

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 18, 2024

Sam Vogt

Tasman Geosciences

6855 W. 119th Ave.

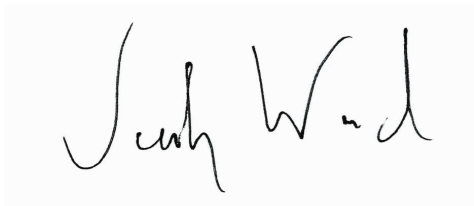
Broomfield, CO 80020

RE: Civitas - Bury Crandell C Unit 1

Work Order #2402272

Enclosed are the results of analyses for samples received by Summit Scientific on 02/14/24 17:51. 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: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH-B01@5'	2402272-01	Soil	02/14/24 12:20	02/14/24 17:51
FL-B01@4'	2402272-06	Soil	02/14/24 12:45	02/14/24 17:51
FL-B02@4'	2402272-07	Soil	02/14/24 12:50	02/14/24 17:51
SP-CS01	2402272-08	Soil	02/14/24 12:55	02/14/24 17:51

The Hexavalent Chromium hold-time has expired for these samples. Hexavalent Chromium was therefore cancelled prior to completion at Summit Scientific.

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Client: Civitas/Tasman		Send Data To: Project Manager: Jacob Evans/Sam Vogt		Send Invoice To: 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#: 23730	
Phone: PM Phone # - (610) 405-9078		Project Name: Bury Crandell C Unit 1		PO/Billing Codes: 8520.302	
Sampler Name: Sean Clarke		Project Number:		Contact:	

					Preservative				Matrix				Analysis Requested								Special Instructions	
ID	Sample Description	Date Sampled	Time Sampled	# of containers	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	Full Table 915	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	
1	WH-BØ1 @ 5'	2/14/24	12:20	2						X												
2	WH-NØ1 @ 4'		12:25																			
3	WH-SØ1 @ 4'		12:30																			
4	WH-EØ1 @ 4'		12:35																			
5	WH-WØ1 @ 4'		12:40																			
6	FL-BØ1 @ 4'		12:45																			
7	FL-BØ2 @ 4'		12:50																			
8	SP-CSØ1	↓	12:55	↓						↓											↓	
9																						
10																						
11																						
12																						
13																						
14																						
15																						

Relinquished by: <i>Sam Clarke</i>	Date/Time: 2/14/24 14:40	Received by: Tasman Lockbox	Date/Time: 2/14/24 14:40	TAT Business Days	Field DO	Notes:
Relinquished by: <i>Tasman Lockbox</i>	Date/Time: 2/14/24 17:51	Received by: <i>[Signature]</i>	Date/Time: 2/14/24 17:51	Same Day <input checked="" type="checkbox"/>	Field EC	
				1 Day <input type="checkbox"/>	Field ORP	
				2 Days <input type="checkbox"/>	Field pH	
				3 Days <input type="checkbox"/>	Field Temp.	
				Standard <input type="checkbox"/>	Field Turb.	
Temperature Upon Receipt: 7.9	Corrected Temperature: 8	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2402272Client Curtastroman Client Project ID: Bury Crandell Cunit 1Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 7.9Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on JCE
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 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 checked="" type="checkbox"/>	<input type="checkbox"/>	missing samples 2-5
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 Name2/14/24
Date/Time



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

Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

WH-B01@5'
2402272-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/14/24 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHB0494	02/14/24	02/14/24	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: **02/14/24 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0448	112 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0392	98.0 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/14/24 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHB0491	02/14/24	02/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/14/24 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.3	82.1 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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PAH by EPA Method 8270D SIM

Date Sampled: **02/14/24 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHB0504	02/15/24	02/19/24	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: **02/14/24 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0168	50.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0142	42.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/14/24 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHB0721	02/22/24	02/23/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/14/24 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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WH-B01@5'
2402272-01 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.08	0.200	mg/kg dry	1	BHD0179	04/05/24	04/10/24	EPA 6020B	
Barium	321	0.400	"	"	"	"	"	"	
Cadmium	0.265	0.200	"	"	"	"	"	"	
Copper	4.11	0.400	"	"	"	"	"	"	
Lead	14.9	0.200	"	"	"	"	"	"	
Nickel	3.65	0.400	"	"	"	"	"	"	
Silver	0.0598	0.0200	"	"	"	"	"	"	
Zinc	18.5	0.400	"	"	"	"	"	"	
Selenium	0.273	0.260	"	"	"	"	"	"	

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

Date Sampled: 02/14/24 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	181	0.0500	mg/L dry	1	BHB0502	02/15/24	02/20/24	EPA 6020B	
Magnesium	0.119	0.0500	"	"	"	"	"	"	
Sodium	65.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 02/14/24 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.33	0.00100	units	1	BHB0744	02/22/24	02/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 02/14/24 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	80.4		%	1	BHB0515	02/15/24	02/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: 02/14/24 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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WH-B01@5'
2402272-01 (Soil)

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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Specific Conductance (EC)	1.69	0.0100	mmhos/cm	1	BHB0541	02/16/24	02/20/24	EPA 120.1
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WH-B01@5'
2402272-01 (Soil)

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

Date Sampled: **02/14/24 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	9.44			pH Units	1	BHD0127	02/16/24	04/08/24	EPA 9045D	I-04

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Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
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FL-B01@4'
2402272-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/14/24 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHB0494	02/14/24	02/14/24	EPA 8260B	
Toluene	0.11	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: **02/14/24 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0435	109 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0396	99.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0406	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/14/24 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0491	02/14/24	02/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/14/24 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.94	71.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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FL-B01@4'
2402272-06 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **02/14/24 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHB0504	02/15/24	02/19/24	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: **02/14/24 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0247	74.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0206	61.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/14/24 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHB0721	02/22/24	02/23/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/14/24 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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FL-B01@4'
2402272-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.21	0.200	mg/kg dry	1	BHD0179	04/05/24	04/10/24	EPA 6020B	
Barium	341	0.400	"	"	"	"	"	"	
Cadmium	0.641	0.200	"	"	"	"	"	"	
Copper	3.93	0.400	"	"	"	"	"	"	
Lead	12.3	0.200	"	"	"	"	"	"	
Nickel	5.15	0.400	"	"	"	"	"	"	
Silver	0.0678	0.0200	"	"	"	"	"	"	
Zinc	12.7	0.400	"	"	"	"	"	"	
Selenium	0.370	0.260	"	"	"	"	"	"	

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

Date Sampled: 02/14/24 12:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	39.9	0.0500	mg/L dry	1	BHB0502	02/15/24	02/20/24	EPA 6020B	
Magnesium	10.9	0.0500	"	"	"	"	"	"	
Sodium	31.0	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 02/14/24 12:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.12	0.00100	units	1	BHB0744	02/22/24	02/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 02/14/24 12:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.9		%	1	BHB0515	02/15/24	02/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: 02/14/24 12:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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04/18/24 11:53

FL-B01@4'
2402272-06 (Soil)

Summit Scientific

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Specific Conductance (EC)	0.359	0.0100	mmhos/cm	1	BHB0541	02/16/24	02/20/24	EPA 120.1
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Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/14/24 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.71		pH Units	1	BHB0542	02/16/24	02/20/24	EPA 9045D	

Summit Scientific

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

Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

FL-B02@4'
2402272-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/14/24 12:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	0.0096	0.0020	mg/kg	1	BHB0494	02/14/24	02/14/24	EPA 8260B	
Toluene	0.14	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.041	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.61	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.26	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.10	0.0050	"	"	"	"	"	"	
Naphthalene	0.030	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	5.4	0.50	"	"	"	"	"	"	

Date Sampled: **02/14/24 12:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0435	109 %	50-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>	0.0398	99.6 %	50-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0424	106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/14/24 12:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0491	02/14/24	02/14/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/14/24 12:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<i>Surrogate: o-Terphenyl</i>	8.51	68.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

FL-B02@4'
2402272-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **02/14/24 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0504	02/15/24	02/19/24	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	0.00611	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0773	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.152	0.00500	"	"	"	"	"	"	

Date Sampled: **02/14/24 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0158	47.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0202	60.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/14/24 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0721	02/22/24	02/23/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/14/24 12:50**

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: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

FL-B02@4'
2402272-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.53	0.200	mg/kg dry	1	BHD0179	04/05/24	04/10/24	EPA 6020B
Barium	589	0.400	"	"	"	"	"	"
Cadmium	0.455	0.200	"	"	"	"	"	"
Copper	5.50	0.400	"	"	"	"	"	"
Lead	14.1	0.200	"	"	"	"	"	"
Nickel	4.84	0.400	"	"	"	"	"	"
Silver	0.0601	0.0200	"	"	"	"	"	"
Zinc	16.7	0.400	"	"	"	"	"	"
Selenium	0.326	0.260	"	"	"	"	"	"

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

Date Sampled: **02/14/24 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	203	0.0500	mg/L dry	1	BHB0502	02/15/24	02/20/24	EPA 6020B	
Magnesium	34.5	0.0500	"	"	"	"	"	"	
Sodium	25.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/14/24 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.432	0.00100	units	1	BHB0744	02/22/24	02/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/14/24 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	77.2		%	1	BHB0515	02/15/24	02/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/14/24 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
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Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

FL-B02@4'
2402272-07 (Soil)

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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Specific Conductance (EC)	1.04	0.0100	mmhos/cm	1	BHB0541	02/16/24	02/20/24	EPA 120.1
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Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/14/24 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.14		pH Units	1	BHB0542	02/16/24	02/20/24	EPA 9045D	

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Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

SP-CS01
2402272-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/14/24 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHB0494	02/14/24	02/14/24	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: **02/14/24 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0432	108 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0397	99.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0399	99.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/14/24 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0491	02/14/24	02/15/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/14/24 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.98	71.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

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SP-CS01
2402272-08 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **02/14/24 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHB0504	02/15/24	02/19/24	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: **02/14/24 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0218	65.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0218	65.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/14/24 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHB0721	02/22/24	02/23/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/14/24 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

SP-CS01
2402272-08 (Soil)

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Total Metals by EPA 6020B

Arsenic	3.44	0.200	mg/kg dry	1	BHD0179	04/05/24	04/10/24	EPA 6020B
Barium	833	0.400	"	"	"	"	"	"
Cadmium	0.279	0.200	"	"	"	"	"	"
Copper	6.63	0.400	"	"	"	"	"	"
Lead	10.4	0.200	"	"	"	"	"	"
Nickel	2.94	0.400	"	"	"	"	"	"
Silver	0.0516	0.0200	"	"	"	"	"	"
Zinc	11.0	0.400	"	"	"	"	"	"
Selenium	0.286	0.260	"	"	"	"	"	"

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

Date Sampled: **02/14/24 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	87.6	0.0500	mg/L dry	1	BHB0502	02/15/24	02/20/24	EPA 6020B	
Magnesium	23.4	0.0500	"	"	"	"	"	"	
Sodium	73.0	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/14/24 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.79	0.00100	units	1	BHB0744	02/22/24	02/22/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/14/24 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.2		%	1	BHB0515	02/15/24	02/15/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/14/24 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

SP-CS01
2402272-08 (Soil)

Summit Scientific

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Specific Conductance (EC)	0.808	0.0100	mmhos/cm	1	BHB0541	02/16/24	02/20/24	EPA 120.1
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Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **02/14/24 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.25		pH Units	1	BHB0542	02/16/24	02/20/24	EPA 9045D	

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Broomfield CO, 80020

Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

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 BHB0494 - EPA 5030 Soil MS

Blank (BHB0494-BLK1)

Prepared: 02/14/24 Analyzed: 02/15/24

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	0.0390		"	0.0400		97.4	50-150			
Surrogate: Toluene-d8	0.0391		"	0.0400		97.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.6	50-150			

LCS (BHB0494-BS1)

Prepared: 02/14/24 Analyzed: 02/15/24

Benzene	0.118	0.0020	mg/kg	0.100		118	70-130			
Toluene	0.114	0.0050	"	0.100		114	70-130			
Ethylbenzene	0.122	0.0050	"	0.100		122	70-130			
m,p-Xylene	0.243	0.010	"	0.200		122	70-130			
o-Xylene	0.103	0.0050	"	0.100		103	70-130			
1,2,4-Trimethylbenzene	0.113	0.0050	"	0.100		113	70-130			
1,3,5-Trimethylbenzene	0.112	0.0050	"	0.100		112	70-130			
Naphthalene	0.117	0.0038	"	0.100		117	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0430		"	0.0400		108	50-150			
Surrogate: Toluene-d8	0.0402		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0377		"	0.0400		94.4	50-150			

Matrix Spike (BHB0494-MS1)

Source: 2402265-01

Prepared: 02/14/24 Analyzed: 02/15/24

Benzene	0.122	0.0020	mg/kg	0.100	ND	122	70-130			
Toluene	0.119	0.0050	"	0.100	ND	119	70-130			
Ethylbenzene	0.119	0.0050	"	0.100	ND	119	70-130			
m,p-Xylene	0.237	0.010	"	0.200	ND	119	70-130			
o-Xylene	0.103	0.0050	"	0.100	0.00387	98.8	70-130			
1,2,4-Trimethylbenzene	0.132	0.0050	"	0.100	0.0296	103	70-130			
1,3,5-Trimethylbenzene	0.104	0.0050	"	0.100	0.00369	101	70-130			
Naphthalene	0.146	0.0038	"	0.100	0.0514	94.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0470		"	0.0400		117	50-150			
Surrogate: Toluene-d8	0.0409		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0405		"	0.0400		101	50-150			

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Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

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 BHB0494 - EPA 5030 Soil MS

Matrix Spike Dup (BHB0494-MSD1)	Source: 2402265-01			Prepared: 02/14/24 Analyzed: 02/15/24						
Benzene	0.123	0.0020	mg/kg	0.100	ND	123	70-130	0.708	30	
Toluene	0.118	0.0050	"	0.100	ND	118	70-130	1.19	30	
Ethylbenzene	0.119	0.0050	"	0.100	ND	119	70-130	0.151	30	
m,p-Xylene	0.235	0.010	"	0.200	ND	117	70-130	1.06	30	
o-Xylene	0.103	0.0050	"	0.100	0.00387	98.7	70-130	0.117	30	
1,2,4-Trimethylbenzene	0.131	0.0050	"	0.100	0.0296	101	70-130	0.889	30	
1,3,5-Trimethylbenzene	0.103	0.0050	"	0.100	0.00369	99.0	70-130	1.77	30	
Naphthalene	0.149	0.0038	"	0.100	0.0514	97.9	70-130	2.56	30	
Surrogate: 1,2-Dichloroethane-d4	0.0462		"	0.0400		116	50-150			
Surrogate: Toluene-d8	0.0402		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		100	50-150			

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Tasman Geosciences
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Broomfield CO, 80020

Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

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 BHB0491 - EPA 3550A

Blank (BHB0491-BLK1)

Prepared: 02/14/24 Analyzed: 02/15/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	13.5		"	12.5		108	30-150			

LCS (BHB0491-BS1)

Prepared: 02/14/24 Analyzed: 02/15/24

C10-C28 (DRO)	519	50	mg/kg	500		104	70-130			
Surrogate: o-Terphenyl	15.1		"	12.5		120	30-150			

Matrix Spike (BHB0491-MS1)

Source: 2402265-01

Prepared: 02/14/24 Analyzed: 02/15/24

C10-C28 (DRO)	675	50	mg/kg	500	74.0	120	70-130			
Surrogate: o-Terphenyl	15.9		"	12.5		127	30-150			

Matrix Spike Dup (BHB0491-MSD1)

Source: 2402265-01

Prepared: 02/14/24 Analyzed: 02/15/24

C10-C28 (DRO)	677	50	mg/kg	500	74.0	121	70-130	0.276	20	
Surrogate: o-Terphenyl	17.8		"	12.5		143	30-150			

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

Project: Civitas - Bury Crandell C Unit 1
Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

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 BHB0504 - EPA 5030 Soil MS

Blank (BHB0504-BLK1)

Prepared: 02/15/24 Analyzed: 02/18/24

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	0.0385		"	0.0333		115	40-150			
Surrogate: Fluoranthene-d10	0.0273		"	0.0333		81.8	40-150			

LCS (BHB0504-BS1)

Prepared: 02/15/24 Analyzed: 02/18/24

Acenaphthene	0.0297	0.00500	mg/kg	0.0333		89.1	31-137			
Anthracene	0.0285	0.00500	"	0.0333		85.4	30-120			
Benzo (a) anthracene	0.0182	0.00500	"	0.0333		54.5	30-120			
Benzo (a) pyrene	0.0232	0.00500	"	0.0333		69.7	30-120			
Benzo (b) fluoranthene	0.0221	0.00500	"	0.0333		66.3	30-120			
Benzo (k) fluoranthene	0.0280	0.00500	"	0.0333		84.0	30-120			
Chrysene	0.0297	0.00500	"	0.0333		89.2	30-120			
Dibenz (a,h) anthracene	0.0216	0.00500	"	0.0333		64.7	30-120			
Fluoranthene	0.0272	0.00500	"	0.0333		81.6	30-120			
Fluorene	0.0287	0.00500	"	0.0333		86.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0219	0.00500	"	0.0333		65.6	30-120			
Pyrene	0.0311	0.00500	"	0.0333		93.2	35-142			
1-Methylnaphthalene	0.0417	0.00500	"	0.0333		125	35-142			
2-Methylnaphthalene	0.0305	0.00500	"	0.0333		91.6	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0369		"	0.0333		111	40-150			
Surrogate: Fluoranthene-d10	0.0284		"	0.0333		85.1	40-150			

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Broomfield CO, 80020

Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

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 BHB0504 - EPA 5030 Soil MS

Matrix Spike (BHB0504-MS1)

Source: 2402267-01

Prepared: 02/15/24 Analyzed: 02/18/24

Acenaphthene	0.0178	0.00500	mg/kg	0.0333	ND	53.5	31-137			
Anthracene	0.0181	0.00500	"	0.0333	ND	54.3	30-120			
Benzo (a) anthracene	0.0158	0.00500	"	0.0333	ND	47.4	30-120			
Benzo (a) pyrene	0.0176	0.00500	"	0.0333	ND	52.7	30-120			
Benzo (b) fluoranthene	0.0128	0.00500	"	0.0333	ND	38.5	30-120			
Benzo (k) fluoranthene	0.0155	0.00500	"	0.0333	ND	46.4	30-120			
Chrysene	0.0182	0.00500	"	0.0333	ND	54.7	30-120			
Dibenz (a,h) anthracene	0.0180	0.00500	"	0.0333	ND	54.1	30-120			
Fluoranthene	0.0180	0.00500	"	0.0333	ND	54.0	30-120			
Fluorene	0.0179	0.00500	"	0.0333	ND	53.8	30-120			
Indeno (1,2,3-cd) pyrene	0.0178	0.00500	"	0.0333	ND	53.4	30-120			
Pyrene	0.0189	0.00500	"	0.0333	ND	56.8	35-142			
1-Methylnaphthalene	0.0259	0.00500	"	0.0333	ND	77.6	15-130			
2-Methylnaphthalene	0.0191	0.00500	"	0.0333	ND	57.3	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0242		"	0.0333		72.5	40-150			
Surrogate: Fluoranthene-d10	0.0190		"	0.0333		56.9	40-150			

Matrix Spike Dup (BHB0504-MSD1)

Source: 2402267-01

Prepared: 02/15/24 Analyzed: 02/18/24

Acenaphthene	0.0139	0.00500	mg/kg	0.0333	ND	41.8	31-137	24.7	30	
Anthracene	0.0154	0.00500	"	0.0333	ND	46.2	30-120	16.2	30	
Benzo (a) anthracene	0.0214	0.00500	"	0.0333	ND	64.1	30-120	29.9	30	
Benzo (a) pyrene	0.0137	0.00500	"	0.0333	ND	41.0	30-120	24.8	30	
Benzo (b) fluoranthene	0.0186	0.00500	"	0.0333	ND	55.9	30-120	36.9	30	QR-02
Benzo (k) fluoranthene	0.0160	0.00500	"	0.0333	ND	48.1	30-120	3.71	30	
Chrysene	0.0159	0.00500	"	0.0333	ND	47.6	30-120	14.0	30	
Dibenz (a,h) anthracene	0.0156	0.00500	"	0.0333	ND	46.9	30-120	14.2	30	
Fluoranthene	0.0134	0.00500	"	0.0333	ND	40.3	30-120	29.1	30	
Fluorene	0.0144	0.00500	"	0.0333	ND	43.1	30-120	22.1	30	
Indeno (1,2,3-cd) pyrene	0.0153	0.00500	"	0.0333	ND	45.8	30-120	15.2	30	
Pyrene	0.0135	0.00500	"	0.0333	ND	40.5	35-142	33.5	30	QR-02
1-Methylnaphthalene	0.0151	0.00500	"	0.0333	ND	45.2	15-130	52.9	50	QR-02
2-Methylnaphthalene	0.0149	0.00500	"	0.0333	ND	44.8	15-130	24.5	50	
Surrogate: 2-Methylnaphthalene-d10	0.0163		"	0.0333		48.8	40-150			
Surrogate: Fluoranthene-d10	0.0141		"	0.0333		42.4	40-150			

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

Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

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 BHB0721 - EPA 3050B

Blank (BHB0721-BLK1)

Prepared: 02/22/24 Analyzed: 02/23/24

Boron ND 2.00 mg/L

LCS (BHB0721-BS1)

Prepared: 02/22/24 Analyzed: 02/23/24

Boron 5.06 2.00 mg/L 5.00 101 80-120

Duplicate (BHB0721-DUP1)

Source: 2402163-02

Prepared: 02/22/24 Analyzed: 02/23/24

Boron 0.106 2.00 mg/L 0.105 0.304 20

Matrix Spike (BHB0721-MS1)

Source: 2402163-02

Prepared: 02/22/24 Analyzed: 02/23/24

Boron 5.12 2.00 mg/L 5.00 0.105 100 75-125

Matrix Spike Dup (BHB0721-MSD1)

Source: 2402163-02

Prepared: 02/22/24 Analyzed: 02/23/24

Boron 5.19 2.00 mg/L 5.00 0.105 102 75-125 1.38 25

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

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 BHD0179 - EPA 3050B

Blank (BHD0179-BLK1)

Prepared: 04/05/24 Analyzed: 04/10/24

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 (BHD0179-BS1)

Prepared: 04/05/24 Analyzed: 04/10/24

Arsenic	41.9	0.200	mg/kg wet	40.0	105	80-120
Barium	39.3	0.400	"	40.0	98.2	80-120
Cadmium	1.94	0.200	"	2.00	97.1	80-120
Copper	39.9	0.400	"	40.0	99.7	80-120
Lead	19.5	0.200	"	20.0	97.3	80-120
Nickel	39.2	0.400	"	40.0	98.1	80-120
Silver	1.95	0.0200	"	2.00	97.7	80-120
Zinc	41.1	0.400	"	40.0	103	80-120
Selenium	4.10	0.260	"	4.00	103	80-120

Duplicate (BHD0179-DUP1)

Source: 2402270-01

Prepared: 04/05/24 Analyzed: 04/10/24

Arsenic	2.45	0.180	mg/kg dry	3.16	25.5	20	QR-04
Barium	23.0	0.360	"	28.2	20.1	20	QR-04
Cadmium	0.120	0.180	"	0.121	1.07	20	
Copper	2.15	0.360	"	2.26	5.29	20	
Lead	7.57	0.180	"	9.11	18.4	20	
Nickel	1.26	0.360	"	1.20	5.11	20	
Silver	0.0225	0.0180	"	0.0259	14.3	20	
Zinc	7.15	0.360	"	6.65	7.28	20	
Selenium	ND	0.234	"	ND		20	

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Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

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 BHD0179 - EPA 3050B

Matrix Spike (BHD0179-MS1)		Source: 2402270-01			Prepared: 04/05/24 Analyzed: 04/10/24					
Arsenic	30.0	0.200	mg/kg dry	46.6	3.16	57.7	75-125			QM-05
Barium	73.5	0.400	"	46.6	28.2	97.3	75-125			
Cadmium	2.52	0.200	"	2.33	0.121	103	75-125			
Copper	21.0	0.400	"	46.6	2.26	40.2	75-125			QM-05
Lead	30.0	0.200	"	23.3	9.11	89.7	75-125			
Nickel	20.4	0.400	"	46.6	1.20	41.2	75-125			QM-05
Silver	2.34	0.0200	"	2.33	0.0259	99.4	75-125			
Zinc	28.1	0.400	"	46.6	6.65	46.0	75-125			QM-05
Selenium	5.06	0.260	"	4.66	ND	109	75-125			

Matrix Spike Dup (BHD0179-MSD1)		Source: 2402270-01			Prepared: 04/05/24 Analyzed: 04/10/24					
Arsenic	28.0	0.200	mg/kg dry	46.6	3.16	53.3	75-125	7.07	25	QM-05
Barium	76.9	0.400	"	46.6	28.2	105	75-125	4.50	25	
Cadmium	2.57	0.200	"	2.33	0.121	105	75-125	1.81	25	
Copper	20.8	0.400	"	46.6	2.26	39.7	75-125	1.00	25	QM-05
Lead	31.0	0.200	"	23.3	9.11	93.9	75-125	3.19	25	
Nickel	20.3	0.400	"	46.6	1.20	40.9	75-125	0.628	25	QM-05
Silver	2.43	0.0200	"	2.33	0.0259	103	75-125	3.56	25	
Zinc	28.0	0.400	"	46.6	6.65	45.9	75-125	0.128	25	QM-05
Selenium	4.99	0.260	"	4.66	ND	107	75-125	1.50	25	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

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 BHB0502 - General Preparation

Blank (BHB0502-BLK1)

Prepared: 02/15/24 Analyzed: 02/20/24

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

LCS (BHB0502-BS1)

Prepared: 02/15/24 Analyzed: 02/20/24

Calcium	5.51	0.0500	mg/L wet	5.00	110	70-130
Magnesium	5.58	0.0500	"	5.00	112	70-130
Sodium	5.47	0.0500	"	5.00	109	70-130

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Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730

Project Manager: Sam Vogt

Reported:

04/18/24 11:53

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 BHB0515 - General Preparation

Duplicate (BHB0515-DUP1)		Source: 2402130-01		Prepared & Analyzed: 02/15/24						
% Solids	94.0		%		94.4			0.330	20	

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Broomfield CO, 80020

Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

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 BHB0541 - General Preparation

Blank (BHB0541-BLK1)

Prepared: 02/16/24 Analyzed: 02/20/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHB0541-BS1)

Prepared: 02/16/24 Analyzed: 02/20/24

Specific Conductance (EC) 0.153 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BHB0541-DUP1)

Source: 2402205-01

Prepared: 02/16/24 Analyzed: 02/20/24

Specific Conductance (EC) 0.262 0.0100 mmhos/cm 0.264 0.798 20

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

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

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

Batch BHB0542 - General Preparation

LCS (BHB0542-BS1)

Prepared: 02/16/24 Analyzed: 02/20/24

pH	9.29		pH Units	9.18	101	95-105
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Duplicate (BHB0542-DUP1)

Source: 2402203-01

Prepared: 02/16/24 Analyzed: 02/20/24

pH	8.36		pH Units	8.35	0.120	20
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Batch BHD0127 - General Preparation

LCS (BHD0127-BS1)

Prepared: 04/04/24 Analyzed: 04/08/24

pH	9.02		pH Units	9.18	98.3	95-105
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Duplicate (BHD0127-DUP1)

Source: 2402062-03RE1

Prepared: 04/04/24 Analyzed: 04/08/24

pH	8.59		pH Units	8.66	0.812	20
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Civitas - Bury Crandell C Unit 1

Project Number: 23730
Project Manager: Sam Vogt

Reported:
04/18/24 11:53

Notes and Definitions

QR-04	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
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.
I-04	Sample was analyzed out of recommended holding time per clients request.
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