

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 11, 2025

Sam Vogt

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Civitas - Ruhl 1G-32H-B264

Work Order #2501025

Enclosed are the results of analyses for samples received by Summit Scientific on 01/03/25 17:28. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Natalie Tessier For Paul Shrewsbury

President



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

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH-B01@7'	2501025-01	Soil	01/03/25 10:50	01/03/25 17:28
WH-N01@6'	2501025-02	Soil	01/03/25 10:55	01/03/25 17:28
WH-S01@6'	2501025-03	Soil	01/03/25 11:00	01/03/25 17:28
WH-E01@6'	2501025-04	Soil	01/03/25 11:05	01/03/25 17:28
WH-W01@6'	2501025-05	Soil	01/03/25 11:10	01/03/25 17:28
FL-B01@5'	2501025-06	Soil	01/03/25 11:15	01/03/25 17:28
FL-B02@3'	2501025-07	Soil	01/03/25 12:00	01/03/25 17:28

Summit Scientific

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

Lab ID	Page \ of \
2501025	

Client: Civitas/Tasman	Project Manager: Sam Vogt / Jacob Evans	Company:
Address: 6855 W. 119th Ave.	E-Mail: svogt@tasman-geo.com / jevans@civiresources.com	Project Name/Location:
City/State/Zip: Broomfield, CO 80020		AFE#: 24296
Phone: PM Phone # (610) 405-9078	Project Name: RUHL 1G-32H-B264	PO/Billing Codes: 24296 8523.195
Sampler Name: Abby Martin, Sean Clarke	Project Number:	Contact: AM

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested							Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN	1,2,4 + 1,3,5 TMBs	TPH (GRO,DRO,ORO)	PAH	pH, EC, SAR	Boron		Metals
1	WH-B01@7'	1/03/25	10:50	2			X			X									X	pH, EC, SAR by Saturated paste preparation method Boron by Hot Water Soluble preparation Method Table 915 Metals - As, Ba, Cd, Cu, Pb, Ni, Se, Ag, Zn, Cr VI FULL TABLE 915
2	WH-N01@6'		10:55																	
3	WH-S01@6'		11:00																	
4	WH-E01@6'		11:05																	
5	WH-W01@6'		11:10																	
6	FL-B01@5'		11:15																	
7	FL-B02@3'		12:00																	
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by: Abby Martin	Date/Time: 1/03/25 14:15	Received by: TASMAN LOCK BOX	Date/Time: 1/03/25 14:15	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lock Box	Date/Time: 1/3/25 1728	Received by: [Signature]	Date/Time: 1/3/25 1728	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 0.1	Corrected Temperature: 0	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2501025

Client: Curtis Casman Client Project ID: RUHL IG-32H-B204

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

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

Temp (°C) Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on 20E
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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

AS
Custodian Printed Name

1/3/25
Date/Time



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

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

WH-B01@7'
2501025-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/03/25 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	0.0075	0.0020		mg/kg	1	BIA0343	01/09/25	01/11/25	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.033	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.013	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1.4	0.50		"	"	"	"	"	"	

Date Sampled: **01/03/25 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0363	90.7 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	97.9 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0399	99.7 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/03/25 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BIA0344	01/09/25	01/12/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/03/25 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	15.4	123 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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PAH by EPA Method 8270D SIM

Date Sampled: **01/03/25 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIA0342	01/09/25	01/11/25	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	0.0109	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	0.00725	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0424	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0437	0.00500	"	"	"	"	"	"	

Date Sampled: **01/03/25 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0307	92.0 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0205	61.4 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/03/25 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIB0888	02/17/25	02/21/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/03/25 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Broomfield CO, 80020

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

WH-B01@7'
2501025-01 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	7.48	0.200	mg/kg dry	1	BIB1243	02/21/25	03/10/25	EPA 6020B
Barium	1180	0.400	"	"	"	"	"	"
Cadmium	1.05	0.200	"	"	"	"	"	"
Copper	157	0.400	"	"	"	"	"	"
Lead	14.6	0.200	"	"	"	"	"	"
Nickel	11.9	0.400	"	"	"	"	"	"
Silver	0.194	0.0200	"	"	"	"	"	"
Zinc	60.9	0.400	"	"	"	"	"	"
Selenium	1.80	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/03/25 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA1002	01/22/25	01/27/25	EPA 7196A	

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

Date Sampled: **01/03/25 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	71.6	0.0500	mg/L dry	1	BIA1151	01/24/25	01/29/25	EPA 6020B	
Magnesium	8.47	0.0500	"	"	"	"	"	"	
Sodium	49.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/03/25 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.48	0.00100	units	1	BIA1323	01/29/25	01/29/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/03/25 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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WH-B01@7'
2501025-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	66.7	%	1	BIA1182	01/27/25	01/27/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/03/25 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.726	0.0100	mmhos/cm	1	BIA1149	01/24/25	01/28/25	EPA 120.1	

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

Date Sampled: **01/03/25 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.37		pH Units	1	BIA1147	01/24/25	01/28/25	EPA 9045D	

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03/11/25 08:06

WH-N01@6'
2501025-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/03/25 10:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BIA0343	01/09/25	01/11/25	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: **01/03/25 10:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0389	97.2 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0393	98.2 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0424	106 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/03/25 10:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BIA0344	01/09/25	01/12/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/03/25 10:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	15.8	126 %	30-150	"	"	"	"	"	

PAH by EPA Method 8270D SIM

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03/11/25 08:06

WH-N01@6'
2501025-02 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **01/03/25 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIA0342	01/09/25	01/11/25	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: **01/03/25 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0252	75.5 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0250	74.9 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/03/25 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIB0888	02/17/25	02/21/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/03/25 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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03/11/25 08:06

WH-N01@6'
2501025-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	5.65	0.200	mg/kg dry	1	BIB1243	02/21/25	03/07/25	EPA 6020B
Barium	360	0.400	"	"	"	"	"	"
Cadmium	0.367	0.200	"	"	"	"	"	"
Copper	7.35	0.400	"	"	"	"	"	"
Lead	11.1	0.200	"	"	"	"	"	"
Nickel	8.16	0.400	"	"	"	"	"	"
Silver	0.0634	0.0200	"	"	"	"	"	"
Zinc	27.4	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/03/25 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA1002	01/22/25	01/27/25	EPA 7196A	

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

Date Sampled: **01/03/25 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	39.9	0.0500	mg/L dry	1	BIA1151	01/24/25	01/29/25	EPA 6020B	
Magnesium	7.77	0.0500	"	"	"	"	"	"	
Sodium	35.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/03/25 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.36	0.00100	units	1	BIA1323	01/29/25	01/29/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/03/25 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

WH-N01@6'
2501025-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	82.0	%	1	BIA1182	01/27/25	01/27/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/03/25 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.236	0.0100	mmhos/cm	1	BIA1149	01/24/25	01/28/25	EPA 120.1	

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

Date Sampled: **01/03/25 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.62		pH Units	1	BIA1147	01/24/25	01/28/25	EPA 9045D	

Summit Scientific

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

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

WH-S01@6'
2501025-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/03/25 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIA0343	01/09/25	01/11/25	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: **01/03/25 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0382	95.6 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0408	102 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/03/25 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BIA0344	01/09/25	01/12/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/03/25 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	17.2	138 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

WH-S01@6'
2501025-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIA0342	01/09/25	01/11/25	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: **01/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0221	66.4 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0199	59.7 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIB0888	02/17/25	02/21/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/03/25 11:00**

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: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

WH-S01@6'
2501025-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	6.11	0.200	mg/kg dry	1	BIB1243	02/21/25	03/07/25	EPA 6020B
Barium	178	0.400	"	"	"	"	"	"
Cadmium	0.388	0.200	"	"	"	"	"	"
Copper	7.63	0.400	"	"	"	"	"	"
Lead	11.8	0.200	"	"	"	"	"	"
Nickel	8.70	0.400	"	"	"	"	"	"
Silver	0.0681	0.0200	"	"	"	"	"	"
Zinc	28.4	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA1002	01/22/25	01/27/25	EPA 7196A	

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

Date Sampled: **01/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	32.9	0.0500	mg/L dry	1	BIA1151	01/24/25	01/29/25	EPA 6020B	
Magnesium	7.34	0.0500	"	"	"	"	"	"	
Sodium	15.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.640	0.00100	units	1	BIA1323	01/29/25	01/29/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/03/25 11:00**

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: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

WH-S01@6'
2501025-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	82.0	%	1	BIA1182	01/27/25	01/27/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.176	0.0100	mmhos/cm	1	BIA1149	01/24/25	01/28/25	EPA 120.1	

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

Date Sampled: **01/03/25 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.76		pH Units	1	BIA1147	01/24/25	01/28/25	EPA 9045D	

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

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

WH-E01@6'
2501025-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/03/25 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIA0343	01/09/25	01/11/25	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: **01/03/25 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0380	95.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0397	99.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0405	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/03/25 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIA0344	01/09/25	01/12/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/03/25 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	16.1	129 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

WH-E01@6'
2501025-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/03/25 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIA0342	01/09/25	01/11/25	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: **01/03/25 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0210	63.1 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0204	61.1 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/03/25 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIB0888	02/17/25	02/21/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/03/25 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Broomfield CO, 80020

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

WH-E01@6'
2501025-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	6.53	0.200	mg/kg dry	1	BIB1243	02/21/25	03/07/25	EPA 6020B
Barium	258	0.400	"	"	"	"	"	"
Cadmium	0.341	0.200	"	"	"	"	"	"
Copper	7.11	0.400	"	"	"	"	"	"
Lead	10.2	0.200	"	"	"	"	"	"
Nickel	8.11	0.400	"	"	"	"	"	"
Silver	0.0575	0.0200	"	"	"	"	"	"
Zinc	25.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/03/25 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA1002	01/22/25	01/27/25	EPA 7196A	

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

Date Sampled: **01/03/25 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	28.0	0.0500	mg/L dry	1	BIA1151	01/24/25	01/29/25	EPA 6020B	
Magnesium	8.03	0.0500	"	"	"	"	"	"	
Sodium	15.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/03/25 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.647	0.00100	units	1	BIA1323	01/29/25	01/29/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/03/25 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

WH-E01@6'
2501025-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	81.5	%	1	BIA1182	01/27/25	01/27/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/03/25 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.201	0.0100	mmhos/cm	1	BIA1149	01/24/25	01/28/25	EPA 120.1	

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

Date Sampled: **01/03/25 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.48		pH Units	1	BIA1147	01/24/25	01/28/25	EPA 9045D	

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Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

WH-W01@6'
2501025-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/03/25 11:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BIA0343	01/09/25	01/11/25	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: **01/03/25 11:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0357	89.3 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.6 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0397	99.2 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/03/25 11:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BIA0344	01/09/25	01/12/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/03/25 11:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	9.73	77.8 %	30-150	"	"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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03/11/25 08:06

WH-W01@6'
2501025-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/03/25 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIA0342	01/09/25	01/11/25	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: **01/03/25 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0222	66.7 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0230	69.0 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/03/25 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIB0888	02/17/25	02/21/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/03/25 11:10**

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: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

WH-W01@6'
2501025-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	5.64	0.200	mg/kg dry	1	BIB1243	02/21/25	03/07/25	EPA 6020B
Barium	179	0.400	"	"	"	"	"	"
Cadmium	0.374	0.200	"	"	"	"	"	"
Copper	7.50	0.400	"	"	"	"	"	"
Lead	11.2	0.200	"	"	"	"	"	"
Nickel	8.18	0.400	"	"	"	"	"	"
Silver	0.0617	0.0200	"	"	"	"	"	"
Zinc	27.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/03/25 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA1002	01/22/25	01/27/25	EPA 7196A	

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

Date Sampled: **01/03/25 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	32.4	0.0500	mg/L dry	1	BIA1151	01/24/25	01/29/25	EPA 6020B	
Magnesium	9.75	0.0500	"	"	"	"	"	"	
Sodium	23.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/03/25 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.937	0.00100	units	1	BIA1323	01/29/25	01/29/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/03/25 11:10**

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: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

WH-W01@6'
2501025-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	81.1	%	1	BIA1182	01/27/25	01/27/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/03/25 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.264	0.0100	mmhos/cm	1	BIA1149	01/24/25	01/28/25	EPA 120.1	

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

Date Sampled: **01/03/25 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.46		pH Units	1	BIA1147	01/24/25	01/28/25	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

FL-B01@5'
2501025-06 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/03/25 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIA0343	01/09/25	01/11/25	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: **01/03/25 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0369	92.3 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0397	99.3 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0398	99.5 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/03/25 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BIA0344	01/09/25	01/12/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/03/25 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.4	83.6 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
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Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

FL-B01@5'
2501025-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/03/25 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIA0342	01/09/25	01/11/25	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: **01/03/25 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0208	62.3 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0204	61.3 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/03/25 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIB0888	02/17/25	02/21/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/03/25 11:15**

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

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

FL-B01@5'
2501025-06 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	5.63	0.200	mg/kg dry	1	BIB1243	02/21/25	03/07/25	EPA 6020B
Barium	201	0.400	"	"	"	"	"	"
Cadmium	0.408	0.200	"	"	"	"	"	"
Copper	7.18	0.400	"	"	"	"	"	"
Lead	11.2	0.200	"	"	"	"	"	"
Nickel	8.09	0.400	"	"	"	"	"	"
Silver	0.0620	0.0200	"	"	"	"	"	"
Zinc	27.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/03/25 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA1002	01/22/25	01/27/25	EPA 7196A	

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

Date Sampled: **01/03/25 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	69.4	0.0500	mg/L dry	1	BIA1151	01/24/25	01/29/25	EPA 6020B	
Magnesium	9.73	0.0500	"	"	"	"	"	"	
Sodium	103	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/03/25 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.07	0.00100	units	1	BIA1323	01/29/25	01/29/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/03/25 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
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Broomfield CO, 80020

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

FL-B01@5'
2501025-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	82.6	%	1	BIA1182	01/27/25	01/27/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/03/25 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.293	0.0100	mmhos/cm	1	BIA1149	01/24/25	01/28/25	EPA 120.1	

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

Date Sampled: **01/03/25 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.71		pH Units	1	BIA1147	01/24/25	01/28/25	EPA 9045D	

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Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

FL-B02@3'
2501025-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/03/25 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIA0343	01/09/25	01/11/25	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: **01/03/25 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0367	91.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0392	98.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/03/25 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIA0344	01/09/25	01/12/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/03/25 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.7	85.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

FL-B02@3'
2501025-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/03/25 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIA0342	01/09/25	01/12/25	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: **01/03/25 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0216	64.7 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0199	59.7 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/03/25 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIB0888	02/17/25	02/21/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/03/25 12:00**

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

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

FL-B02@3'
2501025-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	3.84	0.200	mg/kg dry	1	BIB1243	02/21/25	03/07/25	EPA 6020B
Barium	171	0.400	"	"	"	"	"	"
Cadmium	0.346	0.200	"	"	"	"	"	"
Copper	7.76	0.400	"	"	"	"	"	"
Lead	10.2	0.200	"	"	"	"	"	"
Nickel	6.35	0.400	"	"	"	"	"	"
Silver	0.0713	0.0200	"	"	"	"	"	"
Zinc	25.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/03/25 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA1002	01/22/25	01/27/25	EPA 7196A	

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

Date Sampled: **01/03/25 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	28.0	0.0500	mg/L dry	1	BIA1151	01/24/25	01/29/25	EPA 6020B	
Magnesium	8.45	0.0500	"	"	"	"	"	"	
Sodium	21.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/03/25 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.902	0.00100	units	1	BIA1323	01/29/25	01/29/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/03/25 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Broomfield CO, 80020

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

FL-B02@3'
2501025-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	88.1	%	1	BIA1182	01/27/25	01/27/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/03/25 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.192	0.0100	mmhos/cm	1	BIA1149	01/24/25	01/28/25	EPA 120.1	

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

Date Sampled: **01/03/25 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.66		pH Units	1	BIA1147	01/24/25	01/28/25	EPA 9045D	

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

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

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 BIA0343 - EPA 5030 Soil MS

Blank (BIA0343-BLK1)

Prepared: 01/09/25 Analyzed: 01/11/25

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	0.0400		"	0.0400		100	50-150				
Surrogate: Toluene-d8	0.0406		"	0.0400		101	50-150				
Surrogate: 4-Bromofluorobenzene	0.0410		"	0.0400		103	50-150				

LCS (BIA0343-BS1)

Prepared: 01/09/25 Analyzed: 01/11/25

Benzene	0.106	0.0020	mg/kg	0.100		106	70-130				
Toluene	0.106	0.0050	"	0.100		106	70-130				
Ethylbenzene	0.102	0.0050	"	0.100		102	70-130				
m,p-Xylene	0.203	0.010	"	0.200		101	70-130				
o-Xylene	0.0999	0.0050	"	0.100		99.9	70-130				
1,2,4-Trimethylbenzene	0.0992	0.0050	"	0.100		99.2	70-130				
1,3,5-Trimethylbenzene	0.0985	0.0050	"	0.100		98.5	70-130				
Naphthalene	0.0995	0.0038	"	0.100		99.5	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0400		"	0.0400		100	50-150				
Surrogate: Toluene-d8	0.0409		"	0.0400		102	50-150				
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400		101	50-150				

Matrix Spike (BIA0343-MS1)

Source: 2501024-01

Prepared: 01/09/25 Analyzed: 01/11/25

Benzene	0.0992	0.0020	mg/kg	0.100	ND	99.2	70-130				
Toluene	0.0998	0.0050	"	0.100	0.0174	82.4	70-130				
Ethylbenzene	0.0992	0.0050	"	0.100	0.00381	95.4	70-130				
m,p-Xylene	0.196	0.010	"	0.200	0.0305	83.0	70-130				
o-Xylene	0.0951	0.0050	"	0.100	0.0113	83.8	70-130				
1,2,4-Trimethylbenzene	0.0970	0.0050	"	0.100	0.0215	75.5	70-130				
1,3,5-Trimethylbenzene	0.0960	0.0050	"	0.100	0.00915	86.9	70-130				
Naphthalene	0.101	0.0038	"	0.100	0.00708	93.8	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0407		"	0.0400		102	50-150				
Surrogate: Toluene-d8	0.0411		"	0.0400		103	50-150				
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0400		102	50-150				

Summit Scientific

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

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BIA0343 - EPA 5030 Soil MS

Matrix Spike Dup (BIA0343-MSD1)	Source: 2501024-01			Prepared: 01/09/25 Analyzed: 01/11/25						
Benzene	0.102	0.0020	mg/kg	0.100	ND	102	70-130	2.54	30	
Toluene	0.103	0.0050	"	0.100	0.0174	85.4	70-130	2.93	30	
Ethylbenzene	0.0996	0.0050	"	0.100	0.00381	95.8	70-130	0.392	30	
m,p-Xylene	0.196	0.010	"	0.200	0.0305	82.8	70-130	0.153	30	
o-Xylene	0.0975	0.0050	"	0.100	0.0113	86.2	70-130	2.49	30	
1,2,4-Trimethylbenzene	0.0958	0.0050	"	0.100	0.0215	74.3	70-130	1.25	30	
1,3,5-Trimethylbenzene	0.0950	0.0050	"	0.100	0.00915	85.8	70-130	1.10	30	
Naphthalene	0.0960	0.0038	"	0.100	0.00708	88.9	70-130	4.97	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>		<i>98.0</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0410</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0389</i>		<i>"</i>	<i>0.0400</i>		<i>97.2</i>	<i>50-150</i>			

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

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

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 BIA0344 - EPA 3550A

Blank (BIA0344-BLK1)

Prepared: 01/09/25 Analyzed: 01/12/25

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	13.7		"	12.5		109	30-150				

LCS (BIA0344-BS1)

Prepared: 01/09/25 Analyzed: 01/12/25

C10-C28 (DRO)	586	50	mg/kg	500		117	70-130				
Surrogate: <i>o</i> -Terphenyl	15.9		"	12.5		127	30-150				

Matrix Spike (BIA0344-MS1)

Source: 2501047-01

Prepared: 01/09/25 Analyzed: 01/12/25

C10-C28 (DRO)	455	50	mg/kg	500	ND	90.9	70-130				
Surrogate: <i>o</i> -Terphenyl	16.4		"	12.5		131	30-150				

Matrix Spike Dup (BIA0344-MSD1)

Source: 2501047-01

Prepared: 01/09/25 Analyzed: 01/12/25

C10-C28 (DRO)	492	50	mg/kg	500	ND	98.3	70-130	7.80	20		
Surrogate: <i>o</i> -Terphenyl	16.1		"	12.5		129	30-150				

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Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

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 BIA0342 - EPA 5030 Soil MS

Blank (BIA0342-BLK1)

Prepared: 01/09/25 Analyzed: 01/11/25

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0209</i>		"	<i>0.0333</i>		<i>62.6</i>	<i>40-140</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0193</i>		"	<i>0.0333</i>		<i>57.9</i>	<i>40-140</i>			

LCS (BIA0342-BS1)

Prepared: 01/09/25 Analyzed: 01/11/25

Acenaphthene	0.0256	0.00500	mg/kg	0.0333		76.9	40-140			
Anthracene	0.0230	0.00500	"	0.0333		68.9	40-140			
Benzo (a) anthracene	0.0243	0.00500	"	0.0333		72.9	40-140			
Benzo (a) pyrene	0.0184	0.00500	"	0.0333		55.1	40-140			
Benzo (b) fluoranthene	0.0186	0.00500	"	0.0333		55.8	40-140			
Benzo (k) fluoranthene	0.0201	0.00500	"	0.0333		60.3	40-140			
Chrysene	0.0253	0.00500	"	0.0333		75.8	40-140			
Dibenz (a,h) anthracene	0.0173	0.00500	"	0.0333		51.9	40-140			
Fluoranthene	0.0212	0.00500	"	0.0333		63.5	40-140			
Fluorene	0.0251	0.00500	"	0.0333		75.3	40-140			
Indeno (1,2,3-cd) pyrene	0.0207	0.00500	"	0.0333		62.2	40-140			
Pyrene	0.0246	0.00500	"	0.0333		73.9	40-140			
1-Methylnaphthalene	0.0247	0.00500	"	0.0333		74.0	40-140			
2-Methylnaphthalene	0.0242	0.00500	"	0.0333		72.5	40-140			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0237</i>		"	<i>0.0333</i>		<i>71.2</i>	<i>40-140</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0240</i>		"	<i>0.0333</i>		<i>71.9</i>	<i>40-140</i>			

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

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

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 BIA0342 - EPA 5030 Soil MS

Matrix Spike (BIA0342-MS1)	Source: 2501024-01			Prepared: 01/09/25 Analyzed: 01/11/25						
Acenaphthene	0.0313	0.00500	mg/kg	0.0333	ND	93.9	40-140			
Anthracene	0.0244	0.00500	"	0.0333	ND	73.2	40-140			
Benzo (a) anthracene	0.0373	0.00500	"	0.0333	ND	112	40-140			
Benzo (a) pyrene	0.0187	0.00500	"	0.0333	ND	56.0	40-140			
Benzo (b) fluoranthene	0.0133	0.00500	"	0.0333	ND	39.8	40-140			QM-05
Benzo (k) fluoranthene	0.00887	0.00500	"	0.0333	ND	26.6	40-140			QM-05
Chrysene	0.0154	0.00500	"	0.0333	ND	46.2	40-140			
Dibenz (a,h) anthracene	0.0212	0.00500	"	0.0333	ND	63.5	40-140			
Fluoranthene	0.0138	0.00500	"	0.0333	ND	41.3	40-140			
Fluorene	0.121	0.00500	"	0.0333	ND	362	40-140			QM-05
Indeno (1,2,3-cd) pyrene	0.0383	0.00500	"	0.0333	ND	115	40-140			
Pyrene	0.0270	0.00500	"	0.0333	0.0100	50.8	40-140			
1-Methylnaphthalene	0.289	0.00500	"	0.0333	0.262	82.5	40-140			
2-Methylnaphthalene	0.454	0.00500	"	0.0333	0.468	NR	40-140			QM-05
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0492</i>		<i>"</i>	<i>0.0333</i>		<i>148</i>	<i>40-140</i>			<i>S-02</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0114</i>		<i>"</i>	<i>0.0333</i>		<i>34.1</i>	<i>40-140</i>			<i>S-02</i>

Matrix Spike Dup (BIA0342-MSD1)	Source: 2501024-01			Prepared: 01/09/25 Analyzed: 01/11/25						
Acenaphthene	0.0370	0.00500	mg/kg	0.0333	ND	111	40-140	16.7	30	
Anthracene	0.0255	0.00500	"	0.0333	ND	76.4	40-140	4.27	30	
Benzo (a) anthracene	0.0336	0.00500	"	0.0333	ND	101	40-140	10.6	30	
Benzo (a) pyrene	0.0188	0.00500	"	0.0333	ND	56.3	40-140	0.362	30	
Benzo (b) fluoranthene	0.0126	0.00500	"	0.0333	ND	37.8	40-140	5.07	30	QM-05
Benzo (k) fluoranthene	0.00874	0.00500	"	0.0333	ND	26.2	40-140	1.50	30	QM-05
Chrysene	0.0256	0.00500	"	0.0333	ND	76.8	40-140	49.8	30	QM-05
Dibenz (a,h) anthracene	0.0233	0.00500	"	0.0333	ND	69.9	40-140	9.65	30	
Fluoranthene	0.0121	0.00500	"	0.0333	ND	36.2	40-140	13.2	30	QM-05
Fluorene	0.165	0.00500	"	0.0333	ND	495	40-140	31.1	30	QM-05
Indeno (1,2,3-cd) pyrene	0.0325	0.00500	"	0.0333	ND	97.5	40-140	16.3	30	
Pyrene	0.0356	0.00500	"	0.0333	0.0100	76.8	40-140	27.7	30	
1-Methylnaphthalene	0.391	0.00500	"	0.0333	0.262	387	40-140	29.8	30	QM-05
2-Methylnaphthalene	0.565	0.00500	"	0.0333	0.468	290	40-140	21.7	30	QM-05
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0567</i>		<i>"</i>	<i>0.0333</i>		<i>170</i>	<i>40-140</i>			<i>S-02</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0107</i>		<i>"</i>	<i>0.0333</i>		<i>32.0</i>	<i>40-140</i>			<i>S-02</i>

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

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

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

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

Batch BIB0888 - EPA 3050B

Blank (BIB0888-BLK1)

Prepared: 02/17/25 Analyzed: 02/21/25

Boron ND 2.00 mg/L

LCS (BIB0888-BS1)

Prepared: 02/17/25 Analyzed: 02/21/25

Boron 5.34 2.00 mg/L 5.00 107 80-120

Duplicate (BIB0888-DUP1)

Source: 2501023-01

Prepared: 02/17/25 Analyzed: 02/21/25

Boron 0.173 2.00 mg/L 0.220 24.0 20 QR-01

Matrix Spike (BIB0888-MS1)

Source: 2501023-01

Prepared: 02/17/25 Analyzed: 02/21/25

Boron 4.70 2.00 mg/L 5.00 0.220 89.7 75-125

Matrix Spike Dup (BIB0888-MSD1)

Source: 2501023-01

Prepared: 02/17/25 Analyzed: 02/21/25

Boron 5.18 2.00 mg/L 5.00 0.220 99.3 75-125 9.72 25

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

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

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 BIB1243 - EPA 3050B

Blank (BIB1243-BLK1)

Prepared: 02/21/25 Analyzed: 03/07/25

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 (BIB1243-BS1)

Prepared: 02/21/25 Analyzed: 03/10/25

Arsenic	39.6	0.200	mg/kg wet	41.7	95.1	80-120
Barium	40.2	0.400	"	41.7	96.5	80-120
Cadmium	2.04	0.200	"	2.08	97.7	80-120
Copper	43.1	0.400	"	41.7	103	80-120
Lead	20.0	0.200	"	20.8	95.8	80-120
Nickel	42.9	0.400	"	41.7	103	80-120
Silver	2.03	0.0200	"	2.08	97.5	80-120
Zinc	43.1	0.400	"	41.7	103	80-120
Selenium	4.50	0.260	"	4.17	108	80-120

Duplicate (BIB1243-DUP1)

Source: 2501025-01

Prepared: 02/21/25 Analyzed: 03/10/25

Arsenic	6.12	0.200	mg/kg dry	7.48	20.0	20	
Barium	1140	0.400	"	1180	3.33	20	
Cadmium	1.24	0.200	"	1.05	16.0	20	
Copper	263	0.400	"	157	50.8	20	QR-04
Lead	14.5	0.200	"	14.6	0.389	20	
Nickel	12.2	0.400	"	11.9	2.75	20	
Silver	0.256	0.0200	"	0.194	27.5	20	QR-04
Zinc	66.9	0.400	"	60.9	9.40	20	
Selenium	1.58	0.260	"	1.80	13.0	20	

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

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

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 BIB1243 - EPA 3050B

Matrix Spike (BIB1243-MS1)	Source: 2501025-01			Prepared: 02/21/25		Analyzed: 03/10/25					
Arsenic	58.7	0.200	mg/kg dry	59.5	7.48	86.0	75-125				
Barium	1390	0.400	"	59.5	1180	350	75-125				QM-05
Cadmium	3.87	0.200	"	2.98	1.05	94.6	75-125				
Copper	137	0.400	"	59.5	157	NR	75-125				QM-05
Lead	41.4	0.200	"	29.8	14.6	90.1	75-125				
Nickel	37.5	0.400	"	59.5	11.9	43.1	75-125				QM-05
Silver	2.96	0.0200	"	2.98	0.194	92.9	75-125				
Zinc	73.4	0.400	"	59.5	60.9	21.1	75-125				QM-05
Selenium	6.74	0.260	"	5.95	1.80	83.0	75-125				

Matrix Spike Dup (BIB1243-MSD1)	Source: 2501025-01			Prepared: 02/21/25		Analyzed: 03/10/25					
Arsenic	64.5	0.200	mg/kg dry	62.0	7.48	92.0	75-125	9.46	25		
Barium	1250	0.400	"	62.0	1180	107	75-125	10.8	25		
Cadmium	4.12	0.200	"	3.10	1.05	99.1	75-125	6.36	25		
Copper	132	0.400	"	62.0	157	NR	75-125	4.22	25		QM-05
Lead	47.5	0.200	"	31.0	14.6	106	75-125	13.7	25		
Nickel	46.3	0.400	"	62.0	11.9	55.5	75-125	21.0	25		QM-05
Silver	3.08	0.0200	"	3.10	0.194	93.2	75-125	4.05	25		
Zinc	91.6	0.400	"	62.0	60.9	49.5	75-125	22.0	25		QM-05
Selenium	7.44	0.260	"	6.20	1.80	91.0	75-125	9.87	25		

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

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BIA1002 - 3060A Mod

Blank (BIA1002-BLK1)

Prepared: 01/22/25 Analyzed: 01/27/25

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BIA1002-BS1)

Prepared: 01/22/25 Analyzed: 01/27/25

Chromium, Hexavalent 22.5 0.30 mg/kg wet 23.8 94.4 80-120

Duplicate (BIA1002-DUP1)

Source: 2501020-01

Prepared: 01/22/25 Analyzed: 01/27/25

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BIA1002-MS1)

Source: 2501020-01

Prepared: 01/22/25 Analyzed: 01/27/25

Chromium, Hexavalent 33.6 0.30 mg/kg dry 32.1 ND 105 75-125

Matrix Spike Dup (BIA1002-MSD1)

Source: 2501020-01

Prepared: 01/22/25 Analyzed: 01/27/25

Chromium, Hexavalent 31.8 0.30 mg/kg dry 31.8 ND 100 75-125 5.34 20

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Tasman Geosciences
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Broomfield CO, 80020

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

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 BIA1151 - General Preparation

Blank (BIA1151-BLK1)

Prepared: 01/24/25 Analyzed: 01/29/25

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

LCS (BIA1151-BS1)

Prepared: 01/24/25 Analyzed: 01/29/25

Calcium	4.64	0.0500	mg/L wet	5.00	92.8	70-130
Magnesium	5.03	0.0500	"	5.00	101	70-130
Sodium	5.16	0.0500	"	5.00	103	70-130

Summit Scientific

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

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
 Project Manager: Sam Vogt

Reported:
 03/11/25 08:06

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 BIA1182 - General Preparation

Duplicate (BIA1182-DUP1)

Source: 2501023-01

Prepared & Analyzed: 01/27/25

% Solids	91.1		%		92.3			1.34	20	
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Summit Scientific

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

Project: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

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

Summit Scientific

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

Batch BIA1149 - General Preparation

Blank (BIA1149-BLK1)

Prepared: 01/24/25 Analyzed: 01/28/25

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BIA1149-BS1)

Prepared: 01/24/25 Analyzed: 01/28/25

Specific Conductance (EC) 1.37 0.0100 mmhos/cm 1.41 97.3 95-105

Duplicate (BIA1149-DUP1)

Source: 2501023-01

Prepared: 01/24/25 Analyzed: 01/28/25

Specific Conductance (EC) 0.465 0.0100 mmhos/cm 0.467 0.423 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: Civitas - Ruhl 1G-32H-B264

Project Number: 24296
Project Manager: Sam Vogt

Reported:
03/11/25 08:06

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 BIA1147 - General Preparation

LCS (BIA1147-BS1)

Prepared: 01/24/25 Analyzed: 01/28/25

pH	9.14	pH Units	9.18	99.6	95-105
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Duplicate (BIA1147-DUP1)

Source: 2501023-01

Prepared: 01/24/25 Analyzed: 01/28/25

pH	7.56	pH Units	7.54	0.250	20
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Summit Scientific

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Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to matrix interference. Matrix interference was verified via reanalysis.
- 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.
- 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