

# Summit Scientific

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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,

A handwritten signature in black ink, appearing to read "Mikayla Axtell".

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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*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.*

## 2209241

303-277-9310

Page 1 of 1

Project Manager: ~~Mike Hattel~~ Kevin Tautkus

E-Mail: ~~mhattel@msn.com~~ Primary Contractor @ murganllc.net

Project Name: George Nelson Consolidations

Phone: ~~303.655.1400~~ 303.825.4822

Sampler Name: ~~Michael Hattel~~

Project Number: 6065x Notes (explication)

www.s2scientific.com

S<sub>2</sub>

## Sample Receipt Checklist

S2 Work Order# 220924Client: KpkClient Project ID: George Norton ConsolidationShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐Airbill #:                     

<input type="checkbox"/>	<input 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)

17.3

Thermometer #

1

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

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

Custodian Printed Name

Date/Time

9.13.2219:00



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: George Norton Consolidation  
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	BF10593	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	BF10424	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	BF10553	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	BF10554	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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Boron</b>	<b>0.882</b>	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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Arsenic</b>	<b>2.19</b>	0.219	mg/kg dry	1	BF10525	09/21/22	09/22/22	EPA 6020B	
<b>Barium</b>	<b>186</b>	0.437	"	"	"	"	"	"	
<b>Cadmium</b>	<b>0.276</b>	0.219	"	"	"	"	"	"	
<b>Copper</b>	<b>18.3</b>	0.437	"	"	"	"	"	"	
<b>Lead</b>	<b>13.1</b>	0.219	"	"	"	"	"	"	
<b>Nickel</b>	<b>11.5</b>	0.437	"	"	"	"	"	"	
<b>Selenium</b>	<b>1.59</b>	0.284	"	"	"	"	"	"	
<b>Silver</b>	<b>0.110</b>	0.0219	"	"	"	"	"	"	
<b>Zinc</b>	<b>66.4</b>	0.437	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

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

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 11:05**

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

**Calculated Analysis**

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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

**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	BF10593	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	BF10424	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	BF10553	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	BF10554	09/21/22	09/22/22	EPA 9045D	

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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

**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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Boron</b>	<b>0.169</b>	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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Arsenic</b>	<b>1.71</b>	0.204	mg/kg dry	1	BF10525	09/21/22	09/22/22	EPA 6020B	
<b>Barium</b>	<b>88.4</b>	0.409	"	"	"	"	"	"	
<b>Cadmium</b>	<b>0.469</b>	0.204	"	"	"	"	"	"	
<b>Copper</b>	<b>9.97</b>	0.409	"	"	"	"	"	"	
<b>Lead</b>	<b>18.3</b>	0.204	"	"	"	"	"	"	
<b>Nickel</b>	<b>7.34</b>	0.409	"	"	"	"	"	"	
<b>Selenium</b>	<b>0.645</b>	0.266	"	"	"	"	"	"	
<b>Silver</b>	<b>0.0604</b>	0.0204	"	"	"	"	"	"	
<b>Zinc</b>	<b>44.9</b>	0.409	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

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

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 12:15**

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

**Calculated Analysis**

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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

**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	<b>0.304</b>	0.00100	units	1	BF10593	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	<b>97.9</b>		%	1	BF10424	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)	<b>0.558</b>	0.0100	mmhos/cm	1	BF10553	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	<b>7.97</b>		pH Units	1	BF10554	09/21/22	09/22/22	EPA 9045D	

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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

**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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Project Manager: Kevin Tautkus

**Reported:**  
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	BF10593	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	BF10424	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	BF10553	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	BF10554	09/21/22	09/22/22	EPA 9045D	

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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

**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**

Summit Scientific

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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@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	<b>0.581</b>	0.00100	units	1	BF10593	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	<b>97.6</b>		%	1	BF10424	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)	<b>1.01</b>	0.0100	mmhos/cm	1	BF10553	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	<b>8.07</b>		pH Units	1	BF10554	09/21/22	09/22/22	EPA 9045D	

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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)**

**Summit Scientific**

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

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

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Boron</b>	<b>0.717</b>	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	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Arsenic</b>	<b>1.16</b>	0.208	mg/kg dry	1	BF10525	09/21/22	09/22/22	EPA 6020B	
<b>Barium</b>	<b>54.8</b>	0.417	"	"	"	"	"	"	
<b>Cadmium</b>	<b>ND</b>	0.208	"	"	"	"	"	"	
<b>Copper</b>	<b>8.20</b>	0.417	"	"	"	"	"	"	
<b>Lead</b>	<b>7.02</b>	0.208	"	"	"	"	"	"	
<b>Nickel</b>	<b>6.07</b>	0.417	"	"	"	"	"	"	
<b>Selenium</b>	<b>0.808</b>	0.271	"	"	"	"	"	"	
<b>Silver</b>	<b>0.0392</b>	0.0208	"	"	"	"	"	"	
<b>Zinc</b>	<b>32.1</b>	0.417	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

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

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 13:30**

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

**Summit Scientific**

**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	BF10593	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	BF10424	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	BF10553	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	BF10554	09/21/22	09/22/22	EPA 9045D	

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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

**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 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

Summit Scientific

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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

## Total Metals by EPA 6020B - Quality Control

### Summit Scientific

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

#### 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: 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	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

**Batch BF10525 - EPA 3050B**

Matrix Spike (BF10525-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 (BF10525-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: George Norton Consolidation

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	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

**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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1675 Broadway  
Denver CO, 80202

Project: George Norton Consolidation

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

**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		%REC		RPD	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

**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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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

**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 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 Level	Source Result	%REC		RPD		Notes
		Limit	Units			%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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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

### 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