

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 16, 2021

Max Knop
K.P. Kauffman
1675 Broadway
Denver, CO 80202

RE: Suckla

Work Order #2108099

Enclosed are the results of analyses for samples received by Summit Scientific on 08/06/21 13:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Muri Premer". The signature is written in a cursive style with a large initial "M" and a long, sweeping underline.

Muri Premer For Paul Shrewsbury
President



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla
Project Number: [none]
Project Manager: Max Knop

Reported:
08/16/21 12:55

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2	2108099-01	Water	08/06/21 08:45	08/06/21 13:20
MW-4	2108099-02	Water	08/06/21 09:30	08/06/21 13:20

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S₂

2108099

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Page (of)

Client: KPK Project Manager: Max Knop
 Address: 1075 Broadway E-Mail: mknop@kpk.com
 City/State/Zip: Denver, CO 80202
 Phone: 3-825-4822 Project Name: SUCKLA
 Sampler Name: Miko Hattel (303-517-6551) Project Number:

Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions		
				HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other								
MW-2	9/6/21	845	4				XX	X					X	X					
MW-4	9/6/21	930	3				XX	X					X	X					

Relinquished by: <u>Miko Hattel</u> Date/Time: <u>9/6/21</u>	Received by: <u>Will Lohr</u> Date/Time: <u>9/6/21 1320</u>	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: <u>5.1</u> Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Notes: PDF to Miko Hattel mhattel@msa.com
Relinquished by:	Received by:		
Relinquished by:	Received by:		

Sample Receipt Checklist

S2 Work Order 2108099

Client: KPK Client Project ID: SUCKIA

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

Matrix (check all that apply): Air Soil/Solid Water Other: _____
(Describe)

Temp (°C)	<u>5.1</u>
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Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on ice</u>
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"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<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"/>	
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"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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

PK
Custodian Printed Name or Initials

Will Sal...
Signature of Custodian

8/6/21
Date/Time



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla
Project Number: [none]
Project Manager: Max Knop

Reported:
08/16/21 12:55

MW-2
2108099-01 (Water)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/06/21 08:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	310	10		ug/l	10	BEH0172	08/11/21	08/12/21	EPA 8260B	
Toluene	ND	1.0		"	1	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	6.4	2.0		"	"	"	"	"	"	
Naphthalene	83	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	96	1.0		"	"	"	"	"	"	

Date Sampled: **08/06/21 08:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	76.9 %			23-173		"	"	"	"	
Surrogate: Toluene-d8	92.9 %			20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	93.2 %			21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **08/06/21 08:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	213	12.0		mg/L	200	BEH0125	08/09/21	08/10/21	EPA 300.0	
Sulfate	1600	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **08/06/21 08:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	3690	10.0		mg/L	1	BEH0161	08/11/21	08/11/21	SM2540C	

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K.P. Kauffman
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Project: Suckla
Project Number: [none]
Project Manager: Max Knop

Reported:
08/16/21 12:55

MW-4
2108099-02 (Water)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/06/21 09:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	330	10		ug/l	10	BEH0172	08/11/21	08/12/21	EPA 8260B	
Toluene	17	1.0		"	1	"	"	"	"	
Ethylbenzene	5.8	1.0		"	"	"	"	"	"	
Xylenes (total)	19	2.0		"	"	"	"	"	"	
Naphthalene	19	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	6.4	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	2.1	1.0		"	"	"	"	"	"	

Date Sampled: **08/06/21 09:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>		81.3 %		23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.0 %		20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		91.1 %		21-167		"	"	"	"	

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Reported:
08/16/21 12:55

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BEH0172 - EPA 5030 Water MS

Blank (BEH0172-BLK1)

Prepared & Analyzed: 08/11/21

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	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	10.4		"	13.3		77.9		23-173			
<i>Surrogate: Toluene-d8</i>	13.0		"	13.3		97.5		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	11.7		"	13.3		87.9		21-167			

LCS (BEH0172-BS1)

Prepared & Analyzed: 08/11/21

Benzene	36.6	1.0	ug/l	33.3		110		51-132			
Toluene	39.7	1.0	"	33.3		119		51-138			
Ethylbenzene	36.1	1.0	"	33.3		108		58-146			
m,p-Xylene	96.1	2.0	"	66.7		144		57-144			
o-Xylene	38.9	1.0	"	33.3		117		53-146			
Naphthalene	31.5	1.0	"	33.3		94.6		70-130			
1,2,4-Trimethylbenzene	32.0	1.0	"	33.3		96.1		70-130			
1,3,5-Trimethylbenzene	31.6	1.0	"	33.3		95.0		70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	10.3		"	13.3		77.3		23-173			
<i>Surrogate: Toluene-d8</i>	12.9		"	13.3		96.8		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	11.9		"	13.3		89.3		21-167			

Matrix Spike (BEH0172-MS1)

Source: 2108158-03

Prepared & Analyzed: 08/11/21

Benzene	36.7	1.0	ug/l	33.3	ND	110		34-141			
Toluene	31.8	1.0	"	33.3	ND	95.4		27-151			
Ethylbenzene	35.4	1.0	"	33.3	ND	106		29-160			
m,p-Xylene	94.3	2.0	"	66.7	2.21	138		20-166			
o-Xylene	36.8	1.0	"	33.3	ND	110		33-159			
Naphthalene	36.2	1.0	"	33.3	ND	109		70-130			
1,2,4-Trimethylbenzene	41.0	1.0	"	33.3	3.01	114		70-130			
1,3,5-Trimethylbenzene	30.4	1.0	"	33.3	2.81	82.9		70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	10.9		"	13.3		81.9		23-173			
<i>Surrogate: Toluene-d8</i>	13.2		"	13.3		99.2		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	12.5		"	13.3		93.8		21-167			

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
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Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BEH0172 - EPA 5030 Water MS

Matrix Spike Dup (BEH0172-MSD1)	Source: 2108158-03			Prepared & Analyzed: 08/11/21						
Benzene	35.9	1.0	ug/l	33.3	ND	108	34-141	2.09	30	
Toluene	40.9	1.0	"	33.3	ND	123	27-151	25.0	30	
Ethylbenzene	35.4	1.0	"	33.3	ND	106	29-160	0.00	30	
m,p-Xylene	93.9	2.0	"	66.7	2.21	138	20-166	0.425	30	
o-Xylene	37.6	1.0	"	33.3	ND	113	33-159	2.18	30	
Naphthalene	38.6	1.0	"	33.3	ND	116	70-130	6.34	30	
1,2,4-Trimethylbenzene	31.7	1.0	"	33.3	3.01	86.1	70-130	25.7	30	
1,3,5-Trimethylbenzene	30.4	1.0	"	33.3	2.81	82.6	70-130	0.296	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>11.2</i>		<i>"</i>	<i>13.3</i>		<i>84.2</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.0</i>		<i>"</i>	<i>13.3</i>		<i>97.6</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>12.7</i>		<i>"</i>	<i>13.3</i>		<i>95.6</i>	<i>21-167</i>			

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1675 Broadway
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Reported:
08/16/21 12:55

Anions by EPA Method 300.0 - Quality Control
Summit Scientific

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

Batch BEH0125 - General Preparation

Blank (BEH0125-BLK1)

Prepared: 08/09/21 Analyzed: 08/10/21

Chloride	ND	0.0600	mg/L						
Sulfate	ND	0.300	"						

LCS (BEH0125-BS1)

Prepared: 08/09/21 Analyzed: 08/10/21

Chloride	2.97	0.0600	mg/L	3.00	98.9	90-110		
Sulfate	14.0	0.300	"	15.0	93.7	90-110		

Duplicate (BEH0125-DUP1)

Source: 2107464-31

Prepared: 08/09/21 Analyzed: 08/10/21

Chloride	487	12.0	mg/L		530		8.57	20
Sulfate	707	60.0	"		732		3.45	20

Matrix Spike (BEH0125-MS1)

Source: 2107464-31

Prepared: 08/09/21 Analyzed: 08/10/21

Chloride	1150	12.0	mg/L	600	530	104	80-120	
Sulfate	4290	60.0	"	3000	732	119	80-120	

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 1675 Broadway
 Denver CO, 80202

Project: Suckla
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 08/16/21 12:55

Total Dissolved Solids by SM2540C - Quality Control
Summit Scientific

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

Batch BEH0161 - General Preparation

Blank (BEH0161-BLK1)

Prepared & Analyzed: 08/11/21

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BEH0161-DUP1)

Source: 2108097-01

Prepared & Analyzed: 08/11/21

Total Dissolved Solids 860 10.0 mg/L 861 0.163 20

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla
Project Number: [none]
Project Manager: Max Knop

Reported:
08/16/21 12:55

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