

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

September 29, 2022

Kevin Tautkus  
K.P. Kauffman  
1675 Broadway  
Denver, CO 80202

RE: MCU 43

Work Order #2209338

Enclosed are the results of analyses for samples received by Summit Scientific on 09/16/22 12:00. 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: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-1@4'	2209338-01	Soil	09/15/22 12:20	09/16/22 12:00
SS-2@4'	2209338-02	Soil	09/15/22 12:25	09/16/22 12:00
SS-3@4'	2209338-03	Soil	09/15/22 12:30	09/16/22 12:00
Background1@4'	2209338-04	Soil	09/15/22 12:45	09/16/22 12:00
Background2@4'	2209338-05	Soil	09/15/22 12:50	09/16/22 12:00
Background3@4'	2209338-06	Soil	09/15/22 12:55	09/16/22 12:00
Background4@4'	2209338-07	Soil	09/15/22 13:00	09/16/22 12:00
Background5@4'	2209338-08	Soil	09/15/22 13:05	09/16/22 12:00
Background6@4'	2209338-09	Soil	09/15/22 13:10	09/16/22 12:00

Summit Scientific

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# Summit Scientific

S<sub>2</sub>

2209338

4653 Table Mountain Drive ♦ Golden, Colorado 80403  
303-277-9310 ♦ 303-374-5933 (f)

Page 1 of 1

Client: KP Kaufman Project Manager: Kevin Tanthous  
 Address: 1675 Broadway E-Mail: primarycontractor@mcu.comille.net  
 City/State/Zip: Denver, CO 80202  
 Phone: 303.825.4822 Project Name: MCU #43  
 Sampler Name: CP & HC Project Number: MCU #43

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	TABLE 9.15 Full suite	TABLE 9.15 Inorganic			
1	SS-1 @ 4'	9.15.22	1220	3			X			X			X				
2	SS-2 @ 4'		1225	1													
3	SS-3 @ 4'		1230	1													
4	Background 1 @ 4'		1245	1													
5	Background 2 @ 4'		1250	1									X				
6	Background 3 @ 4'		1255	1									X				
7	Background 4 @ 4'		1300	1									X				
8	Background 5 @ 4'		1305	1									X				
9	Background 6 @ 4'		1310	1									X				
10																	

Relinquished by: <u>[Signature]</u> Date/Time: <u>9/16/22 1200</u>	Received by: <u>[Signature]</u> Date/Time: <u>9/16/22 1200</u>	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/>	Notes:
Relinquished by:	Received by:	Sample Integrity: Temperature Upon Receipt: <u>8.4</u> Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Relinquished by:	Received by:		

S<sub>2</sub>

2209338

Sample Receipt Checklist

S2 Work Order#

Client: KPK

Client Project ID: MCU #43 <sup>RCH</sup>

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

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

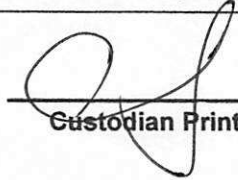
Temp (°C) 8.4

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"/>	<i>once</i>
If custody seals are present, are they intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input 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? <b>If yes, contact client and note in narrative.</b>	<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

9-16-22  
Date/Time

19:00



K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**SS-1@4'**  
**2209338-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/15/22 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BFI0494	09/20/22	09/22/22	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: **09/15/22 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		109 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		92.3 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.8 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **09/15/22 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BFI0497	09/20/22	09/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **09/15/22 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl		109 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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1675 Broadway  
Denver CO, 80202

Project: MCU 43  
Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
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**SS-1@4'**  
**2209338-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/15/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFI0522	09/21/22	09/22/22	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: **09/15/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		78.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		58.4 %	40-150		"	"	"	"	

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

Date Sampled: **09/15/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.501</b>	0.0100	mg/L	1	BFI0568	09/21/22	09/23/22	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/15/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**SS-1@4'**  
**2209338-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.85	0.227	mg/kg dry	1	BF10564	09/21/22	09/24/22	EPA 6020B	
Barium	342	0.453	"	"	"	"	"	"	
Cadmium	ND	0.227	"	"	"	"	"	"	
Copper	8.52	0.453	"	"	"	"	"	"	
Lead	4.83	0.227	"	"	"	"	"	"	
Nickel	8.50	0.453	"	"	"	"	"	"	
Selenium	0.802	0.295	"	"	"	"	"	"	
Silver	0.0323	0.0227	"	"	"	"	"	"	
Zinc	28.1	0.453	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/15/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BF10588	09/22/22	09/23/22	EPA 7196A	

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

Date Sampled: **09/15/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	165	0.0567	mg/L dry	1	BF10667	09/26/22	09/28/22	EPA 6020B	
Magnesium	144	0.0567	"	"	"	"	"	"	
Sodium	338	0.0567	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **09/15/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.64	0.00100	units	1	BF10749	09/28/22	09/28/22	Calculation	

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

Date Sampled: **09/15/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 1675 Broadway  
 Denver CO, 80202

Project: MCU 43

Project Number: [none]  
 Project Manager: Kevin Tautkus

**Reported:**  
 09/29/22 13:37

**SS-1@4'**  
**2209338-01 (Soil)**

**Summit Scientific**

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

<b>% Solids</b>	<b>88.2</b>	%	1	BFI0532	09/21/22	09/26/22	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **09/15/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Specific Conductance (EC)</b>	<b>2.76</b>	0.0100	mmhos/cm	1	BFI0670	09/26/22	09/28/22	EPA 120.1	

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

Date Sampled: **09/15/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>pH</b>	<b>7.95</b>		pH Units	1	BFI0671	09/26/22	09/28/22	EPA 9045D	

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1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**SS-2@4'**  
**2209338-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/15/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFI0494	09/20/22	09/22/22	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: **09/15/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		93.5 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.4 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **09/15/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFI0497	09/20/22	09/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/15/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		93.1 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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1675 Broadway  
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Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**SS-2@4'**  
**2209338-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/15/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFI0522	09/21/22	09/22/22	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: **09/15/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		87.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		55.9 %	40-150		"	"	"	"	

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

Date Sampled: **09/15/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.388</b>	0.0100	mg/L	1	BFI0568	09/21/22	09/23/22	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/15/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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1675 Broadway  
Denver CO, 80202

Project: MCU 43  
Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**SS-2@4'**  
**2209338-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.90	0.219	mg/kg dry	1	BF10564	09/21/22	09/24/22	EPA 6020B	
Barium	153	0.437	"	"	"	"	"	"	
Cadmium	ND	0.219	"	"	"	"	"	"	
Copper	10.7	0.437	"	"	"	"	"	"	
Lead	6.93	0.219	"	"	"	"	"	"	
Nickel	10.7	0.437	"	"	"	"	"	"	
Selenium	0.729	0.284	"	"	"	"	"	"	
Silver	0.0312	0.0219	"	"	"	"	"	"	
Zinc	33.4	0.437	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/15/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BF10588	09/22/22	09/23/22	EPA 7196A	

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

Date Sampled: **09/15/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	56.3	0.0546	mg/L dry	1	BF10667	09/26/22	09/28/22	EPA 6020B	
Magnesium	21.0	0.0546	"	"	"	"	"	"	
Sodium	503	0.0546	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **09/15/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	14.5	0.00100	units	1	BF10749	09/28/22	09/28/22	Calculation	

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

Date Sampled: **09/15/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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K.P. Kauffman  
 1675 Broadway  
 Denver CO, 80202

Project: MCU 43  
 Project Number: [none]  
 Project Manager: Kevin Tautkus

**Reported:**  
 09/29/22 13:37

**SS-2@4'**  
**2209338-02 (Soil)**

**Summit Scientific**

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

<b>% Solids</b>	<b>91.5</b>	%	1	BFI0532	09/21/22	09/26/22	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **09/15/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Specific Conductance (EC)</b>	<b>2.41</b>	0.0100	mmhos/cm	1	BFI0670	09/26/22	09/28/22	EPA 120.1	

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

Date Sampled: **09/15/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>pH</b>	<b>8.16</b>		pH Units	1	BFI0671	09/26/22	09/28/22	EPA 9045D	

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**SS-3@4'**  
**2209338-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/15/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFI0494	09/20/22	09/22/22	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: **09/15/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		128 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		92.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		113 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **09/15/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFI0497	09/20/22	09/23/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/15/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		83.1 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**SS-3@4'**  
**2209338-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/15/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFI0522	09/21/22	09/22/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Benzo (a) pyrene</b>	<b>0.00751</b>	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: **09/15/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		91.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		57.8 %	40-150		"	"	"	"	

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

Date Sampled: **09/15/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.429</b>	0.0100	mg/L	1	BFI0568	09/21/22	09/23/22	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/15/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**SS-3@4'**  
**2209338-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.81	0.212	mg/kg dry	1	BF10564	09/21/22	09/24/22	EPA 6020B	
Barium	93.8	0.424	"	"	"	"	"	"	
Cadmium	ND	0.212	"	"	"	"	"	"	
Copper	8.75	0.424	"	"	"	"	"	"	
Lead	5.10	0.212	"	"	"	"	"	"	
Nickel	8.92	0.424	"	"	"	"	"	"	
Selenium	0.463	0.275	"	"	"	"	"	"	
Silver	0.0228	0.0212	"	"	"	"	"	"	
Zinc	30.0	0.424	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/15/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BF10588	09/22/22	09/23/22	EPA 7196A	

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

Date Sampled: **09/15/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	51.5	0.0530	mg/L dry	1	BF10667	09/26/22	09/28/22	EPA 6020B	
Magnesium	19.4	0.0530	"	"	"	"	"	"	
Sodium	467	0.0530	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **09/15/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	14.1	0.00100	units	1	BF10749	09/28/22	09/28/22	Calculation	

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

Date Sampled: **09/15/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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K.P. Kauffman  
 1675 Broadway  
 Denver CO, 80202

Project: MCU 43  
 Project Number: [none]  
 Project Manager: Kevin Tautkus

**Reported:**  
 09/29/22 13:37

**SS-3@4'**  
**2209338-03 (Soil)**

**Summit Scientific**

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

<b>% Solids</b>	<b>94.4</b>	%	1	BFI0532	09/21/22	09/26/22	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **09/15/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Specific Conductance (EC)</b>	<b>0.816</b>	0.0100	mmhos/cm	1	BFI0670	09/26/22	09/28/22	EPA 120.1	

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

Date Sampled: **09/15/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>pH</b>	<b>8.19</b>		pH Units	1	BFI0671	09/26/22	09/28/22	EPA 9045D	

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**Background1@4'**  
**2209338-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/15/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.155	0.0100	mg/L	1	BF10568	09/21/22	09/23/22	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/15/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.13	0.210	mg/kg dry	1	BF10564	09/21/22	09/24/22	EPA 6020B	
Barium	201	0.420	"	"	"	"	"	"	
Cadmium	0.272	0.210	"	"	"	"	"	"	
Copper	13.2	0.420	"	"	"	"	"	"	
Lead	9.31	0.210	"	"	"	"	"	"	
Nickel	11.0	0.420	"	"	"	"	"	"	
Selenium	0.817	0.273	"	"	"	"	"	"	
Silver	0.0373	0.0210	"	"	"	"	"	"	
Zinc	51.7	0.420	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/15/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BF10588	09/22/22	09/23/22	EPA 7196A	

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

Date Sampled: **09/15/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	57.1	0.0525	mg/L dry	1	BF10667	09/26/22	09/28/22	EPA 6020B	
Magnesium	6.80	0.0525	"	"	"	"	"	"	
Sodium	2.67	0.0525	"	"	"	"	"	"	

**Calculated Analysis**

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**Background1@4'**  
**2209338-04 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/15/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0890	0.00100	units	1	BFI0749	09/28/22	09/28/22	Calculation	

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

Date Sampled: **09/15/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.2		%	1	BFI0532	09/21/22	09/26/22	Calculation	

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

Date Sampled: **09/15/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.164	0.0100	mmhos/cm	1	BFI0670	09/26/22	09/28/22	EPA 120.1	

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

Date Sampled: **09/15/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.22		pH Units	1	BFI0671	09/26/22	09/28/22	EPA 9045D	

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**Background2@4'**  
**2209338-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/15/22 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	0.213	0.0100		mg/L	1	BF10568	09/21/22	09/23/22	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/15/22 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	4.14	0.209		mg/kg dry	1	BF10564	09/21/22	09/24/22	EPA 6020B	
Barium	146	0.418		"	"	"	"	"	"	
Cadmium	0.250	0.209		"	"	"	"	"	"	
Copper	13.0	0.418		"	"	"	"	"	"	
Lead	8.05	0.209		"	"	"	"	"	"	
Nickel	12.2	0.418		"	"	"	"	"	"	
Selenium	0.740	0.271		"	"	"	"	"	"	
Silver	0.0372	0.0209		"	"	"	"	"	"	
Zinc	48.4	0.418		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/15/22 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BF10588	09/22/22	09/23/22	EPA 7196A	

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

Date Sampled: **09/15/22 12:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	87.6	0.0522		mg/L dry	1	BF10667	09/26/22	09/28/22	EPA 6020B	
Magnesium	9.17	0.0522		"	"	"	"	"	"	
Sodium	1.90	0.0522		"	"	"	"	"	"	

**Calculated Analysis**

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43  
Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**Background2@4'**  
**2209338-05 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/15/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0516	0.00100	units	1	BFI0749	09/28/22	09/28/22	Calculation	

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

Date Sampled: **09/15/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.8		%	1	BFI0532	09/21/22	09/26/22	Calculation	

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

Date Sampled: **09/15/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.470	0.0100	mmhos/cm	1	BFI0670	09/26/22	09/28/22	EPA 120.1	

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

Date Sampled: **09/15/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.09		pH Units	1	BFI0671	09/26/22	09/28/22	EPA 9045D	

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**Background3@4'**  
**2209338-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/15/22 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Boron</b>	<b>0.156</b>	0.0100		mg/L	1	BF10568	09/21/22	09/23/22	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/15/22 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Arsenic</b>	<b>4.46</b>	0.209		mg/kg dry	1	BF10564	09/21/22	09/24/22	EPA 6020B	
<b>Barium</b>	<b>205</b>	0.417		"	"	"	"	"	"	
<b>Cadmium</b>	<b>0.229</b>	0.209		"	"	"	"	"	"	
<b>Copper</b>	<b>14.8</b>	0.417		"	"	"	"	"	"	
<b>Lead</b>	<b>9.56</b>	0.209		"	"	"	"	"	"	
<b>Nickel</b>	<b>12.6</b>	0.417		"	"	"	"	"	"	
<b>Selenium</b>	<b>0.997</b>	0.271		"	"	"	"	"	"	
<b>Silver</b>	<b>0.0392</b>	0.0209		"	"	"	"	"	"	
<b>Zinc</b>	<b>53.8</b>	0.417		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/15/22 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BF10588	09/22/22	09/23/22	EPA 7196A	

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

Date Sampled: **09/15/22 12:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Calcium</b>	<b>58.3</b>	0.0522		mg/L dry	1	BF10667	09/26/22	09/28/22	EPA 6020B	
<b>Magnesium</b>	<b>5.60</b>	0.0522		"	"	"	"	"	"	
<b>Sodium</b>	<b>1.56</b>	0.0522		"	"	"	"	"	"	

**Calculated Analysis**

Summit Scientific

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**Background3@4'**  
**2209338-06 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/15/22 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0523	0.00100	units	1	BFI0749	09/28/22	09/28/22	Calculation	

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

Date Sampled: **09/15/22 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.8		%	1	BFI0532	09/21/22	09/26/22	Calculation	

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

Date Sampled: **09/15/22 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.347	0.0100	mmhos/cm	1	BFI0670	09/26/22	09/28/22	EPA 120.1	

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

Date Sampled: **09/15/22 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.09		pH Units	1	BFI0671	09/26/22	09/28/22	EPA 9045D	

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1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**Background4@4'**  
**2209338-07 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/15/22 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	0.235	0.0100		mg/L	1	BF10568	09/21/22	09/23/22	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/15/22 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	5.46	0.210		mg/kg dry	1	BF10564	09/21/22	09/24/22	EPA 6020B	
Barium	2610	0.420		"	"	"	"	"	"	
Cadmium	0.275	0.210		"	"	"	"	"	"	
Copper	16.0	0.420		"	"	"	"	"	"	
Lead	45.7	0.210		"	"	"	"	"	"	
Nickel	12.0	0.420		"	"	"	"	"	"	
Selenium	0.775	0.273		"	"	"	"	"	"	
Silver	0.0407	0.0210		"	"	"	"	"	"	
Zinc	77.0	0.420		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/15/22 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BF10588	09/22/22	09/23/22	EPA 7196A	

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

Date Sampled: **09/15/22 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	58.1	0.0525		mg/L dry	1	BF10667	09/26/22	09/28/22	EPA 6020B	
Magnesium	11.3	0.0525		"	"	"	"	"	"	
Sodium	3.60	0.0525		"	"	"	"	"	"	

**Calculated Analysis**

Summit Scientific

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43  
Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**Background4@4'**  
**2209338-07 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/15/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.113	0.00100	units	1	BFI0749	09/28/22	09/28/22	Calculation	

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

Date Sampled: **09/15/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.2		%	1	BFI0532	09/21/22	09/26/22	Calculation	

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

Date Sampled: **09/15/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.371	0.0100	mmhos/cm	1	BFI0670	09/26/22	09/28/22	EPA 120.1	

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

Date Sampled: **09/15/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.12		pH Units	1	BFI0671	09/26/22	09/28/22	EPA 9045D	

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**Background5@4'**  
**2209338-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/15/22 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Boron</b>	<b>0.388</b>	0.0100		mg/L	1	BF10568	09/21/22	09/23/22	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/15/22 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Arsenic</b>	<b>3.92</b>	0.210		mg/kg dry	1	BF10564	09/21/22	09/24/22	EPA 6020B	
<b>Barium</b>	<b>467</b>	0.420		"	"	"	"	"	"	
<b>Cadmium</b>	<b>0.388</b>	0.210		"	"	"	"	"	"	
<b>Copper</b>	<b>18.6</b>	0.420		"	"	"	"	"	"	
<b>Lead</b>	<b>223</b>	0.210		"	"	"	"	"	"	
<b>Nickel</b>	<b>8.83</b>	0.420		"	"	"	"	"	"	
<b>Selenium</b>	<b>0.940</b>	0.273		"	"	"	"	"	"	
<b>Silver</b>	<b>0.0465</b>	0.0210		"	"	"	"	"	"	
<b>Zinc</b>	<b>49.0</b>	0.420		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/15/22 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BF10588	09/22/22	09/23/22	EPA 7196A	

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

Date Sampled: **09/15/22 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Calcium</b>	<b>54.7</b>	0.0525		mg/L dry	1	BF10667	09/26/22	09/28/22	EPA 6020B	
<b>Magnesium</b>	<b>5.32</b>	0.0525		"	"	"	"	"	"	
<b>Sodium</b>	<b>4.29</b>	0.0525		"	"	"	"	"	"	

**Calculated Analysis**

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43  
Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**Background5@4'**  
**2209338-08 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/15/22 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.148	0.00100	units	1	BFI0749	09/28/22	09/28/22	Calculation	

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

Date Sampled: **09/15/22 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.3		%	1	BFI0532	09/21/22	09/26/22	Calculation	

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

Date Sampled: **09/15/22 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.410	0.0100	mmhos/cm	1	BFI0670	09/26/22	09/28/22	EPA 120.1	

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

Date Sampled: **09/15/22 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.11		pH Units	1	BFI0671	09/26/22	09/28/22	EPA 9045D	

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**Background6@4'**  
**2209338-09 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/15/22 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	0.248	0.0100		mg/L	1	BF10568	09/21/22	09/23/22	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/15/22 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	2.99	0.207		mg/kg dry	1	BF10564	09/21/22	09/24/22	EPA 6020B	
Barium	740	0.414		"	"	"	"	"	"	
Cadmium	0.406	0.207		"	"	"	"	"	"	
Copper	13.7	0.414		"	"	"	"	"	"	
Lead	14.6	0.207		"	"	"	"	"	"	
Nickel	8.02	0.414		"	"	"	"	"	"	
Selenium	0.646	0.269		"	"	"	"	"	"	
Silver	0.0294	0.0207		"	"	"	"	"	"	
Zinc	58.4	0.414		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/15/22 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BF10588	09/22/22	09/23/22	EPA 7196A	

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

Date Sampled: **09/15/22 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	49.2	0.0517		mg/L dry	1	BF10667	09/26/22	09/28/22	EPA 6020B	
Magnesium	7.62	0.0517		"	"	"	"	"	"	
Sodium	1.85	0.0517		"	"	"	"	"	"	

**Calculated Analysis**

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43  
Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**Background6@4'**  
**2209338-09 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/15/22 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0648	0.00100	units	1	BFI0749	09/28/22	09/28/22	Calculation	

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

Date Sampled: **09/15/22 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.6		%	1	BFI0532	09/21/22	09/26/22	Calculation	

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

Date Sampled: **09/15/22 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.330	0.0100	mmhos/cm	1	BFI0670	09/26/22	09/28/22	EPA 120.1	

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

Date Sampled: **09/15/22 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.72		pH Units	1	BFI0671	09/26/22	09/28/22	EPA 9045D	

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

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

#### Summit Scientific

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

#### Batch BFI0494 - EPA 5030 Soil MS

##### Blank (BFI0494-BLK1)

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

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	0.0431		"	0.0400		108	50-150			
Surrogate: Toluene-d8	0.0373		"	0.0400		93.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0373		"	0.0400		93.2	50-150			

##### LCS (BFI0494-BS1)

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

Benzene	0.0604	0.0020	mg/kg	0.0750		80.5	70-130			
Toluene	0.0629	0.0050	"	0.0750		83.8	70-130			
Ethylbenzene	0.0631	0.0050	"	0.0750		84.1	70-130			
m,p-Xylene	0.126	0.010	"	0.150		83.9	70-130			
o-Xylene	0.0640	0.0050	"	0.0750		85.3	70-130			
1,2,4-Trimethylbenzene	0.0594	0.0050	"	0.0750		79.2	70-130			
1,3,5-Trimethylbenzene	0.0604	0.0050	"	0.0750		80.6	70-130			
Naphthalene	0.0580	0.0038	"	0.0750		77.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0315		"	0.0400		78.8	50-150			
Surrogate: Toluene-d8	0.0390		"	0.0400		97.5	50-150			
Surrogate: 4-Bromofluorobenzene	0.0361		"	0.0400		90.3	50-150			

##### Matrix Spike (BFI0494-MS1)

Source: 2209333-21

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

Benzene	0.0557	0.0020	mg/kg	0.0750	ND	74.3	70-130			
Toluene	0.0593	0.0050	"	0.0750	ND	79.1	70-130			
Ethylbenzene	0.0567	0.0050	"	0.0750	ND	75.6	70-130			
m,p-Xylene	0.113	0.010	"	0.150	ND	75.4	70-130			
o-Xylene	0.0594	0.0050	"	0.0750	ND	79.2	70-130			
1,2,4-Trimethylbenzene	0.0564	0.0050	"	0.0750	ND	75.2	70-130			
1,3,5-Trimethylbenzene	0.0563	0.0050	"	0.0750	ND	75.1	70-130			
Naphthalene	0.0559	0.0038	"	0.0750	ND	74.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0339		"	0.0400		84.8	50-150			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.3	50-150			
Surrogate: 4-Bromofluorobenzene	0.0355		"	0.0400		88.8	50-150			

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

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

**Summit Scientific**

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

**Batch BFI0494 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (BFI0494-MSD1)</b>	<b>Source: 2209333-21</b>			<b>Prepared: 09/20/22 Analyzed: 09/22/22</b>						
Benzene	0.0640	0.0020	mg/kg	0.0750	ND	85.4	70-130	13.9	30	
Toluene	0.0656	0.0050	"	0.0750	ND	87.5	70-130	10.1	30	
Ethylbenzene	0.0651	0.0050	"	0.0750	ND	86.8	70-130	13.9	30	
m,p-Xylene	0.129	0.010	"	0.150	ND	86.0	70-130	13.1	30	
o-Xylene	0.0657	0.0050	"	0.0750	ND	87.6	70-130	10.0	30	
1,2,4-Trimethylbenzene	0.0608	0.0050	"	0.0750	ND	81.0	70-130	7.48	30	
1,3,5-Trimethylbenzene	0.0613	0.0050	"	0.0750	ND	81.8	70-130	8.52	30	
Naphthalene	0.0550	0.0038	"	0.0750	ND	73.4	70-130	1.57	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0346</i>		<i>"</i>	<i>0.0400</i>		<i>86.6</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0390</i>		<i>"</i>	<i>0.0400</i>		<i>97.5</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0360</i>		<i>"</i>	<i>0.0400</i>		<i>90.0</i>	<i>50-150</i>			

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

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

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

**Batch BFI0497 - EPA 3550A**

**Blank (BFI0497-BLK1)**

Prepared: 09/20/22 Analyzed: 09/23/22

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								

**LCS (BFI0497-BS1)**

Prepared: 09/20/22 Analyzed: 09/23/22

C10-C28 (DRO)	549	50	mg/kg	500	110	70-130					
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**Matrix Spike (BFI0497-MS1)**

Source: 2209339-01

Prepared: 09/20/22 Analyzed: 09/23/22

C10-C28 (DRO)	474	50	mg/kg	500	49.5	85.0	70-130				
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**Matrix Spike Dup (BFI0497-MSD1)**

Source: 2209339-01

Prepared: 09/20/22 Analyzed: 09/23/22

C10-C28 (DRO)	455	50	mg/kg	500	49.5	81.0	70-130	4.24	20		
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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

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

**Summit Scientific**

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

**Batch BFI0522 - EPA 5030 Soil MS**

**Blank (BFI0522-BLK1)**

Prepared & Analyzed: 09/21/22

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0195</i>		"	<i>0.0333</i>		<i>58.5</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0164</i>		"	<i>0.0333</i>		<i>49.1</i>	<i>40-150</i>			

**LCS (BFI0522-BS1)**

Prepared & Analyzed: 09/21/22

Acenaphthene	0.0390	0.00500	mg/kg	0.0333		117	31-137			
Anthracene	0.0356	0.00500	"	0.0333		107	30-120			
Benzo (a) anthracene	0.0340	0.00500	"	0.0333		102	30-120			
Benzo (a) pyrene	0.0398	0.00500	"	0.0333		120	30-120			
Benzo (b) fluoranthene	0.0399	0.00500	"	0.0333		120	30-120			
Benzo (k) fluoranthene	0.0358	0.00500	"	0.0333		108	30-120			
Chrysene	0.0283	0.00500	"	0.0333		84.8	30-120			
Dibenz (a,h) anthracene	0.0324	0.00500	"	0.0333		97.1	30-120			
Fluoranthene	0.0383	0.00500	"	0.0333		115	30-120			
Fluorene	0.0337	0.00500	"	0.0333		101	30-120			
Indeno (1,2,3-cd) pyrene	0.0347	0.00500	"	0.0333		104	30-120			
Pyrene	0.0335	0.00500	"	0.0333		101	35-142			
1-Methylnaphthalene	0.0359	0.00500	"	0.0333		108	35-142			
2-Methylnaphthalene	0.0349	0.00500	"	0.0333		105	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0350</i>		"	<i>0.0333</i>		<i>105</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0340</i>		"	<i>0.0333</i>		<i>102</i>	<i>40-150</i>			

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

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

**Summit Scientific**

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

**Batch BFI0522 - EPA 5030 Soil MS**

<b>Matrix Spike (BFI0522-MS1)</b>	<b>Source: 2209338-01</b>			<b>Prepared &amp; Analyzed: 09/21/22</b>						
Acenaphthene	0.0310	0.00500	mg/kg	0.0333	ND	93.1	31-137			
Anthracene	0.0271	0.00500	"	0.0333	ND	81.2	30-120			
Benzo (a) anthracene	0.0253	0.00500	"	0.0333	ND	75.9	30-120			
Benzo (a) pyrene	0.0307	0.00500	"	0.0333	ND	92.0	30-120			
Benzo (b) fluoranthene	0.0328	0.00500	"	0.0333	ND	98.3	30-120			
Benzo (k) fluoranthene	0.0331	0.00500	"	0.0333	ND	99.2	30-120			
Chrysene	0.0219	0.00500	"	0.0333	ND	65.8	30-120			
Dibenz (a,h) anthracene	0.0255	0.00500	"	0.0333	ND	76.4	30-120			
Fluoranthene	0.0292	0.00500	"	0.0333	ND	87.5	30-120			
Fluorene	0.0250	0.00500	"	0.0333	ND	74.9	30-120			
Indeno (1,2,3-cd) pyrene	0.0263	0.00500	"	0.0333	ND	78.9	30-120			
Pyrene	0.0259	0.00500	"	0.0333	ND	77.7	35-142			
1-Methylnaphthalene	0.0235	0.00500	"	0.0333	ND	70.5	15-130			
2-Methylnaphthalene	0.0229	0.00500	"	0.0333	ND	68.8	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0220</i>		<i>"</i>	<i>0.0333</i>		<i>66.0</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0302</i>		<i>"</i>	<i>0.0333</i>		<i>90.5</i>	<i>40-150</i>			

<b>Matrix Spike Dup (BFI0522-MSD1)</b>	<b>Source: 2209338-01</b>			<b>Prepared: 09/21/22 Analyzed: 09/22/22</b>						
Acenaphthene	0.0279	0.00500	mg/kg	0.0333	ND	83.7	31-137	10.7	30	
Anthracene	0.0251	0.00500	"	0.0333	ND	75.2	30-120	7.72	30	
Benzo (a) anthracene	0.0236	0.00500	"	0.0333	ND	70.8	30-120	6.88	30	
Benzo (a) pyrene	0.0279	0.00500	"	0.0333	ND	83.6	30-120	9.61	30	
Benzo (b) fluoranthene	0.0303	0.00500	"	0.0333	ND	90.8	30-120	7.92	30	
Benzo (k) fluoranthene	0.0301	0.00500	"	0.0333	ND	90.3	30-120	9.45	30	
Chrysene	0.0196	0.00500	"	0.0333	ND	58.7	30-120	11.4	30	
Dibenz (a,h) anthracene	0.0230	0.00500	"	0.0333	ND	69.0	30-120	10.2	30	
Fluoranthene	0.0266	0.00500	"	0.0333	ND	79.8	30-120	9.11	30	
Fluorene	0.0226	0.00500	"	0.0333	ND	67.7	30-120	10.1	30	
Indeno (1,2,3-cd) pyrene	0.0243	0.00500	"	0.0333	ND	72.8	30-120	8.14	30	
Pyrene	0.0234	0.00500	"	0.0333	ND	70.2	35-142	10.2	30	
1-Methylnaphthalene	0.0224	0.00500	"	0.0333	ND	67.1	15-130	4.95	50	
2-Methylnaphthalene	0.0221	0.00500	"	0.0333	ND	66.2	15-130	3.80	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0220</i>		<i>"</i>	<i>0.0333</i>		<i>65.9</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0279</i>		<i>"</i>	<i>0.0333</i>		<i>83.8</i>	<i>40-150</i>			

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

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

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

**Batch BFI0568 - EPA 3050B**

**Blank (BFI0568-BLK1)**

Prepared: 09/21/22 Analyzed: 09/23/22

Boron ND 0.0100 mg/L

**LCS (BFI0568-BS1)**

Prepared: 09/21/22 Analyzed: 09/23/22

Boron 5.59 0.0100 mg/L 5.00 112 80-120

**Duplicate (BFI0568-DUP1)**

Source: 2209334-21

Prepared: 09/21/22 Analyzed: 09/23/22

Boron 0.0694 0.0100 mg/L 0.0772 10.7 20

**Matrix Spike (BFI0568-MS1)**

Source: 2209334-21

Prepared: 09/21/22 Analyzed: 09/23/22

Boron 5.50 0.0100 mg/L 5.00 0.0772 108 75-125

**Matrix Spike Dup (BFI0568-MSD1)**

Source: 2209334-21

Prepared: 09/21/22 Analyzed: 09/23/22

Boron 5.55 0.0100 mg/L 5.00 0.0772 110 75-125 0.963 25

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

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

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

**Batch BFI0564 - EPA 3050B**

**Blank (BFI0564-BLK1)**

Prepared: 09/21/22 Analyzed: 09/23/22

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 (BFI0564-BS1)**

Prepared: 09/21/22 Analyzed: 09/23/22

Arsenic	45.1	0.200	mg/kg wet	40.0	113	80-120
Barium	42.5	0.400	"	40.0	106	80-120
Cadmium	2.01	0.200	"	2.00	101	80-120
Copper	43.9	0.400	"	40.0	110	80-120
Lead	19.6	0.200	"	20.0	98.1	80-120
Nickel	44.3	0.400	"	40.0	111	80-120
Selenium	3.76	0.260	"	4.00	93.9	80-120
Silver	1.97	0.0200	"	2.00	98.4	80-120
Zinc	46.3	0.400	"	40.0	116	80-120

**Duplicate (BFI0564-DUP1)**

Source: 2209334-21

Prepared: 09/21/22 Analyzed: 09/24/22

Arsenic	2.56	0.232	mg/kg dry	2.56	0.0441	20
Barium	57.4	0.465	"	58.0	0.909	20
Cadmium	0.0971	0.232	"	0.0971	0.0141	20
Copper	4.30	0.465	"	4.30	0.108	20
Lead	4.44	0.232	"	4.47	0.606	20
Nickel	5.26	0.465	"	5.34	1.51	20
Selenium	0.301	0.302	"	0.499	49.6	20
Silver	0.00507	0.0232	"	0.00474	6.66	20
Zinc	19.5	0.465	"	19.6	0.554	20

QR-03

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**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 BFI0564 - EPA 3050B**

**Matrix Spike (BFI0564-MS1)**

Source: 2209334-21

Prepared: 09/21/22 Analyzed: 09/24/22

Arsenic	50.9	0.232	mg/kg dry	46.5	2.56	104	75-125			
Barium	96.5	0.465	"	46.5	58.0	82.9	75-125			
Cadmium	2.33	0.232	"	2.32	0.0971	96.1	75-125			
Copper	51.3	0.465	"	46.5	4.30	101	75-125			
Lead	24.3	0.232	"	23.2	4.47	85.3	75-125			
Nickel	53.3	0.465	"	46.5	5.34	103	75-125			
Selenium	4.30	0.302	"	4.65	0.499	81.8	75-125			
Silver	2.14	0.0232	"	2.32	0.00474	91.7	75-125			
Zinc	67.9	0.465	"	46.5	19.6	104	75-125			

**Matrix Spike Dup (BFI0564-MSD1)**

Source: 2209334-21

Prepared: 09/21/22 Analyzed: 09/24/22

Arsenic	51.0	0.232	mg/kg dry	46.5	2.56	104	75-125	0.208	25
Barium	96.5	0.465	"	46.5	58.0	82.9	75-125	0.00144	25
Cadmium	2.30	0.232	"	2.32	0.0971	94.6	75-125	1.56	25
Copper	51.5	0.465	"	46.5	4.30	102	75-125	0.357	25
Lead	24.7	0.232	"	23.2	4.47	87.0	75-125	1.58	25
Nickel	53.1	0.465	"	46.5	5.34	103	75-125	0.412	25
Selenium	4.37	0.302	"	4.65	0.499	83.3	75-125	1.62	25
Silver	2.15	0.0232	"	2.32	0.00474	92.2	75-125	0.639	25
Zinc	68.4	0.465	"	46.5	19.6	105	75-125	0.784	25

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

**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 BFI0588 - 3060A Mod**

**Blank (BFI0588-BLK1)**

Prepared: 09/22/22 Analyzed: 09/23/22

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BFI0588-BS1)**

Prepared: 09/22/22 Analyzed: 09/23/22

Chromium, Hexavalent 24.4 0.30 mg/kg wet 25.0 97.4 80-120

**Duplicate (BFI0588-DUP1)**

**Source: 2209279-11**

Prepared: 09/22/22 Analyzed: 09/23/22

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BFI0588-MS1)**

**Source: 2209279-11**

Prepared: 09/22/22 Analyzed: 09/23/22

Chromium, Hexavalent 23.3 0.30 mg/kg dry 27.3 ND 85.2 75-125

**Matrix Spike Dup (BFI0588-MSD1)**

**Source: 2209279-11**

Prepared: 09/22/22 Analyzed: 09/23/22

Chromium, Hexavalent 23.7 0.30 mg/kg dry 27.3 ND 87.0 75-125 2.09 20

Summit Scientific

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K.P. Kauffman  
 1675 Broadway  
 Denver CO, 80202

Project: MCU 43

Project Number: [none]  
 Project Manager: Kevin Tautkus

**Reported:**  
 09/29/22 13:37

**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 BFI0667 - General Preparation**

**Blank (BFI0667-BLK1)**

Prepared: 09/26/22 Analyzed: 09/28/22

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

**LCS (BFI0667-BS1)**

Prepared: 09/26/22 Analyzed: 09/28/22

Calcium	5.60	0.0500	mg/L wet	5.00	112	70-130
Magnesium	5.93	0.0500	"	5.00	119	70-130
Sodium	5.76	0.0500	"	5.00	115	70-130

Summit Scientific

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K.P. Kauffman  
 1675 Broadway  
 Denver CO, 80202

Project: MCU 43

Project Number: [none]  
 Project Manager: Kevin Tautkus

**Reported:**  
 09/29/22 13:37

**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 BFI0532 - General Preparation**

Duplicate (BFI0532-DUP1)	Source: 2209335-01	Prepared: 09/21/22	Analyzed: 09/26/22
% Solids	94.0	%	93.6
			0.419
			20

Summit Scientific

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K.P. Kauffman  
 1675 Broadway  
 Denver CO, 80202

Project: MCU 43

Project Number: [none]  
 Project Manager: Kevin Tautkus

**Reported:**  
 09/29/22 13:37

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

**Summit Scientific**

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

**Batch BFI0670 - General Preparation**

**Blank (BFI0670-BLK1)**

Prepared: 09/26/22 Analyzed: 09/28/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BFI0670-BS1)**

Prepared: 09/26/22 Analyzed: 09/28/22

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 101 95-105

**Duplicate (BFI0670-DUP1)**

Source: 2209336-01

Prepared: 09/26/22 Analyzed: 09/28/22

Specific Conductance (EC) 3.61 0.0100 mmhos/cm 3.63 0.553 20

Summit Scientific

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K.P. Kauffman  
 1675 Broadway  
 Denver CO, 80202

Project: MCU 43

Project Number: [none]  
 Project Manager: Kevin Tautkus

**Reported:**  
 09/29/22 13:37

**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 BFI0671 - General Preparation**

**LCS (BFI0671-BS1)**

Prepared: 09/26/22 Analyzed: 09/28/22

pH	9.18		pH Units	9.18		100	95-105			
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**Duplicate (BFI0671-DUP1)**

Source: 2209336-01

Prepared: 09/26/22 Analyzed: 09/28/22

pH	7.61		pH Units	7.63		0.262	20			
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Summit Scientific

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K.P. Kauffman  
1675 Broadway  
Denver CO, 80202

Project: MCU 43

Project Number: [none]  
Project Manager: Kevin Tautkus

**Reported:**  
09/29/22 13:37

### Notes and Definitions

- QR-03      The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- DET         Analyte DETECTED
- ND         Analyte NOT DETECTED at or above the reporting limit
- NR         Not Reported
- dry         Sample results reported on a dry weight basis
- RPD         Relative Percent Difference