

# Summit Scientific

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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 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 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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# Summit Scientific

S<sub>2</sub>

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

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 Egan 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	TPH/DO/GR	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 Egan</u> Date/Time: <u>1-7-19</u>	Received by: <u>[Signature]</u> Date/Time: <u>1.7.19 1340</u>	Turn Around Time (Check) Same Day _____ 72 hours _____ 24 hours _____ Standard <input checked="" type="checkbox"/> 48 hours _____ Sample Integrity: Temperature Upon Receipt: <u>10.2</u> Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	Notes:
Relinquished by: _____ Date/Time: <u>13:40</u>	Received by: _____ Date/Time: _____		
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____		

**Sample Receipt Checklist**

S2 Work Order 1921074

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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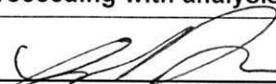
Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ? 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"/>			
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact <sup>(1)</sup> ?			<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?			<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>		<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, H2SO4, NaOH, HNO3, ect			<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? Record the pH in Comments.			<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?			<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.

WP  
Custodian Printed Name or Initials

  
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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 1675 Broadway  
 Denver CO, 80202

Project: Grant Investigation

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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1675 Broadway  
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	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

#### 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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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	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

**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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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	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

**Batch 1901099 - EPA 5030 Water MS**

<b>Matrix Spike (1901099-MS1)</b>	<b>Source: 1901100-01</b>			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				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>14.6</i>		<i>"</i>	<i>13.2</i>		<i>111</i>	<i>23-173</i>				
<i>Surrogate: Toluene-d8</i>	<i>14.2</i>		<i>"</i>	<i>13.3</i>		<i>106</i>	<i>20-170</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>12.6</i>		<i>"</i>	<i>13.3</i>		<i>94.8</i>	<i>21-167</i>				

<b>Matrix Spike Dup (1901099-MSD1)</b>	<b>Source: 1901100-01</b>			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		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>15.1</i>		<i>"</i>	<i>13.2</i>		<i>115</i>	<i>23-173</i>				
<i>Surrogate: Toluene-d8</i>	<i>14.1</i>		<i>"</i>	<i>13.3</i>		<i>106</i>	<i>20-170</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.1</i>		<i>"</i>	<i>13.3</i>		<i>98.1</i>	<i>21-167</i>				

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1675 Broadway  
Denver CO, 80202

Project: Grant Investigation

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

**Reported:**  
01/14/19 14:29

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

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

**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