

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 13, 2022

Jennifer Galles

K.P. Kauffman

1675 Broadway

Denver, CO 80202

RE: Facility 4 AE 2

Work Order #2207039

Enclosed are the results of analyses for samples received by Summit Scientific on 07/06/22 15:00. 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: Facility 4 AE 2

Project Number: [none]
Project Manager: Jennifer Galles

Reported:
07/13/22 13:16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-3@10'	2207039-01	Soil	07/06/22 09:10	07/06/22 15:00

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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.

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S₂

2207039

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Page 1 of 1

Client: K.P. Kauffman

Project Manager: Jennifer Galles

Address: 1675 Broadway

E-Mail: /Jennifer Galles/M Hattel/primarycontractor@marcomllc.net

City/State/Zip: Denver, CO 80202

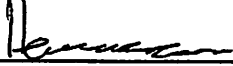

Phone: 303.825.4822

Project Name: Facility 4 AE2

Sampler Name: MH HC

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Full Table								
1	B4-3 @ 10'	7.6.22	10:10	3			X			X			X								
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: 	Date/Time: 7.6.22 @ 1045	Received by: 	Date/Time: 7.6.22 1500	Turn Around Time (Check)	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day	72 hours — Standard —
				24 hours X	
				48 hours —	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	
				Temperature Upon Receipt: 59	
				Samples Intact: Yes No	

S₂

2207039

Sample Receipt Checklist

S2 Work Order# _____

Client: Kp Kauffman Client Project ID: Facility 4 AEZ

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

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Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 59 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.	-			on ICE
Were all samples received intact ⁽¹⁾ ?				
Was adequate sample volume provided ⁽¹⁾ ?				
If custody seals are present, are they intact ⁽¹⁾ ?				
Are samples due within 48 hours present?	-	HA		24 hrs
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			-	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	-			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	-			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	-			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	-			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			-	
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.			-	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.			-	
If dissolved metals are requested, were samples field filtered?			-	
Additional Comments (if any):				
(1) If NO, then contact the client before proceeding with analysis and note in case narrative.				

Custodian Printed Name

Date/Time



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Facility 4 AE 2

Project Number: [none]
Project Manager: Jennifer Galles

Reported:
07/13/22 13:16

BH-3@10'
2207039-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/06/22 09:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BFG0098	07/06/22	07/07/22	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: **07/06/22 09:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		97.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/06/22 09:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BFG0099	"	07/07/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/06/22 09:10**

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

PAH by EPA Method 8270D SIM

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2207039-01 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **07/06/22 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFG0104	07/07/22	07/08/22	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	0.00760	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.00829	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **07/06/22 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		43.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		92.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/06/22 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.410	0.0100	mg/L	1	BFG0100	07/07/22	07/09/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/06/22 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Total Metals by EPA 6020B

Arsenic	4.41	0.254	mg/kg dry	1	BFG0125	07/07/22	07/09/22	EPA 6020B
Barium	152	0.508	"	"	"	"	"	"
Cadmium	ND	0.254	"	"	"	"	"	"
Copper	13.7	0.508	"	"	"	"	"	"
Lead	10.5	0.254	"	"	"	"	"	"
Nickel	15.1	0.508	"	"	"	"	"	"
Selenium	0.913	0.331	"	"	"	"	"	"
Silver	0.0599	0.0254	"	"	"	"	"	"
Zinc	49.1	0.508	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/06/22 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFG0152	07/08/22	07/11/22	EPA 7196A	

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

Date Sampled: **07/06/22 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	151	0.0636	mg/L dry	1	BFG0114	07/07/22	07/12/22	EPA 6020B	
Magnesium	96.4	0.0636	"	"	"	"	"	"	
Sodium	336	0.0636	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/06/22 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.26	0.00100	units	1	BFG0203	07/12/22	07/12/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/06/22 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	78.7	%	1	BFG0107	07/07/22	07/07/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/06/22 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.59	0.0100	mmhos/cm	1	BFG0119	07/07/22	07/08/22	EPA 120.1	

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

Date Sampled: **07/06/22 09:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.97		pH Units	1	BFG0118	07/07/22	07/08/22	EPA 9045D	

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Project Number: [none]
Project Manager: Jennifer Galles

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Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BFG0098 - EPA 5030 Soil MS

Blank (BFG0098-BLK1)

Prepared: 07/06/22 Analyzed: 07/07/22

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	0.0369		"	0.0400		92.2	50-150			
Surrogate: Toluene-d8	0.0327		"	0.0400		81.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.5	50-150			

LCS (BFG0098-BS1)

Prepared: 07/06/22 Analyzed: 07/07/22

Benzene	0.115	0.0020	mg/kg	0.100		115	70-130			
Toluene	0.105	0.0050	"	0.100		105	70-130			
Ethylbenzene	0.102	0.0050	"	0.100		102	70-130			
m,p-Xylene	0.204	0.010	"	0.200		102	70-130			
o-Xylene	0.0943	0.0050	"	0.100		94.3	70-130			
1,2,4-Trimethylbenzene	0.106	0.0050	"	0.100		106	70-130			
1,3,5-Trimethylbenzene	0.103	0.0050	"	0.100		103	70-130			
Naphthalene	0.105	0.0038	"	0.100		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0396		"	0.0400		99.1	50-150			
Surrogate: Toluene-d8	0.0334		"	0.0400		83.6	50-150			
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400		97.6	50-150			

Matrix Spike (BFG0098-MS1)

Source: 2207032-01

Prepared: 07/06/22 Analyzed: 07/07/22

Benzene	0.0909	0.0020	mg/kg	0.100	ND	90.9	70-130			
Toluene	0.0935	0.0050	"	0.100	ND	93.5	70-130			
Ethylbenzene	0.100	0.0050	"	0.100	ND	100	70-130			
m,p-Xylene	0.210	0.010	"	0.200	ND	105	70-130			
o-Xylene	0.0934	0.0050	"	0.100	ND	93.4	70-130			
1,2,4-Trimethylbenzene	0.0976	0.0050	"	0.100	ND	97.6	70-130			
1,3,5-Trimethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130			
Naphthalene	0.103	0.0038	"	0.100	ND	103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0369		"	0.0400		92.2	50-150			
Surrogate: Toluene-d8	0.0346		"	0.0400		86.5	50-150			
Surrogate: 4-Bromofluorobenzene	0.0405		"	0.0400		101	50-150			

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Project: Facility 4 AE 2

Project Number: [none]
Project Manager: Jennifer Galles

Reported:
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch BFG0098 - EPA 5030 Soil MS

Matrix Spike Dup (BFG0098-MSD1)	Source: 2207032-01			Prepared: 07/06/22 Analyzed: 07/07/22						
Benzene	0.0897	0.0020	mg/kg	0.100	ND	89.7	70-130	1.30	30	
Toluene	0.0939	0.0050	"	0.100	ND	93.9	70-130	0.448	30	
Ethylbenzene	0.0977	0.0050	"	0.100	ND	97.7	70-130	2.46	30	
m,p-Xylene	0.209	0.010	"	0.200	ND	104	70-130	0.616	30	
o-Xylene	0.0923	0.0050	"	0.100	ND	92.3	70-130	1.10	30	
1,2,4-Trimethylbenzene	0.0958	0.0050	"	0.100	ND	95.8	70-130	1.92	30	
1,3,5-Trimethylbenzene	0.0944	0.0050	"	0.100	ND	94.4	70-130	6.49	30	
Naphthalene	0.102	0.0038	"	0.100	ND	102	70-130	0.876	30	
Surrogate: 1,2-Dichloroethane-d4	0.0347		"	0.0400		86.8	50-150			
Surrogate: Toluene-d8	0.0331		"	0.0400		82.6	50-150			
Surrogate: 4-Bromofluorobenzene	0.0397		"	0.0400		99.3	50-150			

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Project: Facility 4 AE 2
Project Number: [none]
Project Manager: Jennifer Galles

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07/13/22 13:16

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BFG0099 - EPA 3550A

Blank (BFG0099-BLK1)

Prepared: 07/06/22 Analyzed: 07/07/22

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

LCS (BFG0099-BS1)

Prepared: 07/06/22 Analyzed: 07/07/22

C10-C28 (DRO)	539	50	mg/kg	500	108	70-130
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Matrix Spike (BFG0099-MS1)

Source: 2207032-01

Prepared: 07/06/22 Analyzed: 07/07/22

C10-C28 (DRO)	487	50	mg/kg	500	16.1	94.2	70-130
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Matrix Spike Dup (BFG0099-MSD1)

Source: 2207032-01

Prepared: 07/06/22 Analyzed: 07/07/22

C10-C28 (DRO)	501	50	mg/kg	500	16.1	97.0	70-130	2.84	20
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Project: Facility 4 AE 2
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PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFG0104 - EPA 5030 Soil MS

Blank (BFG0104-BLK1)

Prepared & Analyzed: 07/07/22

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	"							
Surrogate: 2-Methylnaphthalene-d10	0.0247		"	0.0333		74.0	40-150			
Surrogate: Fluoranthene-d10	0.0392		"	0.0333		118	40-150			

LCS (BFG0104-BS1)

Prepared & Analyzed: 07/07/22

Acenaphthene	0.0306	0.00500	mg/kg	0.0333		91.7	31-137			
Anthracene	0.0349	0.00500	"	0.0333		105	30-120			
Benzo (a) anthracene	0.0334	0.00500	"	0.0333		100	30-120			
Benzo (a) pyrene	0.0333	0.00500	"	0.0333		99.8	30-120			
Benzo (b) fluoranthene	0.0335	0.00500	"	0.0333		100	30-120			
Benzo (k) fluoranthene	0.0340	0.00500	"	0.0333		102	30-120			
Chrysene	0.0330	0.00500	"	0.0333		99.1	30-120			
Dibenz (a,h) anthracene	0.0312	0.00500	"	0.0333		93.7	30-120			
Fluoranthene	0.0324	0.00500	"	0.0333		97.4	30-120			
Fluorene	0.0314	0.00500	"	0.0333		94.2	30-120			
Indeno (1,2,3-cd) pyrene	0.0286	0.00500	"	0.0333		85.8	30-120			
Pyrene	0.0321	0.00500	"	0.0333		96.3	35-142			
1-Methylnaphthalene	0.0239	0.00500	"	0.0333		71.8	35-142			
2-Methylnaphthalene	0.0320	0.00500	"	0.0333		96.0	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0227		"	0.0333		68.0	40-150			
Surrogate: Fluoranthene-d10	0.0341		"	0.0333		102	40-150			

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Project Number: [none]
Project Manager: Jennifer Galles

Reported:
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PAH by EPA Method 8270D SIM - Quality Control

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

Batch BFG0104 - EPA 5030 Soil MS

Matrix Spike (BFG0104-MS1)

Source: 2207026-01

Prepared & Analyzed: 07/07/22

Acenaphthene	0.0218	0.00500	mg/kg	0.0333	ND	65.3	31-137			
Anthracene	0.0269	0.00500	"	0.0333	ND	80.8	30-120			
Benzo (a) anthracene	0.0283	0.00500	"	0.0333	ND	84.9	30-120			
Benzo (a) pyrene	0.0257	0.00500	"	0.0333	ND	77.0	30-120			
Benzo (b) fluoranthene	0.0280	0.00500	"	0.0333	ND	84.1	30-120			
Benzo (k) fluoranthene	0.0267	0.00500	"	0.0333	ND	80.2	30-120			
Chrysene	0.0257	0.00500	"	0.0333	ND	77.1	30-120			
Dibenz (a,h) anthracene	0.0152	0.00500	"	0.0333	ND	45.5	30-120			
Fluoranthene	0.0252	0.00500	"	0.0333	ND	75.7	30-120			
Fluorene	0.0222	0.00500	"	0.0333	ND	66.6	30-120			
Indeno (1,2,3-cd) pyrene	0.0219	0.00500	"	0.0333	ND	65.6	30-120			
Pyrene	0.0262	0.00500	"	0.0333	ND	78.6	35-142			
1-Methylnaphthalene	0.0137	0.00500	"	0.0333	ND	41.2	15-130			
2-Methylnaphthalene	0.0193	0.00500	"	0.0333	ND	57.8	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0154		"	0.0333		46.3	40-150			
Surrogate: Fluoranthene-d10	0.0272		"	0.0333		81.5	40-150			

Matrix Spike Dup (BFG0104-MSD1)

Source: 2207026-01

Prepared & Analyzed: 07/07/22

Acenaphthene	0.0154	0.00500	mg/kg	0.0333	ND	46.3	31-137	34.1	30	QR-02
Anthracene	0.0204	0.00500	"	0.0333	ND	61.1	30-120	27.8	30	
Benzo (a) anthracene	0.0212	0.00500	"	0.0333	ND	63.6	30-120	28.7	30	
Benzo (a) pyrene	0.0191	0.00500	"	0.0333	ND	57.3	30-120	29.3	30	
Benzo (b) fluoranthene	0.0206	0.00500	"	0.0333	ND	61.9	30-120	30.3	30	QR-02
Benzo (k) fluoranthene	0.0195	0.00500	"	0.0333	ND	58.6	30-120	31.1	30	QR-02
Chrysene	0.0195	0.00500	"	0.0333	ND	58.5	30-120	27.5	30	
Dibenz (a,h) anthracene	0.0144	0.00500	"	0.0333	ND	43.3	30-120	5.06	30	
Fluoranthene	0.0194	0.00500	"	0.0333	ND	58.2	30-120	26.2	30	
Fluorene	0.0161	0.00500	"	0.0333	ND	48.3	30-120	31.9	30	QR-02
Indeno (1,2,3-cd) pyrene	0.0201	0.00500	"	0.0333	ND	60.4	30-120	8.12	30	
Pyrene	0.0193	0.00500	"	0.0333	ND	57.8	35-142	30.6	30	QR-02
1-Methylnaphthalene	0.0122	0.00500	"	0.0333	ND	36.6	15-130	11.7	50	
2-Methylnaphthalene	0.0168	0.00500	"	0.0333	ND	50.3	15-130	14.0	50	
Surrogate: 2-Methylnaphthalene-d10	0.0159		"	0.0333		47.7	40-150			
Surrogate: Fluoranthene-d10	0.0210		"	0.0333		62.9	40-150			

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Facility 4 AE 2
Project Number: [none]
Project Manager: Jennifer Galles

Reported:
07/13/22 13:16

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 BFG0100 - EPA 3050B

Blank (BFG0100-BLK1)

Prepared: 07/07/22 Analyzed: 07/09/22

Boron ND 0.0100 mg/L

LCS (BFG0100-BS1)

Prepared: 07/07/22 Analyzed: 07/09/22

Boron 5.15 0.0100 mg/L 5.00 103 80-120

Duplicate (BFG0100-DUP1)

Source: 2207033-02

Prepared: 07/07/22 Analyzed: 07/09/22

Boron 0.448 0.0100 mg/L 0.454 1.33 20

Matrix Spike (BFG0100-MS1)

Source: 2207033-02

Prepared: 07/07/22 Analyzed: 07/09/22

Boron 6.01 0.0100 mg/L 5.00 0.454 111 75-125

Matrix Spike Dup (BFG0100-MSD1)

Source: 2207033-02

Prepared: 07/07/22 Analyzed: 07/09/22

Boron 5.73 0.0100 mg/L 5.00 0.454 106 75-125 4.70 25

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Facility 4 AE 2
Project Number: [none]
Project Manager: Jennifer Galles

Reported:
07/13/22 13:16

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BFG0125 - EPA 3050B

Blank (BFG0125-BLK1)

Prepared: 07/07/22 Analyzed: 07/09/22

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 (BFG0125-BS1)

Prepared: 07/07/22 Analyzed: 07/09/22

Arsenic	43.0	0.200	mg/kg wet	40.0	108	80-120
Barium	41.2	0.400	"	40.0	103	80-120
Cadmium	2.11	0.200	"	2.00	106	80-120
Copper	41.0	0.400	"	40.0	102	80-120
Lead	20.0	0.200	"	20.0	100	80-120
Nickel	41.1	0.400	"	40.0	103	80-120
Selenium	4.18	0.260	"	4.00	104	80-120
Silver	2.14	0.0200	"	2.00	107	80-120
Zinc	43.7	0.400	"	40.0	109	80-120

Duplicate (BFG0125-DUP1)

Source: 2207027-01

Prepared: 07/07/22 Analyzed: 07/09/22

Arsenic	3.45	0.246	mg/kg dry	3.04	12.6	20
Barium	86.5	0.491	"	74.4	15.1	20
Cadmium	0.236	0.246	"	0.203	15.2	20
Copper	10.1	0.491	"	9.17	9.88	20
Lead	8.99	0.246	"	9.01	0.289	20
Nickel	12.6	0.491	"	11.1	12.3	20
Selenium	0.995	0.319	"	0.965	2.97	20
Silver	0.0447	0.0246	"	0.0458	2.58	20
Zinc	48.9	0.491	"	42.6	13.9	20

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Facility 4 AE 2

Project Number: [none]
Project Manager: Jennifer Galles

Reported:
07/13/22 13:16

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 BFG0125 - EPA 3050B

Matrix Spike (BFG0125-MS1)

Source: 2207027-01

Prepared: 07/07/22 Analyzed: 07/09/22

Arsenic	53.2	0.246	mg/kg dry	49.1	3.04	102	75-125
Barium	122	0.491	"	49.1	74.4	98.0	75-125
Cadmium	2.78	0.246	"	2.46	0.203	105	75-125
Copper	59.1	0.491	"	49.1	9.17	102	75-125
Lead	30.8	0.246	"	24.6	9.01	88.6	75-125
Nickel	63.9	0.491	"	49.1	11.1	108	75-125
Selenium	5.04	0.319	"	4.91	0.965	83.0	75-125
Silver	2.50	0.0246	"	2.46	0.0458	100	75-125
Zinc	103	0.491	"	49.1	42.6	124	75-125

Matrix Spike Dup (BFG0125-MSD1)

Source: 2207027-01

Prepared: 07/07/22 Analyzed: 07/09/22

Arsenic	53.5	0.246	mg/kg dry	49.1	3.04	103	75-125	0.568	25
Barium	123	0.491	"	49.1	74.4	99.8	75-125	0.719	25
Cadmium	2.80	0.246	"	2.46	0.203	106	75-125	0.477	25
Copper	59.7	0.491	"	49.1	9.17	103	75-125	1.04	25
Lead	30.8	0.246	"	24.6	9.01	88.7	75-125	0.101	25
Nickel	64.3	0.491	"	49.1	11.1	108	75-125	0.574	25
Selenium	5.14	0.319	"	4.91	0.965	85.1	75-125	1.95	25
Silver	2.55	0.0246	"	2.46	0.0458	102	75-125	1.75	25
Zinc	104	0.491	"	49.1	42.6	125	75-125	0.423	25

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Facility 4 AE 2
Project Number: [none]
Project Manager: Jennifer Galles

Reported:
07/13/22 13:16

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 BFG0152 - 3060A Mod

Blank (BFG0152-BLK1)

Prepared: 07/08/22 Analyzed: 07/11/22

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BFG0152-BS1)

Prepared: 07/08/22 Analyzed: 07/11/22

Chromium, Hexavalent 24.8 0.30 mg/kg wet 25.0 99.2 80-120

Duplicate (BFG0152-DUP1)

Source: 2206531-16

Prepared: 07/08/22 Analyzed: 07/11/22

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BFG0152-MS1)

Source: 2206531-16

Prepared: 07/08/22 Analyzed: 07/11/22

Chromium, Hexavalent 26.4 0.30 mg/kg dry 25.7 ND 103 75-125

Matrix Spike Dup (BFG0152-MSD1)

Source: 2206531-16

Prepared: 07/08/22 Analyzed: 07/11/22

Chromium, Hexavalent 25.0 0.30 mg/kg dry 25.7 ND 97.4 75-125 5.39 20

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Facility 4 AE 2

Project Number: [none]
Project Manager: Jennifer Galles

Reported:
07/13/22 13:16

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 BFG0114 - General Preparation

Blank (BFG0114-BLK1)

Prepared: 07/07/22 Analyzed: 07/12/22

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

LCS (BFG0114-BS1)

Prepared: 07/07/22 Analyzed: 07/12/22

Calcium	5.21	0.0500	mg/L wet	5.00	104	70-130
Magnesium	5.32	0.0500	"	5.00	106	70-130
Sodium	5.15	0.0500	"	5.00	103	70-130

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Facility 4 AE 2

Project Number: [none]
Project Manager: Jennifer Galles

Reported:
07/13/22 13:16

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 BFG0107 - General Preparation

Duplicate (BFG0107-DUP1)		Source: 2207033-02			Prepared & Analyzed: 07/07/22					
% Solids	91.3		%		91.9		0.589		20	

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Facility 4 AE 2
Project Number: [none]
Project Manager: Jennifer Galles

Reported:
07/13/22 13:16

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 BFG0119 - General Preparation

Blank (BFG0119-BLK1)

Prepared: 07/07/22 Analyzed: 07/08/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFG0119-BS1)

Prepared: 07/07/22 Analyzed: 07/08/22

Specific Conductance (EC) 0.158 0.0100 mmhos/cm 0.150 105 95-105

Duplicate (BFG0119-DUP1)

Source: 2206443-01

Prepared: 07/07/22 Analyzed: 07/08/22

Specific Conductance (EC) 0.329 0.0100 mmhos/cm 0.336 2.10 20

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Facility 4 AE 2

Project Number: [none]
Project Manager: Jennifer Galles

Reported:
07/13/22 13:16

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

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

Batch BFG0118 - General Preparation

LCS (BFG0118-BS1)

Prepared: 07/07/22 Analyzed: 07/08/22

pH	9.20	pH Units	9.18	100	95-105
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Duplicate (BFG0118-DUP1)

Source: 2206443-01

Prepared: 07/07/22 Analyzed: 07/08/22

pH	4.13	pH Units	4.14	0.242	20
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Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Facility 4 AE 2

Project Number: [none]
Project Manager: Jennifer Galles

Reported:
07/13/22 13:16

Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
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