

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

December 17, 2024

Daniel Simpson

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Garcia USX AB35-10D

Work Order #2411315

Enclosed are the results of analyses for samples received by Summit Scientific on 11/18/24 17:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Jacob Wood For Paul Shrewsbury

President



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

Project: Noble - Garcia USX AB35-10D

Project Number: UWRWE-A2773-ABN  
Project Manager: Daniel Simpson

**Reported:**  
12/17/24 11:26

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01-15@4'	2411315-01	Soil	11/18/24 12:48	11/18/24 17:35

Summit Scientific

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



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

Lab ID	Page 1 of 1
2411315	

	<b>Send Data To:</b>	<b>Send Invoice To:</b>
Client: Tasman, Inc.	Project Manager: Daniel Simpson	Company: Noble Energy, Inc.
Address: 6855 W. 119th Ave.	E-Mail: Tas-chevron-5@tasman-geo.com	Project Name/Location: NARDA USX AB35-100
City/State/Zip: Broomfield / CO / 80020	(bvevft2@chevron.com, jason.davidson@chevron.com)	AFE#: UWRWGA2773-ABN
Phone: 303-487-1228	Project Name: NARDA USX AB35-100	PO/Billing Codes:
Sampler Name: McKenzie Reynolds	Project Number:	Contact: Mike Montoya

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested							Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS		HOLD
1	FL01-1504'	11/18/24	1248	2			X			X			X	X	X	X	X	X		SAR, EC, pH by saturated paste
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by: <i>[Signature]</i>	Date/Time: 11/18/2024 1700	Received by: Tasman Lockbox	Date/Time: 11/18/2024 1700	TAT Business Days	Field DO	Notes:
Relinquished by: <i>[Signature]</i>	Date/Time: 11/18/24 1735	Received by: <i>[Signature]</i>	Date/Time: 11/18/24 1735	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Temperature Upon Receipt: 11.2	Corrected Temperature: 9	IR gun #: 1	HNO3 lot #:	Standard	X	Field Turb.

S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 2411315

Client: Tasman Client Project ID: GarciaUSX AB 35-10D

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

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

Temp (°C) 11.2 Thermometer # 1

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

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

AS

Custodian Printed Name

11/18/24  
Date/Time

30000



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

Project: Noble - Garcia USX AB35-10D

Project Number: UWRWE-A2773-ABN  
Project Manager: Daniel Simpson

**Reported:**  
12/17/24 11:26

**FL01-15@4'**  
**2411315-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **11/18/24 12:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHK1058	11/20/24	11/21/24	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: **11/18/24 12:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0414	104 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0389	97.4 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **11/18/24 12:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHK1059	11/20/24	11/22/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **11/18/24 12:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.81	62.5 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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**FL01-15@4'**  
**2411315-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **11/18/24 12:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHK1109	11/21/24	11/25/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **11/18/24 12:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0149	44.8 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0160	47.9 %	40-140		"	"	"	"	

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

Date Sampled: **11/18/24 12:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHL0155	12/04/24	12/05/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **11/18/24 12:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Garcia USX AB35-10D

Project Number: UWRWE-A2773-ABN  
Project Manager: Daniel Simpson

**Reported:**  
12/17/24 11:26

**FL01-15@4'**  
**2411315-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.45	0.200	mg/kg dry	1	BHL0462	12/11/24	12/13/24	EPA 6020B	
Barium	33.1	0.400	"	"	"	"	"	"	
Cadmium	0.267	0.200	"	"	"	"	"	"	
Copper	6.68	0.400	"	"	"	"	"	"	
Lead	8.82	0.200	"	"	"	"	"	"	
Nickel	3.95	0.400	"	"	"	"	"	"	
Silver	0.0298	0.0200	"	"	"	"	"	"	
Zinc	28.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 11/18/24 12:48

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHL0087	12/03/24	12/03/24	EPA 7196A	

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

Date Sampled: 11/18/24 12:48

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	35.4	0.0500	mg/L dry	1	BHL0634	12/13/24	12/16/24	EPA 6020B	
Magnesium	23.8	0.0500	"	"	"	"	"	"	
Sodium	73.4	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 11/18/24 12:48

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.34	0.00100	units	1	BHL0750	12/17/24	12/17/24	Calculation	

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

Date Sampled: 11/18/24 12:48

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Reported:**  
12/17/24 11:26

**FL01-15@4'**  
**2411315-01 (Soil)**

**Summit Scientific**

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

<b>% Solids</b>	<b>81.8</b>	%	1	BHL0027	12/02/24	12/03/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **11/18/24 12:48**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Specific Conductance (EC)</b>	<b>0.746</b>	0.0100	mmhos/cm	1	BHL0635	12/13/24	12/16/24	EPA 120.1	

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

Date Sampled: **11/18/24 12:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>pH</b>	<b>8.69</b>		pH Units	1	BHL0636	12/13/24	12/16/24	EPA 9045D	

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**Reported:**  
12/17/24 11:26

### 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 BHK1058 - EPA 5030 Soil MS

##### Blank (BHK1058-BLK1)

Prepared & Analyzed: 11/20/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0475		"	0.0400		119	50-150			
<i>Surrogate: Toluene-d8</i>	0.0406		"	0.0400		102	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0424		"	0.0400		106	50-150			

##### LCS (BHK1058-BS1)

Prepared & Analyzed: 11/20/24

Benzene	0.111	0.0020	mg/kg	0.100		111	70-130			
Toluene	0.110	0.0050	"	0.100		110	70-130			
Ethylbenzene	0.109	0.0050	"	0.100		109	70-130			
m,p-Xylene	0.217	0.010	"	0.200		108	70-130			
o-Xylene	0.107	0.0050	"	0.100		107	70-130			
1,2,4-Trimethylbenzene	0.112	0.0050	"	0.100		112	70-130			
1,3,5-Trimethylbenzene	0.111	0.0050	"	0.100		111	70-130			
Naphthalene	0.131	0.0038	"	0.100		131	70-130			QLCS-01
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0496		"	0.0400		124	50-150			
<i>Surrogate: Toluene-d8</i>	0.0409		"	0.0400		102	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0413		"	0.0400		103	50-150			

##### Matrix Spike (BHK1058-MS1)

Source: 2411291-01

Prepared & Analyzed: 11/20/24

Benzene	0.101	0.0020	mg/kg	0.100	ND	101	70-130			
Toluene	0.100	0.0050	"	0.100	ND	100	70-130			
Ethylbenzene	0.0997	0.0050	"	0.100	ND	99.7	70-130			
m,p-Xylene	0.196	0.010	"	0.200	ND	98.1	70-130			
o-Xylene	0.0977	0.0050	"	0.100	ND	97.7	70-130			
1,2,4-Trimethylbenzene	0.102	0.0050	"	0.100	ND	102	70-130			
1,3,5-Trimethylbenzene	0.0994	0.0050	"	0.100	ND	99.4	70-130			
Naphthalene	0.125	0.0038	"	0.100	ND	125	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0515		"	0.0400		129	50-150			
<i>Surrogate: Toluene-d8</i>	0.0410		"	0.0400		102	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0413		"	0.0400		103	50-150			

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Project: Noble - Garcia USX AB35-10D

Project Number: UWRWE-A2773-ABN  
Project Manager: Daniel Simpson

**Reported:**  
12/17/24 11:26

**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 BHK1058 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (BHK1058-MSD1)</b>	<b>Source: 2411291-01</b>			<b>Prepared &amp; Analyzed: 11/20/24</b>						
Benzene	0.106	0.0020	mg/kg	0.100	ND	106	70-130	5.04	30	
Toluene	0.106	0.0050	"	0.100	ND	106	70-130	5.79	30	
Ethylbenzene	0.106	0.0050	"	0.100	ND	106	70-130	6.47	30	
m,p-Xylene	0.209	0.010	"	0.200	ND	105	70-130	6.54	30	
o-Xylene	0.104	0.0050	"	0.100	ND	104	70-130	6.68	30	
1,2,4-Trimethylbenzene	0.109	0.0050	"	0.100	ND	109	70-130	6.09	30	
1,3,5-Trimethylbenzene	0.108	0.0050	"	0.100	ND	108	70-130	8.05	30	
Naphthalene	0.136	0.0038	"	0.100	ND	136	70-130	8.68	30	QM-05
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0514</i>		<i>"</i>	<i>0.0400</i>		<i>128</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0413</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0430</i>		<i>"</i>	<i>0.0400</i>		<i>108</i>	<i>50-150</i>			

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Project Manager: Daniel Simpson

**Reported:**  
12/17/24 11:26

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

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

**Batch BHK1059 - EPA 3550A**

**Blank (BHK1059-BLK1)**

Prepared: 11/20/24 Analyzed: 11/22/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	12.9		"	12.5		103		30-150			

**LCS (BHK1059-BS1)**

Prepared: 11/20/24 Analyzed: 11/22/24

C10-C28 (DRO)	470	50	mg/kg	500		94.1		70-130			
Surrogate: <i>o</i> -Terphenyl	11.8		"	12.5		94.8		30-150			

**Matrix Spike (BHK1059-MS1)**

Source: 2411291-01

Prepared: 11/20/24 Analyzed: 11/22/24

C10-C28 (DRO)	468	50	mg/kg	500	38.3	86.0		70-130			
Surrogate: <i>o</i> -Terphenyl	12.1		"	12.5		96.6		30-150			

**Matrix Spike Dup (BHK1059-MSD1)**

Source: 2411291-01

Prepared: 11/20/24 Analyzed: 11/22/24

C10-C28 (DRO)	467	50	mg/kg	500	38.3	85.8		70-130	0.270	20	
Surrogate: <i>o</i> -Terphenyl	12.1		"	12.5		97.2		30-150			

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**Reported:**  
12/17/24 11:26

**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 BHK1109 - EPA 5030 Soil MS**

**Blank (BHK1109-BLK1)**

Prepared: 11/21/24 Analyzed: 11/22/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0217		"	0.0333		65.2	40-140			
<i>Surrogate: Fluoranthene-d10</i>	0.0228		"	0.0333		68.4	40-140			

**LCS (BHK1109-BS1)**

Prepared: 11/21/24 Analyzed: 11/22/24

Acenaphthene	0.0212	0.00500	mg/kg	0.0333		63.7	40-140			
Anthracene	0.0232	0.00500	"	0.0333		69.6	40-140			
Benzo (a) anthracene	0.0240	0.00500	"	0.0333		71.9	40-140			
Benzo (a) pyrene	0.0233	0.00500	"	0.0333		69.9	40-140			
Benzo (b) fluoranthene	0.0227	0.00500	"	0.0333		68.2	40-140			
Benzo (k) fluoranthene	0.0224	0.00500	"	0.0333		67.1	40-140			
Chrysene	0.0223	0.00500	"	0.0333		66.8	40-140			
Dibenz (a,h) anthracene	0.0184	0.00500	"	0.0333		55.2	40-140			
Fluoranthene	0.0238	0.00500	"	0.0333		71.3	40-140			
Fluorene	0.0219	0.00500	"	0.0333		65.8	40-140			
Indeno (1,2,3-cd) pyrene	0.0203	0.00500	"	0.0333		60.9	40-140			
Pyrene	0.0241	0.00500	"	0.0333		72.2	40-140			
1-Methylnaphthalene	0.0216	0.00500	"	0.0333		64.7	40-140			
2-Methylnaphthalene	0.0231	0.00500	"	0.0333		69.2	40-140			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0212		"	0.0333		63.5	40-140			
<i>Surrogate: Fluoranthene-d10</i>	0.0243		"	0.0333		72.8	40-140			

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

Project: Noble - Garcia USX AB35-10D

Project Number: UWRWE-A2773-ABN  
Project Manager: Daniel Simpson

**Reported:**  
12/17/24 11:26

**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 BHK1109 - EPA 5030 Soil MS**

**Matrix Spike (BHK1109-MS1)**

Source: 2411296-01

Prepared: 11/21/24 Analyzed: 11/22/24

Acenaphthene	0.0150	0.00500	mg/kg	0.0333	ND	45.2	40-140		
Anthracene	0.0154	0.00500	"	0.0333	ND	46.3	40-140		
Benzo (a) anthracene	0.0165	0.00500	"	0.0333	ND	49.4	40-140		
Benzo (a) pyrene	0.0158	0.00500	"	0.0333	ND	47.3	40-140		
Benzo (b) fluoranthene	0.0154	0.00500	"	0.0333	ND	46.3	40-140		
Benzo (k) fluoranthene	0.0151	0.00500	"	0.0333	ND	45.4	40-140		
Chrysene	0.0157	0.00500	"	0.0333	ND	47.0	40-140		
Dibenz (a,h) anthracene	0.0143	0.00500	"	0.0333	ND	43.0	40-140		
Fluoranthene	0.0160	0.00500	"	0.0333	ND	47.9	40-140		
Fluorene	0.0156	0.00500	"	0.0333	ND	46.7	40-140		
Indeno (1,2,3-cd) pyrene	0.0140	0.00500	"	0.0333	ND	41.9	40-140		
Pyrene	0.0175	0.00500	"	0.0333	ND	52.4	40-140		
1-Methylnaphthalene	0.0165	0.00500	"	0.0333	ND	49.6	40-140		
2-Methylnaphthalene	0.0172	0.00500	"	0.0333	ND	51.6	40-140		
Surrogate: 2-Methylnaphthalene-d10	0.0164		"	0.0333		49.2	40-140		
Surrogate: Fluoranthene-d10	0.0159		"	0.0333		47.6	40-140		

**Matrix Spike Dup (BHK1109-MSD1)**

Source: 2411296-01

Prepared: 11/21/24 Analyzed: 11/22/24

Acenaphthene	0.0168	0.00500	mg/kg	0.0333	ND	50.4	40-140	11.0	30
Anthracene	0.0184	0.00500	"	0.0333	ND	55.0	40-140	17.2	30
Benzo (a) anthracene	0.0188	0.00500	"	0.0333	ND	56.4	40-140	13.3	30
Benzo (a) pyrene	0.0180	0.00500	"	0.0333	ND	53.9	40-140	13.1	30
Benzo (b) fluoranthene	0.0173	0.00500	"	0.0333	ND	52.0	40-140	11.6	30
Benzo (k) fluoranthene	0.0169	0.00500	"	0.0333	ND	50.8	40-140	11.1	30
Chrysene	0.0175	0.00500	"	0.0333	ND	52.4	40-140	10.8	30
Dibenz (a,h) anthracene	0.0143	0.00500	"	0.0333	ND	42.8	40-140	0.315	30
Fluoranthene	0.0187	0.00500	"	0.0333	ND	56.0	40-140	15.6	30
Fluorene	0.0173	0.00500	"	0.0333	ND	51.9	40-140	10.7	30
Indeno (1,2,3-cd) pyrene	0.0159	0.00500	"	0.0333	ND	47.7	40-140	12.9	30
Pyrene	0.0191	0.00500	"	0.0333	ND	57.2	40-140	8.67	30
1-Methylnaphthalene	0.0170	0.00500	"	0.0333	ND	51.0	40-140	2.69	30
2-Methylnaphthalene	0.0181	0.00500	"	0.0333	ND	54.4	40-140	5.42	30
Surrogate: 2-Methylnaphthalene-d10	0.0175		"	0.0333		52.6	40-140		
Surrogate: Fluoranthene-d10	0.0188		"	0.0333		56.5	40-140		

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

Project: Noble - Garcia USX AB35-10D

Project Number: UWRWE-A2773-ABN  
Project Manager: Daniel Simpson

**Reported:**  
12/17/24 11:26

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

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

**Batch BHL0155 - EPA 3050B**

**Blank (BHL0155-BLK1)**

Prepared: 12/04/24 Analyzed: 12/05/24

Boron ND 2.00 mg/L

**LCS (BHL0155-BS1)**

Prepared: 12/04/24 Analyzed: 12/05/24

Boron 4.56 2.00 mg/L 5.00 91.3 80-120

**Duplicate (BHL0155-DUP1)**

**Source: 2411310-13**

Prepared: 12/04/24 Analyzed: 12/05/24

Boron 0.131 2.00 mg/L 0.171 26.0 20 QR-01

**Matrix Spike (BHL0155-MS1)**

**Source: 2411310-13**

Prepared: 12/04/24 Analyzed: 12/05/24

Boron 4.41 2.00 mg/L 4.96 0.171 85.5 75-125

**Matrix Spike Dup (BHL0155-MSD1)**

**Source: 2411310-13**

Prepared: 12/04/24 Analyzed: 12/05/24

Boron 4.76 2.00 mg/L 4.96 0.171 92.4 75-125 7.54 25

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Garcia USX AB35-10D

Project Number: UWRWE-A2773-ABN  
Project Manager: Daniel Simpson

**Reported:**  
12/17/24 11:26

**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 BHL0462 - EPA 3050B**

**Blank (BHL0462-BLK1)**

Prepared: 12/11/24 Analyzed: 12/13/24

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 (BHL0462-BS1)**

Prepared: 12/11/24 Analyzed: 12/13/24

Arsenic	41.9	0.200	mg/kg wet	39.7	106	80-120
Barium	42.4	0.400	"	39.7	107	80-120
Cadmium	2.15	0.200	"	1.98	109	80-120
Copper	46.3	0.400	"	39.7	117	80-120
Lead	21.3	0.200	"	19.8	108	80-120
Nickel	42.6	0.400	"	39.7	107	80-120
Silver	2.07	0.0200	"	1.98	104	80-120
Zinc	44.0	0.400	"	39.7	111	80-120
Selenium	4.48	0.260	"	3.97	113	80-120

**Duplicate (BHL0462-DUP1)**

Source: 2411315-01

Prepared: 12/11/24 Analyzed: 12/13/24

Arsenic	2.29	0.200	mg/kg dry	2.45	6.84	20	
Barium	46.0	0.400	"	33.1	32.6	20	QR-04
Cadmium	0.433	0.200	"	0.267	47.5	20	QR-01
Copper	6.35	0.400	"	6.68	5.15	20	
Lead	9.28	0.200	"	8.82	5.12	20	
Nickel	4.89	0.400	"	3.95	21.2	20	QR-04
Silver	0.0326	0.0200	"	0.0298	8.88	20	
Zinc	29.8	0.400	"	28.8	3.15	20	
Selenium	0.190	0.260	"	0.200	5.37	20	

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

Project: Noble - Garcia USX AB35-10D

Project Number: UWRWE-A2773-ABN  
Project Manager: Daniel Simpson

**Reported:**  
12/17/24 11:26

**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 BHL0462 - EPA 3050B**

**Matrix Spike (BHL0462-MS1)**

Source: 2411315-01

Prepared: 12/11/24 Analyzed: 12/13/24

Arsenic	52.4	0.200	mg/kg dry	50.1	2.45	99.7	75-125				
Barium	95.0	0.400	"	50.1	33.1	124	75-125				
Cadmium	3.01	0.200	"	2.50	0.267	109	75-125				
Copper	37.7	0.400	"	50.1	6.68	62.0	75-125				QM-05
Lead	35.1	0.200	"	25.0	8.82	105	75-125				
Nickel	33.8	0.400	"	50.1	3.95	59.6	75-125				QM-05
Silver	2.60	0.0200	"	2.50	0.0298	103	75-125				
Zinc	60.4	0.400	"	50.1	28.8	62.9	75-125				QM-05
Selenium	5.79	0.260	"	5.01	0.200	112	75-125				

**Matrix Spike Dup (BHL0462-MSD1)**

Source: 2411315-01

Prepared: 12/11/24 Analyzed: 12/13/24

Arsenic	49.5	0.200	mg/kg dry	47.7	2.45	98.6	75-125	5.60	25		
Barium	99.2	0.400	"	47.7	33.1	138	75-125	4.31	25		QM-05
Cadmium	2.85	0.200	"	2.39	0.267	108	75-125	5.22	25		
Copper	35.2	0.400	"	47.7	6.68	59.7	75-125	7.01	25		QM-05
Lead	32.6	0.200	"	23.9	8.82	99.9	75-125	7.34	25		
Nickel	31.3	0.400	"	47.7	3.95	57.4	75-125	7.49	25		QM-05
Silver	2.46	0.0200	"	2.39	0.0298	102	75-125	5.49	25		
Zinc	56.8	0.400	"	47.7	28.8	58.5	75-125	6.16	25		QM-05
Selenium	5.18	0.260	"	4.77	0.200	104	75-125	11.1	25		

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

Project: Noble - Garcia USX AB35-10D  
Project Number: UWRWE-A2773-ABN  
Project Manager: Daniel Simpson

**Reported:**  
12/17/24 11:26

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

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

**Batch BHL0087 - 3060A Mod**

**Blank (BHL0087-BLK1)**

Prepared & Analyzed: 12/03/24

Chromium, Hexavalent      ND      0.30    mg/kg wet

**LCS (BHL0087-BS1)**

Prepared & Analyzed: 12/03/24

Chromium, Hexavalent      25.9      0.30    mg/kg wet      25.0      104      80-120

**Duplicate (BHL0087-DUP1)**

**Source: 2411268-01**

Prepared & Analyzed: 12/03/24

Chromium, Hexavalent      ND      0.30    mg/kg dry      ND      20

**Matrix Spike (BHL0087-MS1)**

**Source: 2411268-01**

Prepared & Analyzed: 12/03/24

Chromium, Hexavalent      29.9      0.30    mg/kg dry      28.6      ND      105      75-125

**Matrix Spike Dup (BHL0087-MSD1)**

**Source: 2411268-01**

Prepared & Analyzed: 12/03/24

Chromium, Hexavalent      29.2      0.30    mg/kg dry      28.6      ND      102      75-125      2.32      20

Summit Scientific

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

Project: Noble - Garcia USX AB35-10D

Project Number: UWRWE-A2773-ABN  
Project Manager: Daniel Simpson

**Reported:**  
12/17/24 11:26

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

**Summit Scientific**

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

**Batch BHL0634 - General Preparation**

**Blank (BHL0634-BLK1)**

Prepared: 12/13/24 Analyzed: 12/16/24

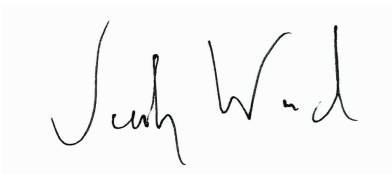
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

**LCS (BHL0634-BS1)**

Prepared: 12/13/24 Analyzed: 12/16/24

Calcium	5.35	0.0500	mg/L wet	5.00		107	70-130			
Magnesium	4.68	0.0500	"	5.00		93.7	70-130			
Sodium	4.80	0.0500	"	5.00		96.0	70-130			

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

Project: Noble - Garcia USX AB35-10D

Project Number: UWRWE-A2773-ABN  
Project Manager: Daniel Simpson

**Reported:**  
12/17/24 11:26

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

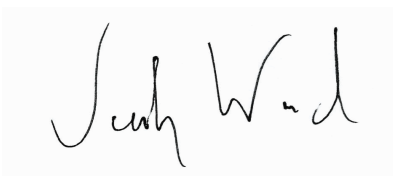
**Summit Scientific**

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

**Batch BHL0027 - General Preparation**

Duplicate (BHL0027-DUP1)	Source: 2411292-20	Prepared: 12/02/24	Analyzed: 12/03/24		
% Solids	97.0	%	97.2	0.148	20

Summit Scientific



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

Project: Noble - Garcia USX AB35-10D

Project Number: UWRWE-A2773-ABN  
Project Manager: Daniel Simpson

**Reported:**  
12/17/24 11:26

**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 BHL0635 - General Preparation**

**Blank (BHL0635-BLK1)**

Prepared: 12/13/24 Analyzed: 12/16/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BHL0635-BS1)**

Prepared: 12/13/24 Analyzed: 12/16/24

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 102 95-105

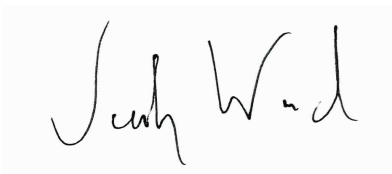
**Duplicate (BHL0635-DUP1)**

**Source: 2411314-01**

Prepared: 12/13/24 Analyzed: 12/16/24

Specific Conductance (EC) 0.715 0.0100 mmhos/cm 0.733 2.49 20

Summit Scientific



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

Project: Noble - Garcia USX AB35-10D

Project Number: UWRWE-A2773-ABN  
Project Manager: Daniel Simpson

**Reported:**  
12/17/24 11:26

**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 BHL0636 - General Preparation**

**LCS (BHL0636-BS1)**

Prepared: 12/13/24 Analyzed: 12/16/24

pH	9.10	pH Units	9.18	99.1	95-105
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**Duplicate (BHL0636-DUP1)**

Source: 2411314-01

Prepared: 12/13/24 Analyzed: 12/16/24

pH	8.62	pH Units	8.59	0.349	20
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Summit Scientific

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

Project: Noble - Garcia USX AB35-10D

Project Number: UWRWE-A2773-ABN  
Project Manager: Daniel Simpson

**Reported:**  
12/17/24 11:26

### Notes and Definitions

- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- QR-01 Analyses are not controlled on RPD values from sample concentrations below the reporting limit. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- QLCS-01 The spike recovery was outside acceptance limits for this analyte indicating a potential high bias. The corresponding samples did not exhibit concentrations above reporting level for this analyte. Data quality is not affected.
- 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