

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 08, 2019

Heather Shideman

Extraction Oil&Gas

370 17th Street Suite 5300

Denver, CO 80202

RE: Trip_Blank/GWA_Coyote_Trails

Work Order # 1907018

Enclosed are the results of analyses for samples received by Summit Scientific on 07/01/19 16:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "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



Extraction Oil&Gas
370 17th Street Suite 5300
Denver CO, 80202

Project: Trip_Blank/GWA_Coyote_Trails

Project Number: 17031 Code 961.15

Project Manager: Heather Shideman

Reported:
07/08/19 13:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BW_Front_Range_Landfill_Surface_Water_SW_Trip_Blank	1907018-01	Water	07/01/19 13:45	07/01/19 16:50

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

1907018

Summit Scientific

S₂

741 Corporate Circle, Suite J ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933

Client: Extraction Oil and Gas (XOG)	Report to: Apex Companies, LLC	Project Manager: Heather Shideman
Address: 2234 117th Ave, Ste 106		E-Mail: Rochelle.Carlisle@apexc.com, Heather.Shideman@apexc.com
City/State/Zip: Greeley, CO 80634		cc: bford@extractionog.com
Phone: (970) 576-3446		Project Name: Trip_Blank/GWA_Coyote_Trails
Sampler Name: <i>Jesse Song</i>		Project No.: AFE # 17031; Code 961.15 Facility ID 757431

ID	Field ID / Point of Collection	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested				Special Instructions	
					HCl	HNO3	None	Other (Specify)	Surface Water	Soil	Air-Canister #	Other (Specify)	BTEX				
1	BW_Front_Range_Landfill_Surface_Water_SW_Trip_Blank	7/1/19	1345	1					X				X				Sample Frequency: Q3
Relinquished by: <i>Jesse Song</i>		Date/Time: 7/1/19 4:50 PM		Received by: <i>[Signature]</i>		Date/Time: 7-1-19 16:50		Turn Around Time (Check)				Notes:					
Relinquished by:		Date/Time:		Received by:		Date/Time:		Same Day <input type="checkbox"/> 72 hours									
Relinquished by:		Date/Time:		Received by:		Date/Time:		24 hours <input checked="" type="checkbox"/> Standard									
Relinquished by:		Date/Time:		Received by:		Date/Time:		48 hours <input type="checkbox"/>									
Relinquished by:		Date/Time:		Received by:		Date/Time:		Sample Integrity:				Temperature Upon Receipt: 13.1					
Relinquished by:		Date/Time:		Received by:		Date/Time:		Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No									

Sample Receipt Checklist

S2 Work Order 1907018

Client: Apex / XOG Client Project ID: Trip-Blank/GWA-Coyote-Trails

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

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

Temp (°C)	13.1°
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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.	✓			in ice
Were all samples received intact ⁽¹⁾ ?	✓			
Was adequate sample volume provided ⁽¹⁾ ?	✓			
If custody seals are present, are they intact ⁽¹⁾ ?			✓	
Are samples with holding times due within 48 hours sample due within 48 hours present?			✓	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	✓			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	✓			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	✓			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		✓		
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			✓	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	

Additional Comments (if any):

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

AT
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

7-1-19 16:56
Date/Time



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BW_Front_Range_Landfill_Surface_Water_SW_Trip_Blank
1907018-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/01/19 13:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1907026	07/02/19	07/04/19	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
m,p-Xylene	ND	2.0		"	"	"	"	"	"	
o-Xylene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **07/01/19 13:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		87.3 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		95.4 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.5 %		21-167		"	"	"	"	

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Project Number: 17031 Code 961.15
Project Manager: Heather Shideman

Reported:
07/08/19 13:59

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 1907026 - EPA 5030 Water MS

Blank (1907026-BLK1)

Prepared: 07/02/19 Analyzed: 07/04/19

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
m,p-Xylene	ND	2.0	"							
o-Xylene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	12.3		"	13.3		92.1		23-173		
Surrogate: Toluene-d8	12.8		"	13.3		96.2		20-170		
Surrogate: 4-Bromofluorobenzene	12.4		"	13.3		93.2		21-167		

LCS (1907026-BS1)

Prepared: 07/02/19 Analyzed: 07/04/19

Benzene	27.3	1.0	ug/l	33.3		81.9		51-132		
Toluene	30.1	1.0	"	33.3		90.3		51-138		
Ethylbenzene	32.0	1.0	"	33.3		96.0		58-146		
m,p-Xylene	64.1	2.0	"	66.7		96.1		57-144		
o-Xylene	31.1	1.0	"	33.3		93.4		53-146		
Surrogate: 1,2-Dichloroethane-d4	12.7		"	13.3		95.2		23-173		
Surrogate: Toluene-d8	13.1		"	13.3		98.2		20-170		
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.7		21-167		

Matrix Spike (1907026-MS1)

Source: 1906399-03

Prepared: 07/02/19 Analyzed: 07/04/19

Benzene	29.6	1.0	ug/l	33.3	2.34	81.9		34-141		
Toluene	30.1	1.0	"	33.3	ND	90.3		27-151		
Ethylbenzene	32.0	1.0	"	33.3	ND	96.1		29-160		
m,p-Xylene	64.5	2.0	"	66.7	ND	96.7		20-166		
o-Xylene	30.7	1.0	"	33.3	ND	92.1		33-159		
Surrogate: 1,2-Dichloroethane-d4	13.2		"	13.3		98.6		23-173		
Surrogate: Toluene-d8	13.1		"	13.3		98.1		20-170		
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.8		21-167		

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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 1907026 - EPA 5030 Water MS

Matrix Spike Dup (1907026-MSD1)

Source: 1906399-03

Prepared: 07/02/19 Analyzed: 07/04/19

Benzene	29.6	1.0	ug/l	33.3	2.34	81.7	34-141	0.237	32	
Toluene	30.3	1.0	"	33.3	ND	90.9	27-151	0.728	25	
Ethylbenzene	32.3	1.0	"	33.3	ND	97.0	29-160	0.901	50	
m,p-Xylene	65.2	2.0	"	66.7	ND	97.7	20-166	1.06	36	
o-Xylene	31.3	1.0	"	33.3	ND	94.0	33-159	2.03	26	
Surrogate: 1,2-Dichloroethane-d4	13.7		"	13.3		103	23-173			
Surrogate: Toluene-d8	12.8		"	13.3		96.1	20-170			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.1	21-167			

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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