

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 14, 2019

Susana Lara-Mesa

K.P. Kauffman

1675 Broadway

Denver, CO 80202

RE: Grant Investigation

Enclosed are the results of analyses for samples received by Summit Scientific on 01/07/19 13:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink on a light blue background. The signature is written in a cursive style and reads "Muri Premier".

Muri Premier For Ben Shrewsbury

Laboratory Manager



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Grant Investigation

Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
01/14/19 14:29

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
001	1901074-01	Soil	01/07/19 11:00	01/07/19 13:40
002	1901074-02	Water	01/07/19 11:00	01/07/19 13:40

Summit Scientific

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1901074

Summit Scientific

S₂

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

Page 1 of 1

Client: KP Kauffman

Project Manager: Susi Lara-mesa

Address:

E-Mail: slaramesa@kpk.com

City/State/Zip:

Phone:

Project Name: Grant Investigation

Sampler Name: Nick Eagon

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions	
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	TPH/DO/EC	BTEX								
1	001	1.7.19	1100	2			/			/				X	X							
2	002	1.7.19	1100	4			/		/						X							
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Relinquished by: <u>Nick Eagon</u>	Date/Time: <u>1-7-18</u>	Received by: <u>[Signature]</u>	Date/Time: <u>1.7.19</u> <u>1340</u>	Turn Around Time (Check) Same Day <u> </u> 72 hours <u> </u> 24 hours <u> </u> Standard <u> / </u> 48 hours <u> </u>	Notes:
Relinquished by:	Date/Time: <u>13:40</u>	Received by:	Date/Time:	Sample Integrity:	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Temperature Upon Receipt: <u>10.2</u> Samples Intact: <u>Yes</u> No	

Sample Receipt Checklist

S2 Work Order 1921078

Client: KP Kauffman Client Project ID: Grant Investigation

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

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

Temp (°C)	<u>18.2</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"/>	
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 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, 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.

WP
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

1.7.19 1355
Date/Time



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Grant Investigation

Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
01/14/19 14:29

001
1901074-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/19 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1901071	01/08/19	01/10/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/07/19 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/07/19 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1901072	01/08/19	01/09/19	EPA 8015M	

Date Sampled: **01/07/19 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		91.2 %	30-150		"	"	"	"	

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Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
01/14/19 14:29

002

1901074-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/19 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1901099	01/09/19	01/12/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **01/07/19 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		97.3 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

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Denver CO, 80202

Project: Grant Investigation

Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
01/14/19 14:29

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 1901071 - EPA 5030 Soil MS

Blank (1901071-BLK1)

Prepared: 01/08/19 Analyzed: 01/10/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0389		"	0.0400		97.4	23-173			
Surrogate: Toluene-d8	0.0406		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.5	21-167			

LCS (1901071-BS1)

Prepared: 01/08/19 Analyzed: 01/10/19

Benzene	0.125	0.0020	mg/kg	0.100		125	70-130			
Toluene	0.122	0.0050	"	0.100		122	70-130			
Ethylbenzene	0.103	0.0050	"	0.100		103	70-130			
m,p-Xylene	0.242	0.010	"	0.200		121	70-130			
o-Xylene	0.115	0.0050	"	0.100		115	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0388		"	0.0400		96.9	23-173			
Surrogate: Toluene-d8	0.0416		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0382		"	0.0400		95.5	21-167			

Matrix Spike (1901071-MS1)

Source: 1901074-01

Prepared: 01/08/19 Analyzed: 01/10/19

Benzene	0.112	0.0020	mg/kg	0.100	ND	112	70-130			
Toluene	0.109	0.0050	"	0.100	ND	109	70-130			
Ethylbenzene	0.119	0.0050	"	0.100	ND	119	70-130			
m,p-Xylene	0.214	0.010	"	0.200	ND	107	70-130			
o-Xylene	0.106	0.0050	"	0.100	ND	106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0378		"	0.0400		94.4	23-173			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.4	21-167			

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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 1901071 - EPA 5030 Soil MS

Matrix Spike Dup (1901071-MSD1)		Source: 1901074-01		Prepared: 01/08/19 Analyzed: 01/10/19						
Benzene	0.0984	0.0020	mg/kg	0.100	ND	98.4	70-130	13.2	30	
Toluene	0.0942	0.0050	"	0.100	ND	94.2	70-130	14.9	30	
Ethylbenzene	0.0998	0.0050	"	0.100	ND	99.8	70-130	17.7	30	
m,p-Xylene	0.180	0.010	"	0.200	ND	90.1	70-130	17.3	30	
o-Xylene	0.0875	0.0050	"	0.100	ND	87.5	70-130	18.9	30	
Surrogate: 1,2-Dichloroethane-d4		0.0368	"	0.0400		92.0	23-173			
Surrogate: Toluene-d8		0.0399	"	0.0400		99.7	20-170			
Surrogate: 4-Bromofluorobenzene		0.0398	"	0.0400		99.6	21-167			

Batch 1901099 - EPA 5030 Water MS

Blank (1901099-BLK1)		Prepared: 01/09/19 Analyzed: 01/10/19								
Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4		14.2	"	13.2		107	23-173			
Surrogate: Toluene-d8		13.6	"	13.3		102	20-170			
Surrogate: 4-Bromofluorobenzene		12.1	"	13.3		90.8	21-167			

LCS (1901099-BS1)		Prepared: 01/09/19 Analyzed: 01/10/19								
Benzene	39.5	1.0	ug/l	33.3		119	70-130			
Toluene	42.4	1.0	"	33.3		127	70-130			
Ethylbenzene	39.6	1.0	"	33.3		119	70-130			
m,p-Xylene	77.9	2.0	"	66.7		117	70-130			
o-Xylene	37.5	1.0	"	33.3		113	70-130			
Surrogate: 1,2-Dichloroethane-d4		13.9	"	13.2		105	23-173			
Surrogate: Toluene-d8		14.4	"	13.3		108	20-170			
Surrogate: 4-Bromofluorobenzene		13.1	"	13.3		98.0	21-167			

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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 1901099 - EPA 5030 Water MS

Matrix Spike (1901099-MS1)		Source: 1901100-01			Prepared: 01/09/19 Analyzed: 01/10/19					
Benzene	38.6	1.0	ug/l	33.3	ND	116	70-130			
Toluene	43.5	1.0	"	33.3	ND	130	70-130			
Ethylbenzene	139	1.0	"	33.3	142	NR	70-130			QM-07
m,p-Xylene	452	2.0	"	66.7	ND	678	70-130			QM-07
o-Xylene	86.0	1.0	"	33.3	61.3	73.9	70-130			
Surrogate: 1,2-Dichloroethane-d4		14.6	"	13.2		111	23-173			
Surrogate: Toluene-d8		14.2	"	13.3		106	20-170			
Surrogate: 4-Bromofluorobenzene		12.6	"	13.3		94.8	21-167			
Matrix Spike Dup (1901099-MSD1)		Source: 1901100-01			Prepared: 01/09/19 Analyzed: 01/10/19					
Benzene	40.3	1.0	ug/l	33.3	ND	121	70-130	4.26	30	
Toluene	44.1	1.0	"	33.3	ND	132	70-130	1.33	30	QM-07
Ethylbenzene	148	1.0	"	33.3	142	18.8	70-130	6.27	30	QM-07
m,p-Xylene	485	2.0	"	66.7	ND	727	70-130	7.08	30	QM-07
o-Xylene	89.5	1.0	"	33.3	61.3	84.5	70-130	4.00	30	
Surrogate: 1,2-Dichloroethane-d4		15.1	"	13.2		115	23-173			
Surrogate: Toluene-d8		14.1	"	13.3		106	20-170			
Surrogate: 4-Bromofluorobenzene		13.1	"	13.3		98.1	21-167			

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Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1901072 - EPA 3550A

Blank (1901072-BLK1)

Prepared: 01/08/19 Analyzed: 01/09/19

C10-C28 (DRO) ND 50 mg/kg

LCS (1901072-BS1)

Prepared: 01/08/19 Analyzed: 01/09/19

C10-C28 (DRO) 557 50 mg/kg 500 111 70-130

Matrix Spike (1901072-MS1)

Source: 1901074-01

Prepared: 01/08/19 Analyzed: 01/09/19

C10-C28 (DRO) 569 50 mg/kg 500 11.0 112 70-130

Matrix Spike Dup (1901072-MSD1)

Source: 1901074-01

Prepared: 01/08/19 Analyzed: 01/09/19

C10-C28 (DRO) 554 50 mg/kg 500 11.0 109 70-130 2.64 20

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Project: Grant Investigation

Project Number: [none]
Project Manager: Susana Lara-Mesa

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01/14/19 14:29

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
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