

# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

August 31, 2017

Jeff Freitas

Top Operating Co

3609 South Wadsworth BLVD Suite 340

Lakewood, CO 80235

RE: SGU-MW

Enclosed are the results of analyses for samples received by Summit Scientific on 08/29/17 16:12. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ben Shrewsbury', with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury

Laboratory Manager



Top Operating Co  
3609 South Wadsworth BLVD Suite 340  
Lakewood CO, 80235

Project: SGU-MW  
Project Number: [none]  
Project Manager: Jeff Freitas

**Reported:**  
08/31/17 19:53

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SGU-MW01	1708261-01	Water	08/29/17 14:19	08/29/17 16:12
SGU-MW05	1708261-02	Water	08/29/17 14:25	08/29/17 16:12
SGU-MW04	1708261-03	Water	08/29/17 14:35	08/29/17 16:12
SGU-MW02	1708261-04	Water	08/29/17 14:46	08/29/17 16:12
SGU-MW03	1708261-05	Water	08/29/17 14:58	08/29/17 16:12

Summit Scientific

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# Summit Scientific

1708261

S<sub>2</sub>

741 Corporate Circle, Suite J ♦ Golden, Colorado 80401

303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: Top Operating Co. Project Manager: Jeff Freitas  
 Address: \_\_\_\_\_ E-Mail: jeff.freitas@topoperating.com  
 City/State/Zip: Lakewood CO 80235  
 Phone: (303) 727-9915 Fax: \_\_\_\_\_ Project Name: SGU-MW  
 Sampler Name: \_\_\_\_\_ Project Number: \_\_\_\_\_

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)									
1	SGU-MW Ø1	8/29/17	14:19	3	X				X					BTEX							
2	SGU-MW Ø5	8/29/17	14:25	3	X				X					X							
3	SGU-MW Ø4	8/29/17	14:35	3	X				X					X							
4	SGU-MW Ø2	8/29/17	14:46	3	X				X					X							
5	SGU-MW Ø3	8/29/17	14:58	3	X				X					X							
6																					
7																					
8																					
9																					
10																					

Relinquished by: <u>[Signature]</u>	Date/Time: <u>8/29/17 16:12</u>	Received by: <u>[Signature]</u>	Date/Time: <u>8/29/17 16:12</u>	<b>Turn Around Time</b> (Check) Same Day _____ 72 hours _____ 24 hours _____ Standard <u>X</u> 48 hours _____ <b>Sample Integrity:</b> Temperature Upon Receipt: <u>9.2</u> Intact: <u>(Yes)</u> No	<b>Notes:</b>
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____		
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____		

## Sample Receipt Checklist

1708261

S2 Work Order: \_\_\_\_\_

Client: top operating Client Project ID: SG-UP - MCShipped Via: \_\_\_\_\_ Airbill #: \_\_\_\_\_  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)Matrix (check all that apply):      Air      Soil/Solid ✓ Water      Other: \_\_\_\_\_  
(Describe)

Cooler ID					
Temp (°C)	9.2				

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.				
Were all samples received intact <sup>(1)</sup> ?	✓			
Was adequate sample volume provided <sup>(1)</sup> ?	✓			
If custody seals are present, are they intact <sup>(1)</sup> ?			✓	
Are short holding time analytes or samples with HTs due within 48 hours present?		✓		
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	✓			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	✓			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	✓			
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	✓			
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>		✓		
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ?	✓			HCl
Note the type of preservative in the Comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , ect				
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ?			✓	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			✓	

Additional Comments (if any):

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.MC  
Custodian Printed NameMC  
Signature or Initials of Custodian8/29/17  
Date/Time





Top Operating Co  
3609 South Wadsworth BLVD Suite 340  
Lakewood CO, 80235

Project: SGU-MW  
Project Number: [none]  
Project Manager: Jeff Freitas

**Reported:**  
08/31/17 19:53

**SGU-MW01**  
**1708261-01 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/29/17 14:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1708284	08/31/17	08/31/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **08/29/17 14:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		112 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		98.6 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.3 %	45-146		"	"	"	"	

Summit Scientific

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3609 South Wadsworth BLVD Suite 340  
Lakewood CO, 80235

Project: SGU-MW  
Project Number: [none]  
Project Manager: Jeff Freitas

**Reported:**  
08/31/17 19:53

**SGU-MW05**  
**1708261-02 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/29/17 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1708284	08/31/17	08/31/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **08/29/17 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		99.2 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.3 %	45-146		"	"	"	"	

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Project: SGU-MW  
Project Number: [none]  
Project Manager: Jeff Freitas

**Reported:**  
08/31/17 19:53

**SGU-MW04**  
**1708261-03 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/29/17 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1708284	08/31/17	08/31/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **08/29/17 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		98.7 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.5 %	45-146		"	"	"	"	

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Project: SGU-MW  
Project Number: [none]  
Project Manager: Jeff Freitas

**Reported:**  
08/31/17 19:53

**SGU-MW02**  
**1708261-04 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/29/17 14:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1708284	08/31/17	08/31/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **08/29/17 14:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		98.7 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.4 %	45-146		"	"	"	"	

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Project: SGU-MW  
Project Number: [none]  
Project Manager: Jeff Freitas

**Reported:**  
08/31/17 19:53

**SGU-MW03**  
**1708261-05 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **08/29/17 14:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1708284	08/31/17	08/31/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **08/29/17 14:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		99.5 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	45-146		"	"	"	"	

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Project: SGU-MW  
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Project Manager: Jeff Freitas

Reported:  
08/31/17 19:53

## 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 1708284 - EPA 5030 Water MS

##### Blank (1708284-BLK1)

Prepared & Analyzed: 08/30/17

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	14.4		"	13.3		108	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		99.4	45-149			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		100	45-146			

##### LCS (1708284-BS1)

Prepared & Analyzed: 08/30/17

Benzene	36.8	1.0	ug/l	33.3		110	51-132			
Toluene	36.6	1.0	"	33.3		110	51-138			
Ethylbenzene	35.4	1.0	"	33.1		107	58-146			
m,p-Xylene	65.2	2.0	"	66.5		97.9	57-144			
o-Xylene	33.0	1.0	"	32.7		101	53-146			
Surrogate: 1,2-Dichloroethane-d4	13.9		"	13.3		104	37-154			
Surrogate: Toluene-d8	14.8		"	13.3		111	45-149			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		100	45-146			

##### Matrix Spike (1708284-MS1)

Source: 1708261-01

Prepared & Analyzed: 08/30/17

Benzene	39.0	1.0	ug/l	33.3	ND	117	34-141			
Toluene	39.1	1.0	"	33.3	ND	117	27-151			
Ethylbenzene	40.3	1.0	"	33.1	ND	122	29-160			
m,p-Xylene	73.6	2.0	"	66.5	ND	111	20-166			
o-Xylene	37.1	1.0	"	32.7	ND	114	33-159			
Surrogate: 1,2-Dichloroethane-d4	14.8		"	13.3		111	37-154			
Surrogate: Toluene-d8	14.0		"	13.3		105	45-149			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		99.8	45-146			

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Project: SGU-MW  
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Project Manager: Jeff Freitas

**Reported:**  
08/31/17 19:53

**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 1708284 - EPA 5030 Water MS**

Matrix Spike Dup (1708284-MSD1)	Source: 1708261-01			Prepared & Analyzed: 08/30/17						
Benzene	40.0	1.0	ug/l	33.3	ND	120	34-141	2.63	32	
Toluene	39.7	1.0	"	33.3	ND	119	27-151	1.65	25	
Ethylbenzene	41.8	1.0	"	33.1	ND	126	29-160	3.61	50	
m,p-Xylene	76.8	2.0	"	66.5	ND	115	20-166	4.22	36	
o-Xylene	38.4	1.0	"	32.7	ND	117	33-159	3.39	26	
Surrogate: 1,2-Dichloroethane-d4	15.4		"	13.3		115	37-154			
Surrogate: Toluene-d8	13.6		"	13.3		102	45-149			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		98.8	45-146			

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Project: SGU-MW  
Project Number: [none]  
Project Manager: Jeff Freitas

**Reported:**  
08/31/17 19:53

### 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