			X			X	X	X	X	X			pH, EC, SAR by saturated paste ~
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by: <i>W. [Signature]</i>	Date/Time: 5/1/23 16:00	Received by: <i>[Signature]</i>	Date/Time: 5/1/23 16:00	TAT Business Days	Field DO	Notes:
Relinquished by: <i>Tasman [Signature]</i>	Date/Time: 5/23 1810	Received by: <i>[Signature]</i>	Date/Time: 5/23 1810	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Temperature Upon Receipt: 10.1	Corrected Temperature: <i>[Signature]</i>	IR gun #: 1	HNO3 lot #:	Standard	X Field Turb.	

S₂

Sample Receipt Checklist

S2 Work Order# 2305019

Client: Nobu Kasman Client Project ID: Webster Bole-01

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>NOTE</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

5/1/23
Date/Time



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

Project: Noble - Webster B06-07
Project Number: UWRWE-A2944-ABN
Project Manager: Jacob Whritenour

Reported:
05/11/23 13:27

FL01-B@4.5'
2305019-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/01/23 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGE0117	05/03/23	05/04/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/01/23 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0542	135 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0395	98.7 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0410	102 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/01/23 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGE0118	05/03/23	05/04/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/01/23 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.3	82.2 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Project Manager: Jacob Whritenour

Reported:
05/11/23 13:27

FL01-B@4.5'
2305019-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/01/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGE0043	05/02/23	05/03/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/01/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0157	47.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0208	62.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/01/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.243	0.0100	mg/L	1	BGE0244	05/08/23	05/08/23	EPA 6020B	

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

Date Sampled: **05/01/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Webster B06-07
Project Number: UWRWE-A2944-ABN
Project Manager: Jacob Whritenour

Reported:
05/11/23 13:27

FL01-B@4.5'
2305019-01 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	48.5	0.0580	mg/L dry	1	BGE0271	05/08/23	05/11/23	EPA 6020B	
Magnesium	7.44	0.0580	"	"	"	"	"	"	
Sodium	2.70	0.0580	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/01/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0954	0.00100	units	1	BGE0367	05/11/23	05/11/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/01/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.3		%	1	BGE0157	05/04/23	05/04/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/01/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.364	0.0100	mmhos/cm	1	BGE0299	05/09/23	05/09/23	EPA 120.1	

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

Date Sampled: **05/01/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.84		pH Units	1	BGE0298	05/09/23	05/09/23	EPA 9045D	

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Broomfield CO, 80020

Project: Noble - Webster B06-07
Project Number: UWRWE-A2944-ABN
Project Manager: Jacob Whritenour

Reported:
05/11/23 13:27

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 BGE0117 - EPA 5030 Soil MS

Blank (BGE0117-BLK1)

Prepared: 05/03/23 Analyzed: 05/04/23

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0456		"	0.0400		114	50-150			
<i>Surrogate: Toluene-d8</i>	0.0397		"	0.0400		99.2	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0350		"	0.0400		87.4	50-150			

LCS (BGE0117-BS1)

Prepared: 05/03/23 Analyzed: 05/04/23

Benzene	0.113	0.0020	mg/kg	0.125		90.2	70-130			
Toluene	0.106	0.0050	"	0.125		84.7	70-130			
Ethylbenzene	0.126	0.0050	"	0.125		101	70-130			
m,p-Xylene	0.256	0.010	"	0.250		103	70-130			
o-Xylene	0.124	0.0050	"	0.125		99.3	70-130			
1,2,4-Trimethylbenzene	0.129	0.0050	"	0.125		103	70-130			
1,3,5-Trimethylbenzene	0.129	0.0050	"	0.125		103	70-130			
Naphthalene	0.120	0.0038	"	0.125		96.3	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0492		"	0.0400		123	50-150			
<i>Surrogate: Toluene-d8</i>	0.0399		"	0.0400		99.7	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0380		"	0.0400		95.0	50-150			

Matrix Spike (BGE0117-MS1)

Source: 2305019-01

Prepared: 05/03/23 Analyzed: 05/04/23

Benzene	0.127	0.0020	mg/kg	0.125	ND	102	70-130			
Toluene	0.106	0.0050	"	0.125	ND	84.7	70-130			
Ethylbenzene	0.124	0.0050	"	0.125	ND	99.0	70-130			
m,p-Xylene	0.233	0.010	"	0.250	ND	93.3	70-130			
o-Xylene	0.126	0.0050	"	0.125	ND	101	70-130			
1,2,4-Trimethylbenzene	0.125	0.0050	"	0.125	ND	100	70-130			
1,3,5-Trimethylbenzene	0.122	0.0050	"	0.125	ND	97.6	70-130			
Naphthalene	0.124	0.0038	"	0.125	ND	99.2	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0415		"	0.0400		104	50-150			
<i>Surrogate: Toluene-d8</i>	0.0390		"	0.0400		97.5	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0405		"	0.0400		101	50-150			

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Project Number: UWRWE-A2944-ABN
Project Manager: Jacob Whritenour

Reported:
05/11/23 13:27

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		

Batch BGE0117 - EPA 5030 Soil MS

Matrix Spike Dup (BGE0117-MSD1)	Source: 2305019-01			Prepared: 05/03/23 Analyzed: 05/04/23						
Benzene	0.114	0.0020	mg/kg	0.125	ND	91.1	70-130	11.1	30	
Toluene	0.125	0.0050	"	0.125	ND	99.6	70-130	16.2	30	
Ethylbenzene	0.126	0.0050	"	0.125	ND	101	70-130	1.90	30	
m,p-Xylene	0.239	0.010	"	0.250	ND	95.6	70-130	2.43	30	
o-Xylene	0.130	0.0050	"	0.125	ND	104	70-130	2.91	30	
1,2,4-Trimethylbenzene	0.128	0.0050	"	0.125	ND	103	70-130	2.32	30	
1,3,5-Trimethylbenzene	0.127	0.0050	"	0.125	ND	101	70-130	3.69	30	
Naphthalene	0.121	0.0038	"	0.125	ND	97.2	70-130	2.03	30	
Surrogate: 1,2-Dichloroethane-d4	0.0423		"	0.0400		106	50-150			
Surrogate: Toluene-d8	0.0387		"	0.0400		96.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0401		"	0.0400		100	50-150			

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

Project: Noble - Webster B06-07
Project Number: UWRWE-A2944-ABN
Project Manager: Jacob Whritenour

Reported:
05/11/23 13:27

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGE0118 - EPA 3550A

Blank (BGE0118-BLK1)

Prepared: 05/03/23 Analyzed: 05/04/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	9.57		"	12.5		76.5	30-150			

LCS (BGE0118-BS1)

Prepared: 05/03/23 Analyzed: 05/04/23

C10-C28 (DRO)	352	50	mg/kg	500		70.3	70-130			
Surrogate: <i>o</i> -Terphenyl	8.56		"	12.5		68.5	30-150			

Matrix Spike (BGE0118-MS1)

Source: 2305019-01

Prepared: 05/03/23 Analyzed: 05/04/23

C10-C28 (DRO)	485	50	mg/kg	500	15.0	94.0	70-130			
Surrogate: <i>o</i> -Terphenyl	7.20		"	12.5		57.6	30-150			

Matrix Spike Dup (BGE0118-MSD1)

Source: 2305019-01

Prepared: 05/03/23 Analyzed: 05/04/23

C10-C28 (DRO)	487	50	mg/kg	500	15.0	94.5	70-130	0.523	20	
Surrogate: <i>o</i> -Terphenyl	8.56		"	12.5		68.4	30-150			

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Project: Noble - Webster B06-07
Project Number: UWRWE-A2944-ABN
Project Manager: Jacob Whritenour

Reported:
05/11/23 13:27

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 BGE0043 - EPA 5030 Soil MS

Blank (BGE0043-BLK1)

Prepared & Analyzed: 05/02/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0253</i>		<i>"</i>	<i>0.0333</i>		<i>75.8</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0301</i>		<i>"</i>	<i>0.0333</i>		<i>90.4</i>	<i>40-150</i>			

LCS (BGE0043-BS1)

Prepared & Analyzed: 05/02/23

Acenaphthene	0.0324	0.00500	mg/kg	0.0333		97.2	31-137			
Anthracene	0.0313	0.00500	"	0.0333		93.9	30-120			
Benzo (a) anthracene	0.0306	0.00500	"	0.0333		91.9	30-120			
Benzo (a) pyrene	0.0262	0.00500	"	0.0333		78.7	30-120			
Benzo (b) fluoranthene	0.0260	0.00500	"	0.0333		78.1	30-120			
Benzo (k) fluoranthene	0.0352	0.00500	"	0.0333		106	30-120			
Chrysene	0.0371	0.00500	"	0.0333		111	30-120			
Dibenz (a,h) anthracene	0.0216	0.00500	"	0.0333		64.8	30-120			
Fluoranthene	0.0301	0.00500	"	0.0333		90.2	30-120			
Fluorene	0.0284	0.00500	"	0.0333		85.1	30-120			
Indeno (1,2,3-cd) pyrene	0.0180	0.00500	"	0.0333		54.0	30-120			
Pyrene	0.0410	0.00500	"	0.0333		123	35-142			
1-Methylnaphthalene	0.0300	0.00500	"	0.0333		90.0	35-142			
2-Methylnaphthalene	0.0316	0.00500	"	0.0333		94.7	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0286</i>		<i>"</i>	<i>0.0333</i>		<i>85.8</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0301</i>		<i>"</i>	<i>0.0333</i>		<i>90.3</i>	<i>40-150</i>			

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

Project: Noble - Webster B06-07
Project Number: UWRWE-A2944-ABN
Project Manager: Jacob Whritenour

Reported:
05/11/23 13:27

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 BGE0043 - EPA 5030 Soil MS

Matrix Spike (BGE0043-MS1)	Source: 2304559-04			Prepared & Analyzed: 05/02/23						
Acenaphthene	0.0217	0.00500	mg/kg	0.0333	ND	65.1	31-137			
Anthracene	0.0202	0.00500	"	0.0333	ND	60.5	30-120			
Benzo (a) anthracene	0.0250	0.00500	"	0.0333	ND	75.0	30-120			
Benzo (a) pyrene	0.0172	0.00500	"	0.0333	ND	51.7	30-120			
Benzo (b) fluoranthene	0.0164	0.00500	"	0.0333	ND	49.1	30-120			
Benzo (k) fluoranthene	0.0199	0.00500	"	0.0333	ND	59.8	30-120			
Chrysene	0.0264	0.00500	"	0.0333	ND	79.2	30-120			
Dibenz (a,h) anthracene	0.0163	0.00500	"	0.0333	ND	48.9	30-120			
Fluoranthene	0.0208	0.00500	"	0.0333	ND	62.3	30-120			
Fluorene	0.0224	0.00500	"	0.0333	ND	67.2	30-120			
Indeno (1,2,3-cd) pyrene	0.0103	0.00500	"	0.0333	ND	30.8	30-120			
Pyrene	0.0267	0.00500	"	0.0333	ND	80.0	35-142			
1-Methylnaphthalene	0.0215	0.00500	"	0.0333	ND	64.4	15-130			
2-Methylnaphthalene	0.0236	0.00500	"	0.0333	ND	70.9	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0203</i>		<i>"</i>	<i>0.0333</i>		<i>61.0</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0231</i>		<i>"</i>	<i>0.0333</i>		<i>69.2</i>	<i>40-150</i>			

Matrix Spike Dup (BGE0043-MSD1)	Source: 2304559-04			Prepared & Analyzed: 05/02/23						
Acenaphthene	0.0181	0.00500	mg/kg	0.0333	ND	54.4	31-137	18.0	30	
Anthracene	0.0191	0.00500	"	0.0333	ND	57.4	30-120	5.19	30	
Benzo (a) anthracene	0.0249	0.00500	"	0.0333	ND	74.7	30-120	0.425	30	
Benzo (a) pyrene	0.0173	0.00500	"	0.0333	ND	51.8	30-120	0.170	30	
Benzo (b) fluoranthene	0.0167	0.00500	"	0.0333	ND	50.1	30-120	2.07	30	
Benzo (k) fluoranthene	0.0190	0.00500	"	0.0333	ND	57.1	30-120	4.61	30	
Chrysene	0.0247	0.00500	"	0.0333	ND	74.0	30-120	6.79	30	
Dibenz (a,h) anthracene	0.0171	0.00500	"	0.0333	ND	51.4	30-120	4.98	30	
Fluoranthene	0.0197	0.00500	"	0.0333	ND	59.2	30-120	5.13	30	
Fluorene	0.0201	0.00500	"	0.0333	ND	60.4	30-120	10.6	30	
Indeno (1,2,3-cd) pyrene	0.0128	0.00500	"	0.0333	ND	38.5	30-120	22.1	30	
Pyrene	0.0253	0.00500	"	0.0333	ND	76.0	35-142	5.12	30	
1-Methylnaphthalene	0.0150	0.00500	"	0.0333	ND	45.1	15-130	35.3	50	
2-Methylnaphthalene	0.0176	0.00500	"	0.0333	ND	52.9	15-130	29.1	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0171</i>		<i>"</i>	<i>0.0333</i>		<i>51.2</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0218</i>		<i>"</i>	<i>0.0333</i>		<i>65.3</i>	<i>40-150</i>			

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

Project: Noble - Webster B06-07
Project Number: UWRWE-A2944-ABN
Project Manager: Jacob Whritenour

Reported:
05/11/23 13:27

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

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

Batch BGE0244 - EPA 3050B

Blank (BGE0244-BLK1)

Prepared & Analyzed: 05/08/23

Boron ND 0.0100 mg/L

LCS (BGE0244-BS1)

Prepared & Analyzed: 05/08/23

Boron 4.99 0.0100 mg/L 5.00 99.7 80-120

Duplicate (BGE0244-DUP1)

Source: 2305017-01

Prepared & Analyzed: 05/08/23

Boron 0.165 0.0100 mg/L 0.182 9.82 20

Matrix Spike (BGE0244-MS1)

Source: 2305017-01

Prepared & Analyzed: 05/08/23

Boron 5.01 0.0100 mg/L 5.00 0.182 96.6 75-125

Matrix Spike Dup (BGE0244-MSD1)

Source: 2305017-01

Prepared & Analyzed: 05/08/23

Boron 5.17 0.0100 mg/L 5.00 0.182 99.8 75-125 3.22 25

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Project: Noble - Webster B06-07

Project Number: UWRWE-A2944-ABN
Project Manager: Jacob Whritenour

Reported:
05/11/23 13:27

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

Summit Scientific

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

Batch BGE0271 - General Preparation

Blank (BGE0271-BLK1)

Prepared: 05/08/23 Analyzed: 05/10/23

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

LCS (BGE0271-BS1)

Prepared: 05/08/23 Analyzed: 05/10/23

Calcium	6.40	0.0500	mg/L wet	5.00		128	70-130			
Magnesium	5.97	0.0500	"	5.00		119	70-130			
Sodium	6.24	0.0500	"	5.00		125	70-130			

Summit Scientific

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 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: Noble - Webster B06-07

Project Number: UWRWE-A2944-ABN
 Project Manager: Jacob Whritenour

Reported:
 05/11/23 13:27

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 BGE0157 - General Preparation

Duplicate (BGE0157-DUP1)		Source: 2305006-03			Prepared & Analyzed: 05/04/23			
% Solids	91.1		%		91.8		0.681	20

Summit Scientific

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Broomfield CO, 80020

Project: Noble - Webster B06-07

Project Number: UWRWE-A2944-ABN
Project Manager: Jacob Whritenour

Reported:
05/11/23 13:27

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 BGE0299 - General Preparation

Blank (BGE0299-BLK1)

Prepared & Analyzed: 05/09/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGE0299-BS1)

Prepared & Analyzed: 05/09/23

Specific Conductance (EC) 0.150 0.0100 mmhos/cm 0.150 100 95-105

Duplicate (BGE0299-DUP1)

Source: 2305017-01

Prepared & Analyzed: 05/09/23

Specific Conductance (EC) 0.286 0.0100 mmhos/cm 0.294 2.72 20

Summit Scientific

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 Broomfield CO, 80020

Project: Noble - Webster B06-07

Project Number: UWRWE-A2944-ABN
 Project Manager: Jacob Whritenour

Reported:
 05/11/23 13:27

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 BGE0298 - General Preparation

LCS (BGE0298-BS1)

Prepared & Analyzed: 05/09/23

pH 9.02 pH Units 9.18 98.3 95-105

Duplicate (BGE0298-DUP1)

Source: 2305017-01

Prepared & Analyzed: 05/09/23

pH 6.80 pH Units 6.63 2.53 20

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Project: Noble - Webster B06-07

Project Number: UWRWE-A2944-ABN

Project Manager: Jacob Whritenour

Reported:
05/11/23 13:27

Notes and Definitions

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