

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 05, 2022

Levi Kirk

K.P. Kauffman

1675 Broadway

Denver, CO 80202

RE: Suckla Brown Unit 17 Header

Work Order #2209581

Enclosed are the results of analyses for samples received by Summit Scientific on 09/29/22 11:30. 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: Suckla Brown Unit 17 Header

Project Number: [none]
Project Manager: Levi Kirk

Reported:
10/05/22 15:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2	2209581-01	Water	09/29/22 10:00	09/29/22 11:30
MW-3	2209581-02	Water	09/29/22 10:20	09/29/22 11:30
MW-7	2209581-03	Water	09/29/22 10:40	09/29/22 11:30

Summit Scientific

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S₂

2209581

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

Page 1 of 1

Client: K.P. Kauffman Company, Inc.

Project Manager: Levi Kirk

Address: 1675 Broadway

E-Mail: PrimaryContractor@marcomllc.net

City/State/Zip: 80202

Phone: 303-825-4822

Project Name: Suckia Brown Unit 17 Header

Sampler Name: HC

Project Number:

					Preservative				Matrix				Analysis Requested								Special Instructions							
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	Tablets organics	Chloride	Sulfate	TDS												
1	MW-2	9-29-22	1000	5	3				X				X	X	X	X												
2	MW-3	I	1020	3	3				I				I	I	I	I												Only two VOAS
3	MW-7	I	1040	4	3				I				I	I	I	I												
4																												
5																												
6																												
7																												
8																												
9																												
10																												

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time	(Check)	Notes:
<u>Hanneman</u>	9-29-22 1130		92922 1130	Same Day	72 hours	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours	Standard	
				48 hours		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:		
				Temperature Upon Receipt:	<u>5.4</u>	
				Samples Intact:	<u>Yes</u> No	

S₂

Sample Receipt Checklist

S2 Work Order# 2209581Client: KPKClient Project ID: Suckia Brown unit 17 HeaderShipped 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"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Matrix (Check all that apply)

Air ☐Soil/Solid ☐Water ☒Other ☐

Temp (°C)

54

Thermometer #

1

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

Additional Comments (if any):

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

Custodian Printed Name

Date/Time

8-29-2219:10



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown Unit 17 Header

Project Number: [none]
Project Manager: Levi Kirk

Reported:
10/05/22 15:44

MW-2
2209581-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/29/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	160	1.0	ug/l	1	BF10808	09/30/22	10/02/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	97	1.0	"	"	"	"	"	"	
Xylenes (total)	220	2.0	"	"	"	"	"	"	
Naphthalene	27	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	110	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	10	1.0	"	"	"	"	"	"	

Date Sampled: **09/29/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		96.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **09/29/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	241	12.0	mg/L	200	BFJ0020	10/03/22	10/03/22	EPA 300.0	
Sulfate	345	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **09/29/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	4180	10.0	mg/L	1	BFJ0019	10/03/22	10/04/22	SM2540C	

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown Unit 17 Header

Project Number: [none]
Project Manager: Levi Kirk

Reported:
10/05/22 15:44

MW-3
2209581-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/29/22 10:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	320	10		ug/l	10	BF10808	09/30/22	10/01/22	EPA 8260B	
Toluene	ND	1.0		"	1	"	"	10/02/22	"	
Ethylbenzene	11	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	12	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	1.9	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **09/29/22 10:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		103 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		98.9 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		129 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **09/29/22 10:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	478	12.0		mg/L	200	BFJ0020	10/03/22	10/03/22	EPA 300.0	
Sulfate	3140	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **09/29/22 10:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	5860	10.0		mg/L	1	BFJ0019	10/03/22	10/04/22	SM2540C	

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Project: Suckla Brown Unit 17 Header

Project Number: [none]
Project Manager: Levi Kirk

Reported:
10/05/22 15:44

MW-7
2209581-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/29/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	85	1.0	ug/l	1	BF10808	09/30/22	10/02/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	21	1.0	"	"	"	"	"	"	
Xylenes (total)	6.3	2.0	"	"	"	"	"	"	
Naphthalene	1.9	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	18	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	1.4	1.0	"	"	"	"	"	"	

Date Sampled: **09/29/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		96.2 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **09/29/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	99.0	12.0	mg/L	200	BFJ0020	10/03/22	10/03/22	EPA 300.0	
Sulfate	4060	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **09/29/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	6140	10.0	mg/L	1	BFJ0019	10/03/22	10/04/22	SM2540C	

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Project: Suckla Brown Unit 17 Header

Project Number: [none]
Project Manager: Levi Kirk

Reported:
10/05/22 15:44

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 BF10808 - EPA 5030 Water MS

Blank (BF10808-BLK1)

Prepared: 09/30/22 Analyzed: 10/01/22

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Naphthalene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	11.6		"	13.3		87.0	23-173			
Surrogate: Toluene-d8	13.3		"	13.3		99.8	20-170			
Surrogate: 4-Bromofluorobenzene	12.4		"	13.3		92.6	21-167			

LCS (BF10808-BS1)

Prepared: 09/30/22 Analyzed: 10/01/22

Benzene	30.5	1.0	ug/l	33.3		91.5	51-132			
Toluene	30.2	1.0	"	33.3		90.5	51-138			
Ethylbenzene	32.6	1.0	"	33.3		97.8	58-146			
m,p-Xylene	64.9	2.0	"	66.7		97.4	57-144			
o-Xylene	30.2	1.0	"	33.3		90.7	53-146			
Naphthalene	29.6	1.0	"	33.3		88.7	70-130			
1,2,4-Trimethylbenzene	30.4	1.0	"	33.3		91.1	70-130			
1,3,5-Trimethylbenzene	31.6	1.0	"	33.3		94.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	11.0		"	13.3		82.6	23-173			
Surrogate: Toluene-d8	14.0		"	13.3		105	20-170			
Surrogate: 4-Bromofluorobenzene	12.4		"	13.3		92.9	21-167			

Matrix Spike (BF10808-MS1)

Source: 2209584-01

Prepared: 09/30/22 Analyzed: 10/01/22

Benzene	30.4	1.0	ug/l	33.3	ND	91.4	34-141			
Toluene	30.4	1.0	"	33.3	ND	91.3	27-151			
Ethylbenzene	34.7	1.0	"	33.3	ND	104	29-160			
m,p-Xylene	69.1	2.0	"	66.7	ND	104	20-166			
o-Xylene	31.6	1.0	"	33.3	ND	94.8	33-159			
Naphthalene	28.5	1.0	"	33.3	ND	85.4	70-130			
1,2,4-Trimethylbenzene	33.0	1.0	"	33.3	ND	99.1	70-130			
1,3,5-Trimethylbenzene	34.4	1.0	"	33.3	ND	103	70-130			
Surrogate: 1,2-Dichloroethane-d4	8.96		"	13.3		67.2	23-173			
Surrogate: Toluene-d8	13.9		"	13.3		105	20-170			
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3		93.7	21-167			

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Project: Suckla Brown Unit 17 Header

Project Number: [none]
Project Manager: Levi Kirk

Reported:
10/05/22 15:44

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 BF10808 - EPA 5030 Water MS

Matrix Spike Dup (BF10808-MSD1)		Source: 2209584-01			Prepared: 09/30/22 Analyzed: 10/01/22					
Benzene	30.8	1.0	ug/l	33.3	ND	92.5	34-141	1.21	30	
Toluene	30.3	1.0	"	33.3	ND	90.9	27-151	0.362	30	
Ethylbenzene	32.7	1.0	"	33.3	ND	98.2	29-160	5.81	30	
m,p-Xylene	64.8	2.0	"	66.7	ND	97.1	20-166	6.53	30	
o-Xylene	30.2	1.0	"	33.3	ND	90.7	33-159	4.46	30	
Naphthalene	37.5	1.0	"	33.3	ND	112	70-130	27.4	30	
1,2,4-Trimethylbenzene	30.1	1.0	"	33.3	ND	90.4	70-130	9.18	30	
1,3,5-Trimethylbenzene	31.2	1.0	"	33.3	ND	93.7	70-130	9.72	30	
<hr/>										
Surrogate: 1,2-Dichloroethane-d4	13.6		"	13.3		102	23-173			
Surrogate: Toluene-d8	13.7		"	13.3		103	20-170			
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.1	21-167			

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K.P. Kauffman
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Project: Suckla Brown Unit 17 Header

Project Number: [none]
Project Manager: Levi Kirk

Reported:
10/05/22 15:44

Anions by EPA Method 300.0 - Quality Control
Summit Scientific

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

Batch BFJ0020 - General Preparation

Blank (BFJ0020-BLK1)

Prepared & Analyzed: 10/03/22

Chloride	ND	0.0600	mg/L
Sulfate	ND	0.300	"

LCS (BFJ0020-BS1)

Prepared & Analyzed: 10/03/22

Chloride	2.83	0.0600	mg/L	3.00	94.2	90-110
Sulfate	13.7	0.300	"	15.0	91.2	90-110

Duplicate (BFJ0020-DUP1)

Source: 2209536-01

Prepared & Analyzed: 10/03/22

Chloride	174	12.0	mg/L	177	1.82	20
Sulfate	2190	60.0	"	2240	2.54	20

Matrix Spike (BFJ0020-MS1)

Source: 2209536-01

Prepared & Analyzed: 10/03/22

Chloride	761	12.0	mg/L	600	177	97.2	80-120
Sulfate	5230	60.0	"	3000	2240	99.4	80-120

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Project: Suckla Brown Unit 17 Header

Project Number: [none]
Project Manager: Levi Kirk

Reported:
10/05/22 15:44

Total Dissolved Solids by SM2540C - Quality Control
Summit Scientific

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

Batch BFJ0019 - General Preparation

Blank (BFJ0019-BLK1)

Prepared: 10/03/22 Analyzed: 10/04/22

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BFJ0019-DUP1)

Source: 2209560-01

Prepared: 10/03/22 Analyzed: 10/04/22

Total Dissolved Solids 904 10.0 mg/L 904 0.00 20

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1675 Broadway
Denver CO, 80202

Project: Suckla Brown Unit 17 Header

Project Number: [none]
Project Manager: Levi Kirk

Reported:
10/05/22 15:44

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