Flowline Closure Checklist

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

Additional Attachments:		Tank Battery Closure		Wellhead Closure		Pit Closure		Partially Buried Vault Closure

Site Name & ECMC Facility Number: AMEN PC D06-18D	Date: 11/2/2023	Remediation Project #: 26921
Associated Wells:	Age of Site:	Number of Photos Attached: 2

Starting point: (GPS coordinates and descriptions)
40253975, -104.594044

End point: (GPS coordinates and descriptions)
40.254672, -104.593787

USCS Soil Type: SW	Estimated Depth to Groundwater: >3'

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/ gas/ water			
Depth	3 ft			
Age	-			
Length	263 ft			
Construction Material	Steel			
Were flowlines pulled?	Yes			
Visual Integrity of lines	Good			
Visual impacts if trenched	None observed			
PID Readings if trenched	0.1-13.1			
Sample taken? Location/Sample ID#	Yes, see below			
Photo Number(s)	1-2			

Other observations regarding on location flowlines:
Samples were collected at the wellhead (FL01-A@3') and along the flowline path (FL01-C@3'). A sample was collected at the separator during the decommissioning of the associated facility (REM #26959).

Summary

Was impacted soil identified? No

Total number of samples field screened: 2	Total number of samples collected: 1
Highest PID Reading: 13.1	Total number of samples submitted to lab for analysis: 1

If more than 10 cubic yards of impacted soil were observed:

Vertical extent:	Estimated spill volume:
Lateral extent:	Volume of soil removed:

Is additional investigation required?

Was groundwater encountered during the investigation?
No

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

Photographic Log

Equipment ID: FL01-A@3'	**Equipment Type:** Flowline	
Material: Steel	**Volume:**	**Contents:** Oil/Gas/Water
Notes/Conditions: Facing South		

Equipment ID: FL01-C@3'	**Equipment Type:** Flowline	
Material: Steel	**Volume:**	**Contents:** Oil/Gas/Water
Notes/Conditions: Facing West		

TABLE 1
SOIL SAMPLE LOCATIONS
NOBLE ENERGY, INC. - AMEN PC D06-18D

Soil Sample ID	Date	PID (ppm)	Visual	Olfactory	Sample Type (Grab/Lab)	Latitude[1]	Longitude	PDOP
FL01-A@3'	11/02/23	0.1	No Staining	No Odor	Lab	40.253975	-104.594038	0.8
FL01-C@3'	11/02/23	13.1	No Staining	No Odor	Grab	40.254217	-104.593982	0.8

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. - AMEN PC D06-18D

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[1,2]		**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[1,2,3]		**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-A@3'	11/02/23	<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)
SSR[1,2]		**6 - 8.3**	**<6**	**<4mmhos/cm**	**2**
FL01-A@3'	11/02/23	**8.63**	0.362	0.187	<2.00

Sample ID	Date Sampled	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
Residential SSL[1,2]		**0.68**	**15,000**	**71**	**0.3**	**3,100**	**400**	**1,500**	**390**	**390**	**23,000**
Protection of Groundwater SSL[1,2,3]		**0.29**	**82**	**0.38**	**0.00067**	**46**	**14**	**26**	**0.26**	**0.8**	**370**
FL01-A@3'	11/02/23	**1.12**	67.3	<0.200	<0.30	2.60	3.41	2.94	<0.260	<0.0200	9.01

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

Definitions:
ECMC = Energy and Carbon Management 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 = Millmhos per centimeter
mg/L = Milligrams per liter
< = Analytical result is less than the indicated laboratory reporting limit
Highlighted results are equal to or exceed the ECMC Table 915-1 standard

1,2,4 - TMB = 1,2,4 Trimethylbenzene
1,3,5 - TMB = 1,3,5 Trimethylbenzene
Benz(a) = Benzo(a)anthracene
Benzo(b) = Benzo(b)fluoranthene
Benzo(k) = Benzo(k)fluoranthene
Benzo(a) = Benzo(a)pyrene
A,H = Dibenzo(a,h)anthracene
1,2,3-CD = Indeno(1,2,3-cd)pyrene
1-M = 1-methylnaphthalene
2-M = 2-methylnaphthalene

Legend

- Flowline Location
- Soil Sample Location – Field Screen (Collected via Trimble GPS)
- 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 ECMC Table 915-1 not shown.
4) Concentration in exceedance of ECMC Table 915-1 soil standards indicated in RED.

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

0 ft. 50 ft. 100 ft.

N

Image Source: Google Earth; Google 2020

DATE:	02/26/2024
DESIGNED BY:	JW
DRAWN BY:	KS

TASMAN GEOSCIENCES

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

Noble Energy, Inc. – DJ Basin
Amen PC D06-18D
NESW, Section 6, Township 3 North, Range 64 West
Weld County, Colorado

Flowline Closure & Soil Analytical Results Map (11/02/2023)

FIGURE 1

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

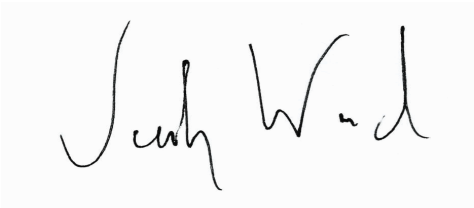
November 22, 2023

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

RE: Noble - Amen PC D06-18D
Work Order #2311061

Enclosed are the results of analyses for samples received by Summit Scientific on 11/02/23 17:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacob Wood For Paul Shrewsbury
President

S2

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Amen PC D06-18D Project Number: UWRWE-A3087-ABN Project Manager: Jacob Whritenour	**Reported:** 11/22/23 13:46

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01-A@3'	2311061-01	Soil	11/02/23 12:34	11/02/23 17:40

Summit Scientific

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

SUMMIT SCIENTIFIC

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

Lab ID	Page 1 of 1
2311065	

	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: Amen PC D06-18D
City/State/Zip: Broomfield, CO 80020		AFE#: UWRWF-A3027-ABN
Phone: 303-903-5168	Project Name: Amen PC D06-18D	PO/Billing Codes:
Sampler Name: Dalton Hagen	Project Number:	Contact: Miguel Barron

					Preservative				Matrix				Analysis Requested								Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other ___	Water	Soil	Air-Canister #	Other ___	VOC - 915	TPH - 915	PAH - 915	pH,EC,SAR	Boron - HWS	Metals - 915	HOLD		pH, EC, SAR by saturated paste
1	FL01-A@3'	11/2/23	1234	3			X			X			X	X	X	X	X	X			
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by:	Date/Time:	Received by:	Date/Time:
[signature]	1500 11/2/23	Tasman Lockbox	11/2/23 1500
Relinquished by:	Date/Time:	Received by:	Date/Time:
Tasman Lockbox	11223 1740	[signature]	11223 1740
Relinquished by:	Date/Time:	Received by:	Date/Time:

TAT Business Days		Field DO	
Same Day		Field EC	
1 Day		Field ORP	
2 Days		Field pH	
3 Days		Field Temp.	
Standard	X	Field Turb.	

Notes:

Temperature Upon Receipt: 13.3 | Corrected Temperature: 0 | IR gun #: | HNO3 lot #:

S2

Sample Receipt Checklist S2 Work Order# 2311061

Client: Nobletasman Client Project ID: Amen PC Doc-18D

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

[ ] - [ ] [ ] [ ]

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

Temp (°C) 13.3 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.	–			ON ICE
If custody seals are present, are they intact? (1)	–			
Are samples due within 48 hours present?		–		
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		–		
Is a chain-of-custody (COC) form present and filled out Completely? (1)	–			
Is the COC properly relinquished by the client w/ date and time recorded? (1)	–			
Were all samples received intact? (1)	✓			
Was adequate sample volume provided? (1)	✓			
Does the COC agree with the number and type of sample bottles received? (1)	✓			
Do the sample IDs on the bottle labels match the COC? (1)	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
Are samples preserved that require preservation (excluding cooling)? (1) Note the type of preservative in the comments column – HCl, H_2SO_4, NaOH, HNO_3, etc.			✓	
If samples are acid preserved for metals, is the pH ≤ 2? (1) Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	
Additional Comments (if any):				

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

AS
Custodian Printed Name

11/2/23
Date/Time

S2

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Amen PC D06-18D Project Number: UWRWE-A3087-ABN Project Manager: Jacob Whritenour	**Reported:** 11/22/23 13:46

FL01-A@3'

2311061-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/02/23 12:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGK0167	11/06/23	11/07/23	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: **11/02/23 12:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0476	*119 %*	*50-150*		"	"	"	"	
Surrogate: Toluene-d8	0.0418	*105 %*	*50-150*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0441	*110 %*	*50-150*		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

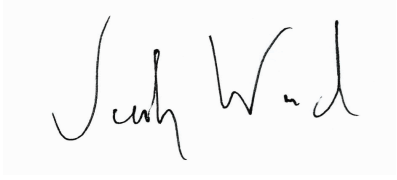
Date Sampled: **11/02/23 12:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGK0169	11/06/23	11/07/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/02/23 12:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.6	*101 %*	*30-150*		"	"	"	"	

PAH by EPA Method 8270D SIM



S2

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Amen PC D06-18D Project Number: UWRWE-A3087-ABN Project Manager: Jacob Whritenour	**Reported:** 11/22/23 13:46

FL01-A@3'

2311061-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/02/23 12:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGK0156	11/06/23	11/07/23	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: **11/02/23 12:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0161	*48.2 %*	*40-150*		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0167	*50.0 %*	*40-150*		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/02/23 12:34**

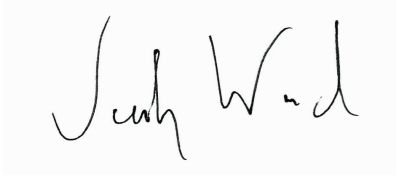
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGK0339	11/09/23	11/11/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/02/23 12:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Summit Scientific



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S2

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Amen PC D06-18D Project Number: UWRWE-A3087-ABN Project Manager: Jacob Whritenour	**Reported:** 11/22/23 13:46

FL01-A@3'

2311061-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	**1.12**	0.200	mg/kg dry	1	BGK0420	11/11/23	11/13/23	EPA 6020B	
Barium	**67.3**	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	**2.60**	0.400	"	"	"	"	"	"	
Lead	**3.41**	0.200	"	"	"	"	"	"	
Nickel	**2.94**	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	**9.01**	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **11/02/23 12:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGK0315	11/08/23	11/13/23	EPA 7196A	

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

Date Sampled: **11/02/23 12:34**

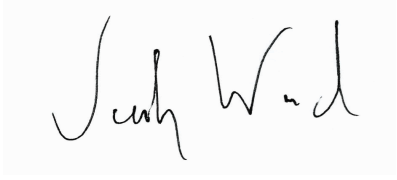
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	**69.1**	0.0500	mg/L dry	1	BGK0396	11/10/23	11/13/23	EPA 6020B	
Magnesium	**9.51**	0.0500	"	"	"	"	"	"	
Sodium	**12.1**	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **11/02/23 12:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	**0.362**	0.00100	units	1	BGK0569	11/15/23	11/15/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods



S2

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Amen PC D06-18D Project Number: UWRWE-A3087-ABN Project Manager: Jacob Whritenour	**Reported:** 11/22/23 13:46

FL01-A@3'

2311061-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **11/02/23 12:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	**94.2**		%	1	BGK0438	11/13/23	11/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/02/23 12:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	**0.187**	0.0100	mmhos/cm	1	BGK0432	11/13/23	11/13/23	EPA 120.1	

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Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Amen PC D06-18D Project Number: UWRWE-A3087-ABN Project Manager: Jacob Whritenour	**Reported:** 11/22/23 13:46

FL01-A@3'

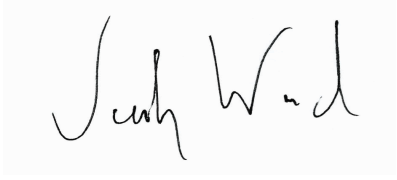
2311061-01 (Soil)

Summit Scientific

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

Date Sampled: **11/02/23 12:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	**8.63**		pH Units	1	BGK0835	11/13/23	11/21/23	EPA 9045D	



S2

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Amen PC D06-18D Project Number: UWRWE-A3087-ABN Project Manager: Jacob Whritenour	**Reported:** 11/22/23 13:46

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0167 - EPA 5030 Soil MS										
Blank (BGK0167-BLK1)				Prepared & Analyzed: 11/06/23						
Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	*0.0516*		*"*	*0.0400*		*129*	*50-150*			
Surrogate: Toluene-d8	*0.0439*		*"*	*0.0400*		*110*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0441*		*"*	*0.0400*		*110*	*50-150*			
LCS (BGK0167-BS1)				Prepared & Analyzed: 11/06/23						
Benzene	0.101	0.0020	mg/kg	0.100		101	70-130			
Toluene	0.119	0.0050	"	0.100		119	70-130			
Ethylbenzene	0.0984	0.0050	"	0.100		98.4	70-130			
m,p-Xylene	0.212	0.010	"	0.200		106	70-130			
o-Xylene	0.0998	0.0050	"	0.100		99.8	70-130			
1,2,4-Trimethylbenzene	0.117	0.0050	"	0.100		117	70-130			
1,3,5-Trimethylbenzene	0.115	0.0050	"	0.100		115	70-130			
Naphthalene	0.114	0.0038	"	0.100		114	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0518*		*"*	*0.0400*		*129*	*50-150*			
Surrogate: Toluene-d8	*0.0412*		*"*	*0.0400*		*103*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0434*		*"*	*0.0400*		*109*	*50-150*			
Matrix Spike (BGK0167-MS1)		**Source: 2311061-01**		Prepared & Analyzed: 11/06/23						
Benzene	0.0912	0.0020	mg/kg	0.100	ND	91.2	70-130			
Toluene	0.0959	0.0050	"	0.100	ND	95.9	70-130			
Ethylbenzene	0.0914	0.0050	"	0.100	ND	91.4	70-130			
m,p-Xylene	0.193	0.010	"	0.200	ND	96.4	70-130			
o-Xylene	0.0911	0.0050	"	0.100	ND	91.1	70-130			
1,2,4-Trimethylbenzene	0.0894	0.0050	"	0.100	ND	89.4	70-130			
1,3,5-Trimethylbenzene	0.0974	0.0050	"	0.100	ND	97.4	70-130			
Naphthalene	0.0967	0.0038	"	0.100	ND	96.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0524*		*"*	*0.0400*		*131*	*50-150*			
Surrogate: Toluene-d8	*0.0380*		*"*	*0.0400*		*95.0*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0413*		*"*	*0.0400*		*103*	*50-150*			

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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.

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Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Amen PC D06-18D Project Number: UWRWE-A3087-ABN Project Manager: Jacob Whritenour	**Reported:** 11/22/23 13:46

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0167 - EPA 5030 Soil MS										
Matrix Spike Dup (BGK0167-MSD1)	**Source: 2311061-01**			Prepared & Analyzed: 11/06/23						
Benzene	0.0968	0.0020	mg/kg	0.100	ND	96.8	70-130	5.94	30	
Toluene	0.109	0.0050	"	0.100	ND	109	70-130	12.9	30	
Ethylbenzene	0.0912	0.0050	"	0.100	ND	91.2	70-130	0.263	30	
m,p-Xylene	0.192	0.010	"	0.200	ND	96.2	70-130	0.187	30	
o-Xylene	0.0993	0.0050	"	0.100	ND	99.3	70-130	8.60	30	
1,2,4-Trimethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130	12.4	30	
1,3,5-Trimethylbenzene	0.106	0.0050	"	0.100	ND	106	70-130	8.35	30	
Naphthalene	0.0880	0.0038	"	0.100	ND	88.0	70-130	9.32	30	
Surrogate: 1,2-Dichloroethane-d4	*0.0534*		*"*	*0.0400*		*134*	*50-150*			
Surrogate: Toluene-d8	*0.0404*		*"*	*0.0400*		*101*	*50-150*			
Surrogate: 4-Bromofluorobenzene	*0.0487*		*"*	*0.0400*		*122*	*50-150*			

Summit Scientific

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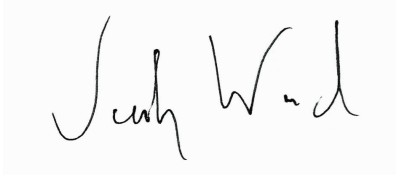
Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Amen PC D06-18D Project Number: UWRWE-A3087-ABN Project Manager: Jacob Whritenour	**Reported:** 11/22/23 13:46

Extractable Petroleum Hydrocarbons by 8015 - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0169 - EPA 3550A										
Blank (BGK0169-BLK1)				Prepared & Analyzed: 11/06/23						
C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	*14.5*		*"*	*12.5*		*116*	*30-150*			
LCS (BGK0169-BS1)				Prepared & Analyzed: 11/06/23						
C10-C28 (DRO)	418	50	mg/kg	500		83.5	70-130			
Surrogate: o-Terphenyl	*12.7*		*"*	*12.5*		*102*	*30-150*			
Matrix Spike (BGK0169-MS1)	**Source: 2311061-01**			Prepared & Analyzed: 11/06/23						
C10-C28 (DRO)	401	50	mg/kg	500	38.2	72.5	70-130			
Surrogate: o-Terphenyl	*12.2*		*"*	*12.5*		*97.3*	*30-150*			
Matrix Spike Dup (BGK0169-MSD1)	**Source: 2311061-01**			Prepared & Analyzed: 11/06/23						
C10-C28 (DRO)	451	50	mg/kg	500	38.2	82.7	70-130	11.9	20	
Surrogate: o-Terphenyl	*11.1*		*"*	*12.5*		*88.6*	*30-150*			



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Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Amen PC D06-18D Project Number: UWRWE-A3087-ABN Project Manager: Jacob Whritenour	**Reported:** 11/22/23 13:46

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0156 - EPA 5030 Soil MS										
Blank (BGK0156-BLK1)				Prepared: 11/06/23 Analyzed: 11/07/23						
Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	*0.0341*		*"*	*0.0333*		*102*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0352*		*"*	*0.0333*		*106*	*40-150*			
LCS (BGK0156-BS1)				Prepared: 11/06/23 Analyzed: 11/07/23						
Acenaphthene	0.0304	0.00500	mg/kg	0.0333		91.3	31-137			
Anthracene	0.0293	0.00500	"	0.0333		87.8	30-120			
Benzo (a) anthracene	0.0288	0.00500	"	0.0333		86.5	30-120			
Benzo (a) pyrene	0.0288	0.00500	"	0.0333		86.4	30-120			
Benzo (b) fluoranthene	0.0293	0.00500	"	0.0333		87.9	30-120			
Benzo (k) fluoranthene	0.0295	0.00500	"	0.0333		88.4	30-120			
Chrysene	0.0308	0.00500	"	0.0333		92.4	30-120			
Dibenz (a,h) anthracene	0.0256	0.00500	"	0.0333		76.7	30-120			
Fluoranthene	0.0291	0.00500	"	0.0333		87.4	30-120			
Fluorene	0.0290	0.00500	"	0.0333		87.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0205	0.00500	"	0.0333		61.5	30-120			
Pyrene	0.0307	0.00500	"	0.0333		92.2	35-142			
1-Methylnaphthalene	0.0305	0.00500	"	0.0333		91.6	35-142			
2-Methylnaphthalene	0.0289	0.00500	"	0.0333		86.7	35-142			
Surrogate: 2-Methylnaphthalene-d10	*0.0294*		*"*	*0.0333*		*88.2*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0296*		*"*	*0.0333*		*88.9*	*40-150*			

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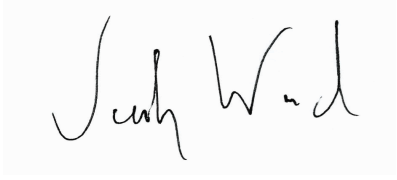

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Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Amen PC D06-18D Project Number: UWRWE-A3087-ABN Project Manager: Jacob Whritenour	**Reported:** 11/22/23 13:46

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0156 - EPA 5030 Soil MS										
Matrix Spike (BGK0156-MS1)	**Source: 2311019-01**			Prepared: 11/06/23 Analyzed: 11/07/23						
Acenaphthene	0.0208	0.00500	mg/kg	0.0333	ND	62.4	31-137			
Anthracene	0.0178	0.00500	"	0.0333	ND	53.5	30-120			
Benzo (a) anthracene	0.0175	0.00500	"	0.0333	ND	52.6	30-120			
Benzo (a) pyrene	0.0168	0.00500	"	0.0333	ND	50.3	30-120			
Benzo (b) fluoranthene	0.0172	0.00500	"	0.0333	ND	51.6	30-120			
Benzo (k) fluoranthene	0.0170	0.00500	"	0.0333	ND	51.0	30-120			
Chrysene	0.0183	0.00500	"	0.0333	ND	55.0	30-120			
Dibenz (a,h) anthracene	0.0140	0.00500	"	0.0333	ND	42.1	30-120			
Fluoranthene	0.0189	0.00500	"	0.0333	ND	56.7	30-120			
Fluorene	0.0200	0.00500	"	0.0333	ND	60.2	30-120			
Indeno (1,2,3-cd) pyrene	0.0186	0.00500	"	0.0333	ND	55.8	30-120			
Pyrene	0.0181	0.00500	"	0.0333	ND	54.4	35-142			
1-Methylnaphthalene	0.0187	0.00500	"	0.0333	ND	56.0	15-130			
2-Methylnaphthalene	0.0175	0.00500	"	0.0333	ND	52.5	15-130			
Surrogate: 2-Methylnaphthalene-d10	*0.0181*		*"*	*0.0333*		*54.4*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0195*		*"*	*0.0333*		*58.5*	*40-150*			
Matrix Spike Dup (BGK0156-MSD1)	**Source: 2311019-01**			Prepared: 11/06/23 Analyzed: 11/07/23						
Acenaphthene	0.0195	0.00500	mg/kg	0.0333	ND	58.4	31-137	6.66	30	
Anthracene	0.0178	0.00500	"	0.0333	ND	53.3	30-120	0.432	30	
Benzo (a) anthracene	0.0179	0.00500	"	0.0333	ND	53.7	30-120	2.02	30	
Benzo (a) pyrene	0.0169	0.00500	"	0.0333	ND	50.7	30-120	0.854	30	
Benzo (b) fluoranthene	0.0174	0.00500	"	0.0333	ND	52.1	30-120	1.10	30	
Benzo (k) fluoranthene	0.0172	0.00500	"	0.0333	ND	51.6	30-120	1.31	30	
Chrysene	0.0188	0.00500	"	0.0333	ND	56.5	30-120	2.71	30	
Dibenz (a,h) anthracene	0.0144	0.00500	"	0.0333	ND	43.3	30-120	2.72	30	
Fluoranthene	0.0188	0.00500	"	0.0333	ND	56.3	30-120	0.761	30	
Fluorene	0.0196	0.00500	"	0.0333	ND	58.8	30-120	2.30	30	
Indeno (1,2,3-cd) pyrene	0.0186	0.00500	"	0.0333	ND	55.7	30-120	0.230	30	
Pyrene	0.0184	0.00500	"	0.0333	ND	55.1	35-142	1.30	30	
1-Methylnaphthalene	0.0181	0.00500	"	0.0333	ND	54.4	15-130	2.94	50	
2-Methylnaphthalene	0.0179	0.00500	"	0.0333	ND	53.8	15-130	2.45	50	
Surrogate: 2-Methylnaphthalene-d10	*0.0189*		*"*	*0.0333*		*56.8*	*40-150*			
Surrogate: Fluoranthene-d10	*0.0198*		*"*	*0.0333*		*59.4*	*40-150*			

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Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Amen PC D06-18D Project Number: UWRWE-A3087-ABN Project Manager: Jacob Whritenour	**Reported:** 11/22/23 13:46

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

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0339 - EPA 3050B										
Blank (BGK0339-BLK1)				Prepared: 11/09/23 Analyzed: 11/11/23						
Boron	ND	2.00	mg/L							
LCS (BGK0339-BS1)				Prepared: 11/09/23 Analyzed: 11/11/23						
Boron	4.79	2.00	mg/L	5.00		95.9	80-120			
Duplicate (BGK0339-DUP1)		**Source: 2311019-01**		Prepared: 11/09/23 Analyzed: 11/11/23						
Boron	0.0762	2.00	mg/L		0.0904			17.1	20	
Matrix Spike (BGK0339-MS1)		**Source: 2311019-01**		Prepared: 11/09/23 Analyzed: 11/11/23						
Boron	5.07	2.00	mg/L	5.00	0.0904	99.6	75-125			
Matrix Spike Dup (BGK0339-MSD1)		**Source: 2311019-01**		Prepared: 11/09/23 Analyzed: 11/11/23						
Boron	5.31	2.00	mg/L	5.00	0.0904	104	75-125	4.70	25	

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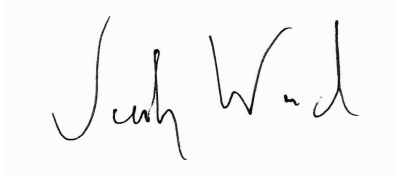

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Amen PC D06-18D Project Number: UWRWE-A3087-ABN Project Manager: Jacob Whritenour	**Reported:** 11/22/23 13:46

Total Metals by EPA 6020B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0420 - EPA 3050B										
Blank (BGK0420-BLK1)				Prepared: 11/11/23 Analyzed: 11/13/23						
Arsenic	ND	0.200	mg/kg wet							
Barium	ND	0.400	"							
Cadmium	ND	0.200	"							
Copper	ND	0.400	"							
Lead	ND	0.200	"							
Nickel	ND	0.400	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							
Selenium	ND	0.260	"							
LCS (BGK0420-BS1)				Prepared: 11/11/23 Analyzed: 11/13/23						
Arsenic	41.9	0.200	mg/kg wet	40.0		105	80-120			
Barium	42.3	0.400	"	40.0		106	80-120			
Cadmium	1.91	0.200	"	2.00		95.7	80-120			
Copper	40.3	0.400	"	40.0		101	80-120			
Lead	19.6	0.200	"	20.0		98.1	80-120			
Nickel	41.8	0.400	"	40.0		105	80-120			
Silver	1.86	0.0200	"	2.00		92.8	80-120			
Zinc	38.8	0.400	"	40.0		97.0	80-120			
Selenium	4.06	0.260	"	4.00		102	80-120			
Duplicate (BGK0420-DUP1)		**Source: 2310443-01**		Prepared: 11/11/23 Analyzed: 11/13/23						
Arsenic	4.67	0.200	mg/kg dry		5.89			23.2	20	QR-04
Barium	114	0.400	"		128			12.2	20	
Cadmium	0.182	0.200	"		0.241			28.0	20	QR-01
Copper	6.31	0.400	"		7.27			14.1	20	
Lead	9.26	0.200	"		12.2			27.7	20	QR-04
Nickel	7.91	0.400	"		8.10			2.42	20	
Silver	0.0552	0.0200	"		0.0571			3.48	20	
Zinc	21.5	0.400	"		24.6			13.4	20	
Selenium	0.187	0.260	"		0.259			32.2	20	QR-01

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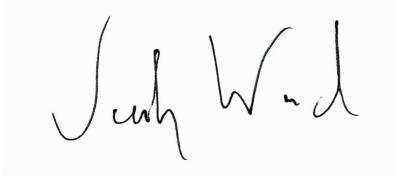
Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Amen PC D06-18D Project Number: UWRWE-A3087-ABN Project Manager: Jacob Whritenour	**Reported:** 11/22/23 13:46

Total Metals by EPA 6020B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0420 - EPA 3050B										
Matrix Spike (BGK0420-MS1)	**Source: 2310443-01**			Prepared: 11/11/23 Analyzed: 11/13/23						
Arsenic	54.1	0.200	mg/kg dry	48.8	5.89	98.8	75-125			
Barium	166	0.400	"	48.8	128	76.6	75-125			
Cadmium	2.54	0.200	"	2.44	0.241	94.2	75-125			
Copper	36.2	0.400	"	48.8	7.27	59.3	75-125			QM-07
Lead	32.9	0.200	"	24.4	12.2	84.5	75-125			
Nickel	37.8	0.400	"	48.8	8.10	60.8	75-125			QM-07
Silver	2.27	0.0200	"	2.44	0.0571	90.7	75-125			
Zinc	53.2	0.400	"	48.8	24.6	58.6	75-125			QM-07
Selenium	7.46	0.260	"	4.88	0.259	147	75-125			QM-07
Matrix Spike Dup (BGK0420-MSD1)	**Source: 2310443-01**			Prepared: 11/11/23 Analyzed: 11/13/23						
Arsenic	50.5	0.200	mg/kg dry	48.8	5.89	91.4	75-125	6.93	25	
Barium	153	0.400	"	48.8	128	50.0	75-125	8.17	25	QM-07
Cadmium	2.38	0.200	"	2.44	0.241	87.7	75-125	6.49	25	
Copper	34.4	0.400	"	48.8	7.27	55.5	75-125	5.32	25	QM-07
Lead	30.9	0.200	"	24.4	12.2	76.2	75-125	6.35	25	
Nickel	35.9	0.400	"	48.8	8.10	56.9	75-125	5.22	25	QM-07
Silver	2.17	0.0200	"	2.44	0.0571	86.5	75-125	4.66	25	
Zinc	50.0	0.400	"	48.8	24.6	51.9	75-125	6.27	25	QM-07
Selenium	7.24	0.260	"	4.88	0.259	143	75-125	3.05	25	QM-07



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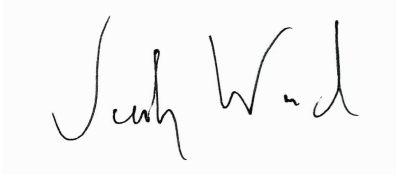
Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Amen PC D06-18D Project Number: UWRWE-A3087-ABN Project Manager: Jacob Whritenour	**Reported:** 11/22/23 13:46

Hexavalent Chromium by EPA Method 7196 - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0315 - 3060A_Mod										
Blank (BGK0315-BLK1)				Prepared: 11/08/23 Analyzed: 11/13/23						
Chromium, Hexavalent	ND	0.30	mg/kg wet							
LCS (BGK0315-BS1)				Prepared: 11/08/23 Analyzed: 11/13/23						
Chromium, Hexavalent	26.6	0.30	mg/kg wet	25.0		107	80-120			
Duplicate (BGK0315-DUP1)		**Source: 2310443-01**		Prepared: 11/08/23 Analyzed: 11/13/23						
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND				20	
Matrix Spike (BGK0315-MS1)		**Source: 2310443-01**		Prepared: 11/08/23 Analyzed: 11/13/23						
Chromium, Hexavalent	32.0	0.30	mg/kg dry	30.5	ND	105	75-125			
Matrix Spike Dup (BGK0315-MSD1)		**Source: 2310443-01**		Prepared: 11/08/23 Analyzed: 11/13/23						
Chromium, Hexavalent	31.4	0.30	mg/kg dry	30.5	ND	103	75-125	2.12	20	

Summit Scientific



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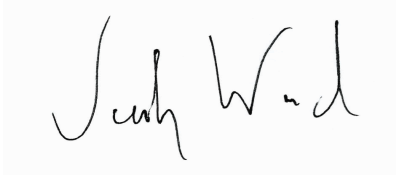
Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Amen PC D06-18D Project Number: UWRWE-A3087-ABN Project Manager: Jacob Whritenour	**Reported:** 11/22/23 13:46

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

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0396 - General Preparation										
Blank (BGK0396-BLK1)				Prepared: 11/10/23 Analyzed: 11/13/23						
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							
LCS (BGK0396-BS1)				Prepared: 11/10/23 Analyzed: 11/13/23						
Calcium	5.74	0.0500	mg/L wet	5.00		115	70-130			
Magnesium	5.15	0.0500	"	5.00		103	70-130			
Sodium	5.20	0.0500	"	5.00		104	70-130			



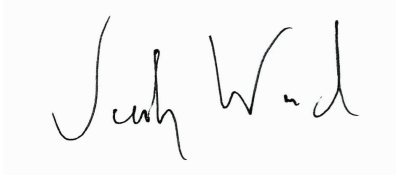
S2

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Amen PC D06-18D Project Number: UWRWE-A3087-ABN Project Manager: Jacob Whritenour	**Reported:** 11/22/23 13:46

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

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0438 - General Preparation										
Duplicate (BGK0438-DUP1)	**Source: 2311052-01**			Prepared & Analyzed: 11/13/23						
% Solids	86.3		%		85.9			0.518	20	



S2

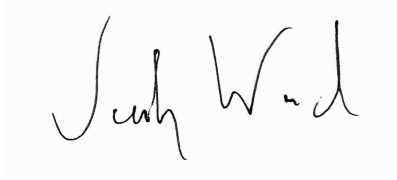
Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Amen PC D06-18D Project Number: UWRWE-A3087-ABN Project Manager: Jacob Whritenour	**Reported:** 11/22/23 13:46

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

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0432 - General Preparation										
Blank (BGK0432-BLK1)				Prepared & Analyzed: 11/13/23						
Specific Conductance (EC)	ND	0.0100	mmhos/cm							
LCS (BGK0432-BS1)				Prepared & Analyzed: 11/13/23						
Specific Conductance (EC)	0.152	0.0100	mmhos/cm	0.150		101	95-105			
Duplicate (BGK0432-DUP1)		**Source: 2311061-01**		Prepared & Analyzed: 11/13/23						
Specific Conductance (EC)	0.187	0.0100	mmhos/cm		0.187			0.00	20	

Summit Scientific



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S2

Tasman Geosciences 6855 W. 119th Ave. Broomfield CO, 80020	Project: Noble - Amen PC D06-18D Project Number: UWRWE-A3087-ABN Project Manager: Jacob Whritenour	**Reported:** 11/22/23 13:46

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

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0431 - General Preparation										
LCS (BGK0431-BS1)				Prepared & Analyzed: 11/13/23						
pH	9.10		pH Units	9.18		99.1	95-105			
Duplicate (BGK0431-DUP1)		**Source: 2311061-01**		Prepared & Analyzed: 11/13/23						
pH	8.83		pH Units		8.83			0.00	20	
Batch BGK0835 - General Preparation										
LCS (BGK0835-BS1)				Prepared & Analyzed: 11/21/23						
pH	9.18		pH Units	9.18		100	95-105			
Duplicate (BGK0835-DUP1)		**Source: 2310248-01**		Prepared & Analyzed: 11/21/23						
pH	9.61		pH Units		9.58			0.313	20	

Summit Scientific

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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.
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.
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