

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

September 23, 2022

Kevin Tautkus

K.P. Kauffman

1675 Broadway

Denver, CO 80202

RE: George Norton Consolidation

Work Order #2209241

Enclosed are the results of analyses for samples received by Summit Scientific on 09/13/22 14:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury

President



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: George Norton Consolidation

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
09/23/22 09:45

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Background -1@2'	2209241-01	Soil	09/13/22 11:00	09/13/22 14:20
Background -1@4'	2209241-02	Soil	09/13/22 11:05	09/13/22 14:20
Background -2@2'	2209241-03	Soil	09/13/22 12:15	09/13/22 14:20
Background -2@4'	2209241-04	Soil	09/13/22 12:30	09/13/22 14:20
Background -3@2'	2209241-05	Soil	09/13/22 13:15	09/13/22 14:20
Background -3@4'	2209241-06	Soil	09/13/22 13:30	09/13/22 14:20

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S₂

Sample Receipt Checklist

S2 Work Order# 220924

Client: Kpk

Client Project ID: George Norton Consolidation

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"/>	
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on ICE</u>
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 type="checkbox"/>	<input checked="" 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.

[Signature]
Custodian Printed Name

9.13.22 19:00
Date/Time



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: George Norton Consolidation

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
09/23/22 09:45

Background -1@2'
2209241-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/13/22 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	0.830	0.0100		mg/L	1	BF10452	09/19/22	09/20/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/13/22 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	2.32	0.208		mg/kg dry	1	BF10525	09/21/22	09/22/22	EPA 6020B	
Barium	128	0.417		"	"	"	"	"	"	
Cadmium	0.320	0.208		"	"	"	"	"	"	
Copper	14.7	0.417		"	"	"	"	"	"	
Lead	14.1	0.208		"	"	"	"	"	"	
Nickel	7.80	0.417		"	"	"	"	"	"	
Selenium	0.861	0.271		"	"	"	"	"	"	
Silver	0.126	0.0208		"	"	"	"	"	"	
Zinc	51.9	0.417		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/13/22 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BF10491	09/20/22	09/21/22	EPA 7196A	

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

Date Sampled: **09/13/22 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	63.2	0.0521		mg/L dry	1	BF10469	09/19/22	09/22/22	EPA 6020B	
Magnesium	24.9	0.0521		"	"	"	"	"	"	
Sodium	164	0.0521		"	"	"	"	"	"	

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Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
09/23/22 09:45

Background -1@2'
2209241-01 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/13/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.42	0.00100	units	1	BFI0593	09/22/22	09/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/13/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.0		%	1	BFI0424	09/16/22	09/19/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/13/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.559	0.0100	mmhos/cm	1	BFI0553	09/21/22	09/21/22	EPA 120.1	

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

Date Sampled: **09/13/22 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.46		pH Units	1	BFI0554	09/21/22	09/22/22	EPA 9045D	

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Project: George Norton Consolidation

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
09/23/22 09:45

Background -1@4'
2209241-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/13/22 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.882	0.0100	mg/L	1	BF10452	09/19/22	09/20/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/13/22 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.19	0.219	mg/kg dry	1	BF10525	09/21/22	09/22/22	EPA 6020B	
Barium	186	0.437	"	"	"	"	"	"	
Cadmium	0.276	0.219	"	"	"	"	"	"	
Copper	18.3	0.437	"	"	"	"	"	"	
Lead	13.1	0.219	"	"	"	"	"	"	
Nickel	11.5	0.437	"	"	"	"	"	"	
Selenium	1.59	0.284	"	"	"	"	"	"	
Silver	0.110	0.0219	"	"	"	"	"	"	
Zinc	66.4	0.437	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/13/22 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BF10491	09/20/22	09/21/22	EPA 7196A	

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

Date Sampled: **09/13/22 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	32.2	0.0547	mg/L dry	1	BF10469	09/19/22	09/22/22	EPA 6020B	
Magnesium	15.4	0.0547	"	"	"	"	"	"	
Sodium	305	0.0547	"	"	"	"	"	"	

Calculated Analysis

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Reported:
09/23/22 09:45

Background -1@4'
2209241-02 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/13/22 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	11.1	0.00100	units	1	BFI0593	09/22/22	09/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/13/22 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.4		%	1	BFI0424	09/16/22	09/19/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/13/22 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.63	0.0100	mmhos/cm	1	BFI0553	09/21/22	09/21/22	EPA 120.1	

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

Date Sampled: **09/13/22 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.02		pH Units	1	BFI0554	09/21/22	09/22/22	EPA 9045D	

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Project: George Norton Consolidation

Project Number: [none]
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Reported:
09/23/22 09:45

Background -2@2'
2209241-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/13/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.169	0.0100	mg/L	1	BF10452	09/19/22	09/20/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/13/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.71	0.204	mg/kg dry	1	BF10525	09/21/22	09/22/22	EPA 6020B	
Barium	88.4	0.409	"	"	"	"	"	"	
Cadmium	0.469	0.204	"	"	"	"	"	"	
Copper	9.97	0.409	"	"	"	"	"	"	
Lead	18.3	0.204	"	"	"	"	"	"	
Nickel	7.34	0.409	"	"	"	"	"	"	
Selenium	0.645	0.266	"	"	"	"	"	"	
Silver	0.0604	0.0204	"	"	"	"	"	"	
Zinc	44.9	0.409	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/13/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BF10491	09/20/22	09/21/22	EPA 7196A	

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

Date Sampled: **09/13/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	55.0	0.0511	mg/L dry	1	BF10469	09/19/22	09/22/22	EPA 6020B	
Magnesium	13.0	0.0511	"	"	"	"	"	"	
Sodium	9.66	0.0511	"	"	"	"	"	"	

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09/23/22 09:45

Background -2@2'
2209241-03 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/13/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.304	0.00100	units	1	BFI0593	09/22/22	09/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/13/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.9		%	1	BFI0424	09/16/22	09/19/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/13/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.558	0.0100	mmhos/cm	1	BFI0553	09/21/22	09/21/22	EPA 120.1	

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

Date Sampled: **09/13/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.97		pH Units	1	BFI0554	09/21/22	09/22/22	EPA 9045D	

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Project: George Norton Consolidation

Project Number: [none]
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Reported:
09/23/22 09:45

Background -2@4'
2209241-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/13/22 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	0.513	0.0100		mg/L	1	BF10452	09/19/22	09/20/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/13/22 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	2.52	0.211		mg/kg dry	1	BF10525	09/21/22	09/22/22	EPA 6020B	
Barium	108	0.421		"	"	"	"	"	"	
Cadmium	0.694	0.211		"	"	"	"	"	"	
Copper	13.4	0.421		"	"	"	"	"	"	
Lead	14.4	0.211		"	"	"	"	"	"	
Nickel	10.8	0.421		"	"	"	"	"	"	
Selenium	0.675	0.274		"	"	"	"	"	"	
Silver	0.0705	0.0211		"	"	"	"	"	"	
Zinc	57.6	0.421		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/13/22 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BF10491	09/20/22	09/21/22	EPA 7196A	

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

Date Sampled: **09/13/22 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	55.1	0.0527		mg/L dry	1	BF10469	09/19/22	09/22/22	EPA 6020B	
Magnesium	28.4	0.0527		"	"	"	"	"	"	
Sodium	114	0.0527		"	"	"	"	"	"	

Calculated Analysis

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09/23/22 09:45

Background -2@4'
2209241-04 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/13/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.11	0.00100	units	1	BFI0593	09/22/22	09/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/13/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.9		%	1	BFI0424	09/16/22	09/19/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/13/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.12	0.0100	mmhos/cm	1	BFI0553	09/21/22	09/21/22	EPA 120.1	

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

Date Sampled: **09/13/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.95		pH Units	1	BFI0554	09/21/22	09/22/22	EPA 9045D	

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Project: George Norton Consolidation

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Reported:
09/23/22 09:45

Background -3@2'
2209241-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/13/22 13:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	0.667	0.0100		mg/L	1	BF10452	09/19/22	09/20/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/13/22 13:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	1.19	0.205		mg/kg dry	1	BF10525	09/21/22	09/22/22	EPA 6020B	
Barium	49.7	0.410		"	"	"	"	"	"	
Cadmium	0.317	0.205		"	"	"	"	"	"	
Copper	9.02	0.410		"	"	"	"	"	"	
Lead	11.0	0.205		"	"	"	"	"	"	
Nickel	4.73	0.410		"	"	"	"	"	"	
Selenium	0.867	0.266		"	"	"	"	"	"	
Silver	0.0837	0.0205		"	"	"	"	"	"	
Zinc	55.0	0.410		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/13/22 13:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BF10491	09/20/22	09/21/22	EPA 7196A	

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

Date Sampled: **09/13/22 13:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	63.3	0.0512		mg/L dry	1	BF10469	09/19/22	09/22/22	EPA 6020B	
Magnesium	22.3	0.0512		"	"	"	"	"	"	
Sodium	21.1	0.0512		"	"	"	"	"	"	

Calculated Analysis

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Project: George Norton Consolidation

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
09/23/22 09:45

Background -3@2'
2209241-05 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/13/22 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.581	0.00100	units	1	BFI0593	09/22/22	09/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/13/22 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.6		%	1	BFI0424	09/16/22	09/19/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/13/22 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.01	0.0100	mmhos/cm	1	BFI0553	09/21/22	09/21/22	EPA 120.1	

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

Date Sampled: **09/13/22 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.07		pH Units	1	BFI0554	09/21/22	09/22/22	EPA 9045D	

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K.P. Kauffman
1675 Broadway
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Project: George Norton Consolidation

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
09/23/22 09:45

Background -3@4'
2209241-06 (Soil)

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Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/13/22 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	0.717	0.0100	mg/L	1	BF10452	09/19/22	09/20/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/13/22 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.16	0.208	mg/kg dry	1	BF10525	09/21/22	09/22/22	EPA 6020B	
Barium	54.8	0.417	"	"	"	"	"	"	
Cadmium	ND	0.208	"	"	"	"	"	"	
Copper	8.20	0.417	"	"	"	"	"	"	
Lead	7.02	0.208	"	"	"	"	"	"	
Nickel	6.07	0.417	"	"	"	"	"	"	
Selenium	0.808	0.271	"	"	"	"	"	"	
Silver	0.0392	0.0208	"	"	"	"	"	"	
Zinc	32.1	0.417	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/13/22 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BF10491	09/20/22	09/21/22	EPA 7196A	

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

Date Sampled: **09/13/22 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	30.8	0.0521	mg/L dry	1	BF10469	09/19/22	09/22/22	EPA 6020B	
Magnesium	11.8	0.0521	"	"	"	"	"	"	
Sodium	85.7	0.0521	"	"	"	"	"	"	

Calculated Analysis

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: George Norton Consolidation

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
09/23/22 09:45

**Background -3@4'
2209241-06 (Soil)**

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Calculated Analysis

Date Sampled: **09/13/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.33	0.00100	units	1	BFI0593	09/22/22	09/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/13/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.0		%	1	BFI0424	09/16/22	09/19/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/13/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.581	0.0100	mmhos/cm	1	BFI0553	09/21/22	09/21/22	EPA 120.1	

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

Date Sampled: **09/13/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.14		pH Units	1	BFI0554	09/21/22	09/22/22	EPA 9045D	

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Project: George Norton Consolidation

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
09/23/22 09:45

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

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

Batch BFI0452 - EPA 3050B

Blank (BFI0452-BLK1)

Prepared: 09/19/22 Analyzed: 09/20/22

Boron ND 0.0100 mg/L

LCS (BFI0452-BS1)

Prepared: 09/19/22 Analyzed: 09/20/22

Boron 4.21 0.0100 mg/L 5.00 84.3 80-120

Duplicate (BFI0452-DUP1)

Source: 2209218-01

Prepared: 09/19/22 Analyzed: 09/20/22

Boron 4.21 0.0100 mg/L 4.24 0.631 20

Matrix Spike (BFI0452-MS1)

Source: 2209218-01

Prepared: 09/19/22 Analyzed: 09/20/22

Boron 9.30 0.0100 mg/L 5.00 4.24 101 75-125

Matrix Spike Dup (BFI0452-MSD1)

Source: 2209218-01

Prepared: 09/19/22 Analyzed: 09/20/22

Boron 9.68 0.0100 mg/L 5.00 4.24 109 75-125 3.94 25

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Project: George Norton Consolidation

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
09/23/22 09:45

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 BFI0525 - EPA 3050B

Blank (BFI0525-BLK1)

Prepared & Analyzed: 09/21/22

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	"							
Selenium	ND	0.260	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							

LCS (BFI0525-BS1)

Prepared & Analyzed: 09/21/22

Arsenic	42.8	0.200	mg/kg wet	40.0	107	80-120
Barium	41.4	0.400	"	40.0	104	80-120
Cadmium	2.06	0.200	"	2.00	103	80-120
Copper	42.0	0.400	"	40.0	105	80-120
Lead	20.2	0.200	"	20.0	101	80-120
Nickel	42.1	0.400	"	40.0	105	80-120
Selenium	3.99	0.260	"	4.00	99.8	80-120
Silver	2.04	0.0200	"	2.00	102	80-120
Zinc	43.3	0.400	"	40.0	108	80-120

Duplicate (BFI0525-DUP1)

Source: 2209237-01

Prepared & Analyzed: 09/21/22

Arsenic	4.49	0.213	mg/kg dry	4.37	2.66	20
Barium	145	0.426	"	143	1.87	20
Cadmium	0.172	0.213	"	0.168	2.56	20
Copper	5.73	0.426	"	5.55	3.10	20
Lead	8.53	0.213	"	8.24	3.38	20
Nickel	6.83	0.426	"	6.60	3.48	20
Selenium	0.694	0.277	"	0.572	19.2	20
Silver	0.0327	0.0213	"	0.0311	4.96	20
Zinc	19.8	0.426	"	19.4	2.24	20

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Project Manager: Kevin Tautkus

Reported:
09/23/22 09:45

Total Metals by EPA 6020B - Quality Control
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Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch BFI0525 - EPA 3050B

Matrix Spike (BFI0525-MS1)

Source: 2209237-01

Prepared: 09/21/22 Analyzed: 09/22/22

Arsenic	48.2	0.213	mg/kg dry	42.6	4.37	103	75-125			
Barium	180	0.426	"	42.6	143	88.9	75-125			
Cadmium	2.32	0.213	"	2.13	0.168	101	75-125			
Copper	47.9	0.426	"	42.6	5.55	99.5	75-125			
Lead	25.4	0.213	"	21.3	8.24	80.8	75-125			
Nickel	50.2	0.426	"	42.6	6.60	102	75-125			
Selenium	4.18	0.277	"	4.26	0.572	84.7	75-125			
Silver	2.11	0.0213	"	2.13	0.0311	97.7	75-125			
Zinc	64.8	0.426	"	42.6	19.4	107	75-125			

Matrix Spike Dup (BFI0525-MSD1)

Source: 2209237-01

Prepared: 09/21/22 Analyzed: 09/22/22

Arsenic	50.4	0.213	mg/kg dry	42.6	4.37	108	75-125	4.46	25
Barium	187	0.426	"	42.6	143	105	75-125	3.73	25
Cadmium	2.42	0.213	"	2.13	0.168	106	75-125	4.26	25
Copper	50.4	0.426	"	42.6	5.55	105	75-125	4.90	25
Lead	26.3	0.213	"	21.3	8.24	84.6	75-125	3.15	25
Nickel	52.3	0.426	"	42.6	6.60	107	75-125	4.04	25
Selenium	4.38	0.277	"	4.26	0.572	89.4	75-125	4.69	25
Silver	2.21	0.0213	"	2.13	0.0311	103	75-125	4.72	25
Zinc	67.4	0.426	"	42.6	19.4	113	75-125	3.92	25

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Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
09/23/22 09:45

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BFI0491 - 3060A Mod

Blank (BFI0491-BLK1)

Prepared: 09/20/22 Analyzed: 09/21/22

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BFI0491-BS1)

Prepared: 09/20/22 Analyzed: 09/21/22

Chromium, Hexavalent 24.6 0.30 mg/kg wet 25.0 98.6 80-120

Duplicate (BFI0491-DUP1)

Source: 2209241-01

Prepared: 09/20/22 Analyzed: 09/21/22

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BFI0491-MS1)

Source: 2209241-01

Prepared: 09/20/22 Analyzed: 09/21/22

Chromium, Hexavalent 23.2 0.30 mg/kg dry 26.0 ND 89.2 75-125

Matrix Spike Dup (BFI0491-MSD1)

Source: 2209241-01

Prepared: 09/20/22 Analyzed: 09/21/22

Chromium, Hexavalent 21.4 0.30 mg/kg dry 26.0 ND 82.2 75-125 8.17 20

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Project Number: [none]
 Project Manager: Kevin Tautkus

Reported:
 09/23/22 09:45

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

Summit Scientific

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

Batch BFI0469 - General Preparation

Blank (BFI0469-BLK1)

Prepared: 09/19/22 Analyzed: 09/22/22

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

LCS (BFI0469-BS1)

Prepared: 09/19/22 Analyzed: 09/22/22

Calcium	6.10	0.0500	mg/L wet	5.00	122	70-130
Magnesium	5.91	0.0500	"	5.00	118	70-130
Sodium	5.67	0.0500	"	5.00	113	70-130

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Project: George Norton Consolidation

Project Number: [none]
 Project Manager: Kevin Tautkus

Reported:
 09/23/22 09:45

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

Summit Scientific

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

Batch BFI0424 - General Preparation

Duplicate (BFI0424-DUP1)	Source: 2209241-01	Prepared: 09/16/22	Analyzed: 09/19/22
% Solids	95.6	%	96.0
			0.483
			20

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Project: George Norton Consolidation

Project Number: [none]
 Project Manager: Kevin Tautkus

Reported:
 09/23/22 09:45

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 BFI0553 - General Preparation

Blank (BFI0553-BLK1)

Prepared & Analyzed: 09/21/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFI0553-BS1)

Prepared & Analyzed: 09/21/22

Specific Conductance (EC) 0.156 0.0100 mmhos/cm 0.150 104 95-105

Duplicate (BFI0553-DUP1)

Source: 2209241-01

Prepared & Analyzed: 09/21/22

Specific Conductance (EC) 0.559 0.0100 mmhos/cm 0.559 0.00 20

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K.P. Kauffman
 1675 Broadway
 Denver CO, 80202

Project: George Norton Consolidation

Project Number: [none]
 Project Manager: Kevin Tautkus

Reported:
 09/23/22 09:45

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 BFI0554 - General Preparation

LCS (BFI0554-BS1)

Prepared: 09/21/22 Analyzed: 09/22/22

pH	9.03	pH Units	9.18	98.4	95-105
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Duplicate (BFI0554-DUP1)

Source: 2209241-01

Prepared: 09/21/22 Analyzed: 09/22/22

pH	8.40	pH Units	8.46	0.712	20
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1675 Broadway
Denver CO, 80202

Project: George Norton Consolidation

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
09/23/22 09:45

Notes and Definitions

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