

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 06, 2024

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Johnson C29-28 FL

Work Order #2408027

Enclosed are the results of analyses for samples received by Summit Scientific on 08/02/24 17:48. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Paul Shrewsbury

President



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

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FS01-FL01-02@4.5'	2408027-01	Soil	08/02/24 11:07	08/02/24 17:48
SS01-FL01-02@3'	2408027-02	Soil	08/02/24 09:34	08/02/24 17:48
SS02-FL01-02@3'	2408027-03	Soil	08/02/24 09:29	08/02/24 17:48
SS03-FL01-02@3'	2408027-04	Soil	08/02/24 11:09	08/02/24 17:48
SS04-FL01-02@3'	2408027-05	Soil	08/02/24 11:11	08/02/24 17:48
FS01-FL01R-W@4'	2408027-06	Soil	08/02/24 14:50	08/02/24 17:48
SS01-FL01R-W@3'	2408027-07	Soil	08/02/24 14:52	08/02/24 17:48
SS02-FL01R-W@3'	2408027-08	Soil	08/02/24 14:54	08/02/24 17:48
SS03-FL01R-W@3'	2408027-09	Soil	08/02/24 14:56	08/02/24 17:48
SS04-FL01R-W@3'	2408027-10	Soil	08/02/24 14:58	08/02/24 17:48

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.*

Client: Noble / Tasman, Inc.		Send Data To:		Send Invoice To:	
Address: 6855 W. 119th Ave.		Project Manager: Jake Whritenour		Company:	
City/State/Zip: Broomfield / CO/ 80020		E-Mail: Jwhritenour@tasman-geo.com		Project Name/Location: Johnson C29-28	
Phone: 719-937-1898		Project Name: Johnson C29-28		AFE#:	
Sampler Name: Josh Adams		Project Number: N/A		PO/Billing Codes:	
				Contact: Dan Patterson	

				Preservative				Matrix				Analysis Requested								Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS	HOLD	
1	ES01-FL01-02 @ 4.5'	8/2/24	1107	3			X			X			X	X	X	X	X	X		SAR, EC, pH by saturated paste
2	SS01-FL01-02 @ 3'		0924																	
3	SS02-FL01-02 @ 3'		0929																	
4	SS03-FL01-02 @ 3'		1109																	
5	SS04-FL01-02 @ 3'		1111																	
6	ES01-FL01R-W @ 4'		1450																	
7	SS01-FL01R-W @ 3'		1452																	
8	SS02-FL01R-W @ 3'		1454																	
9	SS03-FL01R-W @ 3'		1456																	
10	SS04-FL01R-W @ 3'		1458																	
11																				
12																				
13																				
14																				
15																				

Relinquished by:	Date/Time:	Received by:	Date/Time:	TAT Business Days	Field DO	Notes:
Josh Adams	8/2/24		8/2/24 1743	Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
Tasman Geo	8224		8224	2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 12.1	Corrected Temperature 8	IR gun #: 1	HNO3 lot #:			

S<sub>2</sub>

## Sample Receipt Checklist

S2 Work Order# 2408027Client: NoblemanClient Project ID: Johnson C29-28

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

Airbill #:

	-			
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Matrix (Check all that apply)

Air

☐
Soil Solid
☐

Water

☐

Other

☐

Temp (°C)

12.1

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"/>	on ice
If custody seals are present, are they intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Same day
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

8/2/24  
Date/Time



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

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**FS01-FL01-02@4.5'**  
**2408027-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 11:07**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BHH0090	08/02/24	08/02/24	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: **08/02/24 11:07**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0455	114 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0416	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0419	105 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/02/24 11:07**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BHH0091	08/02/24	08/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/02/24 11:07**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	10.5	84.1 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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**2408027-01 (Soil)**

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**PAH by EPA Method 8270D SIM**

Date Sampled: **08/02/24 11:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHH0097	08/05/24	08/06/24	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: **08/02/24 11:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0157	47.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0172	51.5 %	40-150		"	"	"	"	

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

Date Sampled: **08/02/24 11:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHH0107	08/05/24	08/06/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/02/24 11:07**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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08/06/24 13:04

**FS01-FL01-02@4.5'**  
**2408027-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	1.56	0.200	mg/kg dry	1	BHH0101	08/05/24	08/05/24	EPA 6020B
Barium	61.5	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.57	0.400	"	"	"	"	"	"
Lead	4.06	0.200	"	"	"	"	"	"
Nickel	3.86	0.400	"	"	"	"	"	"
Silver	0.0205	0.0200	"	"	"	"	"	"
Zinc	13.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **08/02/24 11:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHH0105	08/05/24	08/05/24	EPA 7196A	

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

Date Sampled: **08/02/24 11:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	89.4	0.0500	mg/L dry	1	BHH0087	08/02/24	08/06/24	EPA 6020B	
Magnesium	8.07	0.0500	"	"	"	"	"	"	
Sodium	58.4	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **08/02/24 11:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.59	0.00100	units	1	BHH0128	08/06/24	08/06/24	Calculation	

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

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**Reported:**  
08/06/24 13:04

**FS01-FL01-02@4.5'**  
**2408027-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 11:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	80.0		%	1	BHH0075	08/05/24	08/05/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **08/02/24 11:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.433	0.0100	mmhos/cm	1	BHH0088	08/02/24	08/05/24	EPA 120.1	

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

Date Sampled: **08/02/24 11:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.49		pH Units	1	BHH0089	08/02/24	08/05/24	EPA 9045D	

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**Reported:**  
08/06/24 13:04

**SS01-FL01-02@3'**  
**2408027-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 09:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHH0090	08/02/24	08/02/24	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: **08/02/24 09:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0383	95.7 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0396	99.1 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/02/24 09:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHH0091	08/02/24	08/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/02/24 09:34**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.80	54.4 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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**Reported:**  
08/06/24 13:04

**SS01-FL01-02@3'**  
**2408027-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **08/02/24 09:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHH0097	08/05/24	08/06/24	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: **08/02/24 09:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0159	47.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0194	58.2 %	40-150		"	"	"	"	

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

Date Sampled: **08/02/24 09:34**

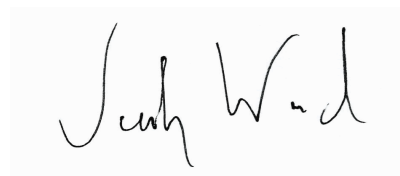
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHH0107	08/05/24	08/06/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/02/24 09:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS01-FL01-02@3'**  
**2408027-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	1.79	0.200	mg/kg dry	1	BHH0101	08/05/24	08/05/24	EPA 6020B
Barium	91.7	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.93	0.400	"	"	"	"	"	"
Lead	5.55	0.200	"	"	"	"	"	"
Nickel	4.45	0.400	"	"	"	"	"	"
Silver	0.0352	0.0200	"	"	"	"	"	"
Zinc	17.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **08/02/24 09:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHH0105	08/05/24	08/05/24	EPA 7196A	

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

Date Sampled: **08/02/24 09:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	95.6	0.0500	mg/L dry	1	BHH0087	08/02/24	08/06/24	EPA 6020B	
Magnesium	14.9	0.0500	"	"	"	"	"	"	
Sodium	46.9	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **08/02/24 09:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.18	0.00100	units	1	BHH0128	08/06/24	08/06/24	Calculation	

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

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Broomfield CO, 80020

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS01-FL01-02@3'**  
**2408027-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 09:34**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	89.9			%	1	BHH0075	08/05/24	08/05/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **08/02/24 09:34**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.332	0.0100		mmhos/cm	1	BHH0088	08/02/24	08/05/24	EPA 120.1	

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

Date Sampled: **08/02/24 09:34**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.71			pH Units	1	BHH0089	08/02/24	08/05/24	EPA 9045D	

Summit Scientific

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS02-FL01-02@3'**  
**2408027-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 09:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHH0090	08/02/24	08/02/24	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: **08/02/24 09:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0390	97.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0390	97.5 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0402	101 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/02/24 09:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHH0091	08/02/24	08/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/02/24 09:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.62	68.9 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS02-FL01-02@3'**  
**2408027-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **08/02/24 09:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHH0097	08/05/24	08/06/24	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: **08/02/24 09:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0146	43.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0140	42.0 %	40-150		"	"	"	"	

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

Date Sampled: **08/02/24 09:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHH0107	08/05/24	08/06/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/02/24 09:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS02-FL01-02@3'**  
**2408027-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	1.68	0.200	mg/kg dry	1	BHH0101	08/05/24	08/05/24	EPA 6020B
Barium	53.8	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.98	0.400	"	"	"	"	"	"
Lead	4.08	0.200	"	"	"	"	"	"
Nickel	3.64	0.400	"	"	"	"	"	"
Silver	0.0281	0.0200	"	"	"	"	"	"
Zinc	14.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **08/02/24 09:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHH0105	08/05/24	08/05/24	EPA 7196A	

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

Date Sampled: **08/02/24 09:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	325	0.0500	mg/L dry	1	BHH0087	08/02/24	08/06/24	EPA 6020B	
Magnesium	56.6	0.0500	"	"	"	"	"	"	
Sodium	62.4	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **08/02/24 09:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.840	0.00100	units	1	BHH0128	08/06/24	08/06/24	Calculation	

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

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Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS02-FL01-02@3'**  
**2408027-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 09:29**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	89.7			%	1	BHH0075	08/05/24	08/05/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **08/02/24 09:29**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.287	0.0100		mmhos/cm	1	BHH0088	08/02/24	08/05/24	EPA 120.1	

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

Date Sampled: **08/02/24 09:29**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.90			pH Units	1	BHH0089	08/02/24	08/05/24	EPA 9045D	

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Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS03-FL01-02@3'**  
**2408027-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 11:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHH0090	08/02/24	08/02/24	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: **08/02/24 11:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0412	103 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0397	99.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0408	102 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/02/24 11:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHH0091	08/02/24	08/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/02/24 11:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.10	64.8 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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**Reported:**  
08/06/24 13:04

**SS03-FL01-02@3'**  
**2408027-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **08/02/24 11:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHH0097	08/05/24	08/06/24	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: **08/02/24 11:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0157	47.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0189	56.6 %	40-150		"	"	"	"	

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

Date Sampled: **08/02/24 11:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHH0107	08/05/24	08/06/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/02/24 11:09**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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6855 W. 119th Ave.  
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Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS03-FL01-02@3'**  
**2408027-04 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	1.75	0.200	mg/kg dry	1	BHH0101	08/05/24	08/05/24	EPA 6020B
Barium	49.9	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.69	0.400	"	"	"	"	"	"
Lead	4.17	0.200	"	"	"	"	"	"
Nickel	3.89	0.400	"	"	"	"	"	"
Silver	0.0267	0.0200	"	"	"	"	"	"
Zinc	13.5	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **08/02/24 11:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHH0105	08/05/24	08/05/24	EPA 7196A	

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

Date Sampled: **08/02/24 11:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	479	0.0500	mg/L dry	1	BHH0087	08/02/24	08/06/24	EPA 6020B	
Magnesium	105	0.0500	"	"	"	"	"	"	
Sodium	96.6	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **08/02/24 11:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.04	0.00100	units	1	BHH0128	08/06/24	08/06/24	Calculation	

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

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Project: Noble - Johnson C29-28 FL  
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Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS03-FL01-02@3'**  
**2408027-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 11:09**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	87.2			%	1	BHH0075	08/05/24	08/05/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **08/02/24 11:09**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.422	0.0100		mmhos/cm	1	BHH0088	08/02/24	08/05/24	EPA 120.1	

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

Date Sampled: **08/02/24 11:09**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.58			pH Units	1	BHH0089	08/02/24	08/05/24	EPA 9045D	

Summit Scientific

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Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS04-FL01-02@3'**  
**2408027-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 11:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHH0090	08/02/24	08/02/24	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: **08/02/24 11:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0367	91.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0421	105 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/02/24 11:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHH0091	08/02/24	08/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/02/24 11:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.65	53.2 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS04-FL01-02@3'**  
**2408027-05 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **08/02/24 11:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHH0097	08/05/24	08/06/24	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: **08/02/24 11:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0142	42.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0161	48.2 %	40-150		"	"	"	"	

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

Date Sampled: **08/02/24 11:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHH0107	08/05/24	08/06/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/02/24 11:11**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS04-FL01-02@3'**  
**2408027-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	1.79	0.200	mg/kg dry	1	BHH0101	08/05/24	08/05/24	EPA 6020B
Barium	52.8	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.84	0.400	"	"	"	"	"	"
Lead	4.28	0.200	"	"	"	"	"	"
Nickel	3.90	0.400	"	"	"	"	"	"
Silver	0.0232	0.0200	"	"	"	"	"	"
Zinc	14.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **08/02/24 11:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHH0105	08/05/24	08/05/24	EPA 7196A	

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

Date Sampled: **08/02/24 11:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	87.7	0.0500	mg/L dry	1	BHH0087	08/02/24	08/06/24	EPA 6020B	
Magnesium	12.6	0.0500	"	"	"	"	"	"	
Sodium	46.8	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **08/02/24 11:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.24	0.00100	units	1	BHH0128	08/06/24	08/06/24	Calculation	

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

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

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS04-FL01-02@3'**  
**2408027-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 11:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.6		%	1	BHH0075	08/05/24	08/05/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **08/02/24 11:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.306	0.0100	mmhos/cm	1	BHH0088	08/02/24	08/05/24	EPA 120.1	

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

Date Sampled: **08/02/24 11:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.84		pH Units	1	BHH0089	08/02/24	08/05/24	EPA 9045D	

Summit Scientific

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**FS01-FL01R-W@4'**  
**2408027-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHH0090	08/02/24	08/02/24	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: **08/02/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0371	92.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0419	105 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0402	100 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/02/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHH0091	08/02/24	08/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/02/24 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.77	70.2 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**FS01-FL01R-W@4'**  
**2408027-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **08/02/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHH0097	08/05/24	08/06/24	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: **08/02/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0145	43.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0166	49.7 %	40-150		"	"	"	"	

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

Date Sampled: **08/02/24 14:50**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHH0107	08/05/24	08/06/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/02/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**FS01-FL01R-W@4'**  
**2408027-06 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	0.832	0.200	mg/kg dry	1	BHH0101	08/05/24	08/05/24	EPA 6020B
Barium	60.1	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.13	0.400	"	"	"	"	"	"
Lead	3.82	0.200	"	"	"	"	"	"
Nickel	3.36	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	12.8	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **08/02/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHH0105	08/05/24	08/05/24	EPA 7196A	

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

Date Sampled: **08/02/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	52.0	0.0500	mg/L dry	1	BHH0087	08/02/24	08/06/24	EPA 6020B	
Magnesium	11.8	0.0500	"	"	"	"	"	"	
Sodium	59.0	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **08/02/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.92	0.00100	units	1	BHH0128	08/06/24	08/06/24	Calculation	

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

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**FS01-FL01R-W@4'**  
**2408027-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 14:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	84.7			%	1	BHH0075	08/05/24	08/05/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **08/02/24 14:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.597	0.0100		mmhos/cm	1	BHH0088	08/02/24	08/05/24	EPA 120.1	

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

Date Sampled: **08/02/24 14:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.40			pH Units	1	BHH0089	08/02/24	08/05/24	EPA 9045D	

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

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS01-FL01R-W@3'**  
**2408027-07 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 14:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHH0090	08/02/24	08/02/24	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: **08/02/24 14:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0427	107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0416	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0409	102 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/02/24 14:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHH0091	08/02/24	08/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/02/24 14:52**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.5	84.2 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Broomfield CO, 80020

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS01-FL01R-W@3'**  
**2408027-07 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **08/02/24 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHH0097	08/05/24	08/06/24	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: **08/02/24 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0147	44.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0138	41.4 %	40-150		"	"	"	"	

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

Date Sampled: **08/02/24 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHH0107	08/05/24	08/06/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/02/24 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS01-FL01R-W@3'**  
**2408027-07 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	1.25	0.179	mg/kg dry	1	BHH0101	08/05/24	08/05/24	EPA 6020B
Barium	60.8	0.357	"	"	"	"	"	"
Cadmium	ND	0.179	"	"	"	"	"	"
Copper	2.22	0.357	"	"	"	"	"	"
Lead	3.81	0.179	"	"	"	"	"	"
Nickel	3.70	0.357	"	"	"	"	"	"
Silver	0.0202	0.0179	"	"	"	"	"	"
Zinc	13.0	0.357	"	"	"	"	"	"
Selenium	ND	0.232	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **08/02/24 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHH0105	08/05/24	08/05/24	EPA 7196A	

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

Date Sampled: **08/02/24 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	45.8	0.0500	mg/L dry	1	BHH0087	08/02/24	08/06/24	EPA 6020B	
Magnesium	8.44	0.0500	"	"	"	"	"	"	
Sodium	79.5	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **08/02/24 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.83	0.00100	units	1	BHH0128	08/06/24	08/06/24	Calculation	

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

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6855 W. 119th Ave.  
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Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS01-FL01R-W@3'**  
**2408027-07 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.1		%	1	BHH0075	08/05/24	08/05/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **08/02/24 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.564	0.0100	mmhos/cm	1	BHH0088	08/02/24	08/05/24	EPA 120.1	

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

Date Sampled: **08/02/24 14:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.65		pH Units	1	BHH0089	08/02/24	08/05/24	EPA 9045D	

Summit Scientific

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS02-FL01R-W@3'**  
**2408027-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 14:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHH0090	08/02/24	08/03/24	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: **08/02/24 14:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0373	93.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0406	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0395	98.8 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/02/24 14:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHH0091	08/02/24	08/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/02/24 14:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.46	75.7 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS02-FL01R-W@3'**  
**2408027-08 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **08/02/24 14:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHH0097	08/05/24	08/06/24	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: **08/02/24 14:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0153	45.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0159	47.6 %	40-150		"	"	"	"	

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

Date Sampled: **08/02/24 14:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHH0107	08/05/24	08/06/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/02/24 14:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS02-FL01R-W@3'**  
**2408027-08 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	1.62	0.200	mg/kg dry	1	BHH0101	08/05/24	08/05/24	EPA 6020B
Barium	51.5	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.09	0.400	"	"	"	"	"	"
Lead	5.62	0.200	"	"	"	"	"	"
Nickel	4.04	0.400	"	"	"	"	"	"
Silver	0.0253	0.0200	"	"	"	"	"	"
Zinc	15.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **08/02/24 14:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHH0105	08/05/24	08/05/24	EPA 7196A	

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

Date Sampled: **08/02/24 14:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	61.9	0.0500	mg/L dry	1	BHH0087	08/02/24	08/06/24	EPA 6020B	
Magnesium	12.4	0.0500	"	"	"	"	"	"	
Sodium	16.3	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **08/02/24 14:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.495	0.00100	units	1	BHH0128	08/06/24	08/06/24	Calculation	

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

Summit Scientific

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

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS02-FL01R-W@3'**  
**2408027-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 14:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.9		%	1	BHH0075	08/05/24	08/05/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **08/02/24 14:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.231	0.0100	mmhos/cm	1	BHH0088	08/02/24	08/05/24	EPA 120.1	

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

Date Sampled: **08/02/24 14:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.62		pH Units	1	BHH0089	08/02/24	08/05/24	EPA 9045D	

Summit Scientific

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS03-FL01R-W@3'**  
**2408027-09 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 14:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHH0090	08/02/24	08/03/24	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: **08/02/24 14:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0423	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0413	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0416	104 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/02/24 14:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHH0091	08/02/24	08/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/02/24 14:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.3	90.8 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS03-FL01R-W@3'**  
**2408027-09 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **08/02/24 14:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHH0097	08/05/24	08/06/24	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: **08/02/24 14:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0156	46.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0143	42.9 %	40-150		"	"	"	"	

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

Date Sampled: **08/02/24 14:56**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHH0107	08/05/24	08/06/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/02/24 14:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS03-FL01R-W@3'**  
**2408027-09 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	1.52	0.200	mg/kg dry	1	BHH0101	08/05/24	08/05/24	EPA 6020B
Barium	43.8	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.47	0.400	"	"	"	"	"	"
Lead	4.12	0.200	"	"	"	"	"	"
Nickel	3.72	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	13.5	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **08/02/24 14:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHH0105	08/05/24	08/05/24	EPA 7196A	

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

Date Sampled: **08/02/24 14:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	32.1	0.0500	mg/L dry	1	BHH0087	08/02/24	08/06/24	EPA 6020B	
Magnesium	9.37	0.0500	"	"	"	"	"	"	
Sodium	74.1	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **08/02/24 14:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.96	0.00100	units	1	BHH0128	08/06/24	08/06/24	Calculation	

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

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

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS03-FL01R-W@3'**  
**2408027-09 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 14:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.1		%	1	BHH0075	08/05/24	08/05/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **08/02/24 14:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.619	0.0100	mmhos/cm	1	BHH0088	08/02/24	08/05/24	EPA 120.1	

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

Date Sampled: **08/02/24 14:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.44		pH Units	1	BHH0089	08/02/24	08/05/24	EPA 9045D	

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Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS04-FL01R-W@3'**  
**2408027-10 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 14:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHH0090	08/02/24	08/03/24	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: **08/02/24 14:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0351	87.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0378	94.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0398	99.4 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **08/02/24 14:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHH0091	08/02/24	08/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/02/24 14:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.64	77.1 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS04-FL01R-W@3'**  
**2408027-10 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **08/02/24 14:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHH0097	08/05/24	08/06/24	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: **08/02/24 14:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0153	45.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0139	41.7 %	40-150		"	"	"	"	

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

Date Sampled: **08/02/24 14:58**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHH0107	08/05/24	08/06/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **08/02/24 14:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS04-FL01R-W@3'**  
**2408027-10 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	1.67	0.200	mg/kg dry	1	BHH0101	08/05/24	08/05/24	EPA 6020B
Barium	52.4	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.66	0.400	"	"	"	"	"	"
Lead	3.88	0.200	"	"	"	"	"	"
Nickel	3.75	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	13.8	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **08/02/24 14:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHH0105	08/05/24	08/05/24	EPA 7196A	

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

Date Sampled: **08/02/24 14:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	37.6	0.0500	mg/L dry	1	BHH0087	08/02/24	08/06/24	EPA 6020B	
Magnesium	12.2	0.0500	"	"	"	"	"	"	
Sodium	108	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **08/02/24 14:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.91	0.00100	units	1	BHH0128	08/06/24	08/06/24	Calculation	

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

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Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**SS04-FL01R-W@3'**  
**2408027-10 (Soil)**

**Summit Scientific**

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

Date Sampled: **08/02/24 14:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.9		%	1	BHH0075	08/05/24	08/05/24	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **08/02/24 14:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.833	0.0100	mmhos/cm	1	BHH0088	08/02/24	08/05/24	EPA 120.1	

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

Date Sampled: **08/02/24 14:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.19		pH Units	1	BHH0089	08/02/24	08/05/24	EPA 9045D	

Summit Scientific

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

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

### Summit Scientific

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

#### Batch BHH0090 - EPA 5030 Soil MS

##### Blank (BHH0090-BLK1)

Prepared: 08/02/24 Analyzed: 08/03/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0357		"	0.0400		89.2	50-150			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

##### LCS (BHH0090-BS1)

Prepared: 08/02/24 Analyzed: 08/03/24

Benzene	0.0788	0.0020	mg/kg	0.100		78.8	70-130			
Toluene	0.104	0.0050	"	0.100		104	70-130			
Ethylbenzene	0.0958	0.0050	"	0.100		95.8	70-130			
m,p-Xylene	0.194	0.010	"	0.200		96.9	70-130			
o-Xylene	0.0940	0.0050	"	0.100		94.0	70-130			
1,2,4-Trimethylbenzene	0.0881	0.0050	"	0.100		88.1	70-130			
1,3,5-Trimethylbenzene	0.0870	0.0050	"	0.100		87.0	70-130			
Naphthalene	0.0740	0.0038	"	0.100		74.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0399		"	0.0400		99.8	50-150			
Surrogate: Toluene-d8	0.0428		"	0.0400		107	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

##### Matrix Spike (BHH0090-MS1)

Source: 2408026-01

Prepared: 08/02/24 Analyzed: 08/03/24

Benzene	0.0752	0.0020	mg/kg	0.100	ND	75.2	70-130			
Toluene	0.0909	0.0050	"	0.100	ND	90.9	70-130			
Ethylbenzene	0.0801	0.0050	"	0.100	ND	80.1	70-130			
m,p-Xylene	0.159	0.010	"	0.200	ND	79.5	70-130			
o-Xylene	0.0788	0.0050	"	0.100	ND	78.8	70-130			
1,2,4-Trimethylbenzene	0.0693	0.0050	"	0.100	ND	69.3	70-130			QM-07
1,3,5-Trimethylbenzene	0.0681	0.0050	"	0.100	ND	68.1	70-130			QM-07
Naphthalene	0.0491	0.0038	"	0.100	ND	49.1	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0409		"	0.0400		102	50-150			
Surrogate: Toluene-d8	0.0411		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.5	50-150			

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

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

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

**Batch BHH0090 - EPA 5030 Soil MS**

Matrix Spike Dup (BHH0090-MSD1)	Source: 2408026-01			Prepared: 08/02/24 Analyzed: 08/03/24						
Benzene	0.0732	0.0020	mg/kg	0.100	ND	73.2	70-130	2.67	30	
Toluene	0.0816	0.0050	"	0.100	ND	81.6	70-130	10.9	30	
Ethylbenzene	0.0772	0.0050	"	0.100	ND	77.2	70-130	3.70	30	
m,p-Xylene	0.151	0.010	"	0.200	ND	75.3	70-130	5.45	30	
o-Xylene	0.0748	0.0050	"	0.100	ND	74.8	70-130	5.08	30	
1,2,4-Trimethylbenzene	0.0638	0.0050	"	0.100	ND	63.8	70-130	8.21	30	QM-07
1,3,5-Trimethylbenzene	0.0652	0.0050	"	0.100	ND	65.2	70-130	4.41	30	QM-07
Naphthalene	0.0502	0.0038	"	0.100	ND	50.2	70-130	2.11	30	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0349		"	0.0400		87.3	50-150			
Surrogate: Toluene-d8	0.0436		"	0.0400		109	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

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

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

**Batch BHH0091 - EPA 3550A**

**Blank (BHH0091-BLK1)**

Prepared & Analyzed: 08/02/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	11.9		"	12.5		95.0	30-150			

**LCS (BHH0091-BS1)**

Prepared & Analyzed: 08/02/24

C10-C28 (DRO)	453	50	mg/kg	500		90.6	70-130			
Surrogate: o-Terphenyl	11.8		"	12.5		94.7	30-150			

**Matrix Spike (BHH0091-MS1)**

Source: 2408026-01

Prepared & Analyzed: 08/02/24

C10-C28 (DRO)	485	50	mg/kg	500	ND	97.0	70-130			
Surrogate: o-Terphenyl	8.68		"	12.5		69.4	30-150			

**Matrix Spike Dup (BHH0091-MSD1)**

Source: 2408026-01

Prepared & Analyzed: 08/02/24

C10-C28 (DRO)	477	50	mg/kg	500	ND	95.3	70-130	1.74	20	
Surrogate: o-Terphenyl	10.4		"	12.5		83.4	30-150			

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Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

## PAH by EPA Method 8270D SIM - Quality Control

### Summit Scientific

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

#### Batch BHH0097 - EPA 5030 Soil MS

##### Blank (BHH0097-BLK1)

Prepared & Analyzed: 08/05/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0177		"	0.0333		53.2	40-150			
Surrogate: Fluoranthene-d10	0.0221		"	0.0333		66.2	40-150			

##### LCS (BHH0097-BS1)

Prepared & Analyzed: 08/05/24

Acenaphthene	0.0183	0.00500	mg/kg	0.0333		54.9	31-137			
Anthracene	0.0198	0.00500	"	0.0333		59.4	30-120			
Benzo (a) anthracene	0.0177	0.00500	"	0.0333		53.1	30-120			
Benzo (a) pyrene	0.0208	0.00500	"	0.0333		62.3	30-120			
Benzo (b) fluoranthene	0.0227	0.00500	"	0.0333		68.1	30-120			
Benzo (k) fluoranthene	0.0227	0.00500	"	0.0333		68.0	30-120			
Chrysene	0.0164	0.00500	"	0.0333		49.2	30-120			
Dibenz (a,h) anthracene	0.0141	0.00500	"	0.0333		42.4	30-120			
Fluoranthene	0.0184	0.00500	"	0.0333		55.2	30-120			
Fluorene	0.0225	0.00500	"	0.0333		67.6	30-120			
Indeno (1,2,3-cd) pyrene	0.0145	0.00500	"	0.0333		43.5	30-120			
Pyrene	0.0185	0.00500	"	0.0333		55.6	35-142			
1-Methylnaphthalene	0.0181	0.00500	"	0.0333		54.4	35-142			
2-Methylnaphthalene	0.0147	0.00500	"	0.0333		44.1	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0196		"	0.0333		58.9	40-150			
Surrogate: Fluoranthene-d10	0.0228		"	0.0333		68.5	40-150			

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Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

## PAH by EPA Method 8270D SIM - Quality Control

### Summit Scientific

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

#### Batch BHH0097 - EPA 5030 Soil MS

Matrix Spike (BHH0097-MS1)			Source: 2408018-01			Prepared & Analyzed: 08/05/24					
Acenaphthene	0.0125	0.00500	mg/kg	0.0333	ND	37.5	31-137				
Anthracene	0.0134	0.00500	"	0.0333	ND	40.3	30-120				
Benzo (a) anthracene	0.0116	0.00500	"	0.0333	ND	34.8	30-120				
Benzo (a) pyrene	0.0136	0.00500	"	0.0333	ND	40.8	30-120				
Benzo (b) fluoranthene	0.0146	0.00500	"	0.0333	ND	43.7	30-120				
Benzo (k) fluoranthene	0.0143	0.00500	"	0.0333	ND	42.9	30-120				
Chrysene	0.0108	0.00500	"	0.0333	ND	32.4	30-120				
Dibenz (a,h) anthracene	0.0167	0.00500	"	0.0333	ND	50.2	30-120				
Fluoranthene	0.0125	0.00500	"	0.0333	ND	37.6	30-120				
Fluorene	0.0158	0.00500	"	0.0333	ND	47.4	30-120				
Indeno (1,2,3-cd) pyrene	0.0105	0.00500	"	0.0333	ND	31.6	30-120				
Pyrene	0.0122	0.00500	"	0.0333	ND	36.6	35-142				
1-Methylnaphthalene	0.0131	0.00500	"	0.0333	ND	39.3	15-130				
2-Methylnaphthalene	0.0105	0.00500	"	0.0333	ND	31.5	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0140		"	0.0333		41.9	40-150				
Surrogate: Fluoranthene-d10	0.0154		"	0.0333		46.2	40-150				

Matrix Spike Dup (BHH0097-MSD1)			Source: 2408018-01			Prepared & Analyzed: 08/05/24					
Acenaphthene	0.0140	0.00500	mg/kg	0.0333	ND	42.1	31-137	11.6	30		
Anthracene	0.0142	0.00500	"	0.0333	ND	42.5	30-120	5.13	30		
Benzo (a) anthracene	0.0128	0.00500	"	0.0333	ND	38.4	30-120	9.91	30		
Benzo (a) pyrene	0.0144	0.00500	"	0.0333	ND	43.3	30-120	5.91	30		
Benzo (b) fluoranthene	0.0154	0.00500	"	0.0333	ND	46.3	30-120	5.65	30		
Benzo (k) fluoranthene	0.0146	0.00500	"	0.0333	ND	43.9	30-120	2.32	30		
Chrysene	0.0117	0.00500	"	0.0333	ND	35.0	30-120	7.67	30		
Dibenz (a,h) anthracene	0.0194	0.00500	"	0.0333	ND	58.2	30-120	14.6	30		
Fluoranthene	0.0127	0.00500	"	0.0333	ND	38.2	30-120	1.53	30		
Fluorene	0.0163	0.00500	"	0.0333	ND	49.0	30-120	3.27	30		
Indeno (1,2,3-cd) pyrene	0.0106	0.00500	"	0.0333	ND	31.8	30-120	0.656	30		
Pyrene	0.0129	0.00500	"	0.0333	ND	38.8	35-142	5.89	30		
1-Methylnaphthalene	0.0145	0.00500	"	0.0333	ND	43.4	15-130	9.75	50		
2-Methylnaphthalene	0.0115	0.00500	"	0.0333	ND	34.4	15-130	8.59	50		
Surrogate: 2-Methylnaphthalene-d10	0.0146		"	0.0333		43.7	40-150				
Surrogate: Fluoranthene-d10	0.0161		"	0.0333		48.3	40-150				

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

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

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

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

**Batch BHH0107 - EPA 3050B**

**Blank (BHH0107-BLK1)**

Prepared: 08/05/24 Analyzed: 08/06/24

Boron ND 2.00 mg/L

**LCS (BHH0107-BS1)**

Prepared: 08/05/24 Analyzed: 08/06/24

Boron 5.11 2.00 mg/L 5.00 102 80-120

**Duplicate (BHH0107-DUP1)**

**Source: 2408027-01**

Prepared: 08/05/24 Analyzed: 08/06/24

Boron 0.214 2.00 mg/L 0.258 18.4 20

**Matrix Spike (BHH0107-MS1)**

**Source: 2408027-01**

Prepared: 08/05/24 Analyzed: 08/06/24

Boron 5.20 2.00 mg/L 4.96 0.258 99.6 75-125

**Matrix Spike Dup (BHH0107-MSD1)**

**Source: 2408027-01**

Prepared: 08/05/24 Analyzed: 08/06/24

Boron 5.36 2.00 mg/L 4.96 0.258 103 75-125 3.17 25

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Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BHH0101 - EPA 3050B**

**Blank (BHH0101-BLK1)**

Prepared & Analyzed: 08/05/24

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 (BHH0101-BS1)**

Prepared & Analyzed: 08/05/24

Arsenic	38.7	0.200	mg/kg wet	37.9	102	80-120
Barium	34.3	0.400	"	37.9	90.5	80-120
Cadmium	1.79	0.200	"	1.89	94.7	80-120
Copper	36.4	0.400	"	37.9	96.0	80-120
Lead	18.6	0.200	"	18.9	98.2	80-120
Nickel	36.9	0.400	"	37.9	97.3	80-120
Silver	1.86	0.0200	"	1.89	98.0	80-120
Zinc	37.7	0.400	"	37.9	99.5	80-120
Selenium	4.30	0.260	"	3.79	114	80-120

**Duplicate (BHH0101-DUP1)**

Source: 2405441-02

Prepared & Analyzed: 08/05/24

Arsenic	0.980	0.200	mg/kg dry	1.15	15.9	20
Barium	45.4	0.400	"	52.2	14.0	20
Cadmium	0.0631	0.200	"	0.0740	15.9	20
Copper	2.60	0.400	"	2.76	6.19	20
Lead	4.03	0.200	"	4.58	12.8	20
Nickel	2.80	0.400	"	3.08	9.55	20
Silver	0.0132	0.0200	"	0.0172	26.3	20
Zinc	11.5	0.400	"	12.8	11.3	20
Selenium	ND	0.260	"	ND		20

QR-01

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6855 W. 119th Ave.  
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Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BHH0101 - EPA 3050B**

Matrix Spike (BHH0101-MS1)			Source: 2405441-02		Prepared & Analyzed: 08/05/24					
Arsenic	27.9	0.200	mg/kg dry	39.9	1.15	67.1	75-125			QM-05
Barium	91.2	0.400	"	39.9	52.2	97.7	75-125			
Cadmium	1.97	0.200	"	2.00	0.0740	95.0	75-125			
Copper	28.9	0.400	"	39.9	2.76	65.5	75-125			QM-05
Lead	21.7	0.200	"	20.0	4.58	86.0	75-125			
Nickel	30.0	0.400	"	39.9	3.08	67.4	75-125			QM-05
Silver	1.96	0.0200	"	2.00	0.0172	97.4	75-125			
Zinc	40.1	0.400	"	39.9	12.8	68.3	75-125			QM-05
Selenium	4.15	0.260	"	3.99	ND	104	75-125			

Matrix Spike Dup (BHH0101-MSD1)			Source: 2405441-02		Prepared & Analyzed: 08/05/24					
Arsenic	28.3	0.200	mg/kg dry	40.2	1.15	67.4	75-125	1.28	25	QM-05
Barium	89.7	0.400	"	40.2	52.2	93.2	75-125	1.67	25	
Cadmium	1.98	0.200	"	2.01	0.0740	94.6	75-125	0.291	25	
Copper	29.4	0.400	"	40.2	2.76	66.1	75-125	1.53	25	QM-05
Lead	21.6	0.200	"	20.1	4.58	84.5	75-125	0.715	25	
Nickel	30.3	0.400	"	40.2	3.08	67.7	75-125	1.10	25	QM-05
Silver	1.93	0.0200	"	2.01	0.0172	94.9	75-125	1.86	25	
Zinc	40.9	0.400	"	40.2	12.8	69.8	75-125	1.97	25	QM-05
Selenium	3.96	0.260	"	4.02	ND	98.4	75-125	4.58	25	

Summit Scientific

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Broomfield CO, 80020

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

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

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

**Batch BHH0105 - 3060A Mod**

**Blank (BHH0105-BLK1)**

Prepared & Analyzed: 08/05/24

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BHH0105-BS1)**

Prepared & Analyzed: 08/05/24

Chromium, Hexavalent 25.6 0.30 mg/kg wet 25.0 103 80-120

**Duplicate (BHH0105-DUP1)**

**Source: 2405441-02**

Prepared & Analyzed: 08/05/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BHH0105-MS1)**

**Source: 2405441-02**

Prepared & Analyzed: 08/05/24

Chromium, Hexavalent 26.8 0.30 mg/kg dry 25.7 ND 104 75-125

**Matrix Spike Dup (BHH0105-MSD1)**

**Source: 2405441-02**

Prepared & Analyzed: 08/05/24

Chromium, Hexavalent 27.7 0.30 mg/kg dry 25.7 ND 108 75-125 3.40 20

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.*



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

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

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

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

**Batch BHH0087 - General Preparation**

**Blank (BHH0087-BLK1)**

Prepared: 08/02/24 Analyzed: 08/05/24

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

**LCS (BHH0087-BS1)**

Prepared: 08/02/24 Analyzed: 08/05/24

Calcium	5.53	0.0500	mg/L wet	5.00	111	70-130
Magnesium	5.48	0.0500	"	5.00	110	70-130
Sodium	5.44	0.0500	"	5.00	109	70-130

Summit Scientific

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Johnson C29-28 FL

Project Number: UWRWE-A3072-ABN

Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

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

**Summit Scientific**

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

**Batch BHH0075 - General Preparation**

Duplicate (BHH0075-DUP1)		Source: 2405441-02			Prepared & Analyzed: 08/05/24					
% Solids	96.7		%		97.1		0.458		20	

Summit Scientific

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

Project: Noble - Johnson C29-28 FL  
Project Number: UWRWE-A3072-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

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

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

**Batch BHH0088 - General Preparation**

**Blank (BHH0088-BLK1)**

Prepared: 08/02/24 Analyzed: 08/05/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BHH0088-BS1)**

Prepared: 08/02/24 Analyzed: 08/05/24

Specific Conductance (EC) 0.158 0.0100 mmhos/cm 0.150 105 95-105

**Duplicate (BHH0088-DUP1)**

**Source: 2405441-02**

Prepared: 08/02/24 Analyzed: 08/05/24

Specific Conductance (EC) 0.235 0.0100 mmhos/cm 0.238 0.972 20

Summit Scientific

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

Project: Noble - Johnson C29-28 FL

Project Number: UWRWE-A3072-ABN

Project Manager: Jacob Whritenour

**Reported:**  
08/06/24 13:04

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

**Summit Scientific**

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

**Batch BHH0089 - General Preparation**

**LCS (BHH0089-BS1)**

Prepared: 08/02/24 Analyzed: 08/05/24

pH	9.21	pH Units	9.18	100	95-105
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**Duplicate (BHH0089-DUP1)**

**Source: 2405441-02**

Prepared: 08/02/24 Analyzed: 08/05/24

pH	7.63	pH Units	7.59	0.526	20
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Summit Scientific

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

Project: Noble - Johnson C29-28 FL

Project Number: UWRWE-A3072-ABN

Project Manager: Jacob Whritenour

**Reported:**

08/06/24 13:04

### Notes and Definitions

QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
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