



75 Suttle Street
Durango, CO 81303
970.247.4220 Phone
970.247.4227 Fax
www.greenanalytical.com

01 May 2020

Steve Moskal
BP America
1199 Main Ave Suite 101
Durango, CO 81303
RE: pH, SAR, EC, B, As

Enclosed are the results of analyses for samples received by the laboratory on 04/24/20 12:50.
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads 'Debbie Zufelt'.

Debbie Zufelt
Reports Manager

All accredited analytes contained in this report are denoted by an asterisk (*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. All of our certifications can be viewed at <http://greenanalytical.com/certifications/>

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8.



BP America
1199 Main Ave Suite 101
Durango CO, 81303

Project: pH, SAR, EC, B, As
Project Name / Number: Tiffany Gathering
Project Manager: Steve Moskal

Reported:
05/01/20 12:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
SS05	2004167-01	Solid	04/24/20 11:05	04/24/20 12:50	
SS06	2004167-02	Solid	04/24/20 11:20	04/24/20 12:50	
SS07	2004167-03	Solid	04/24/20 11:45	04/24/20 12:50	

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BP America 1199 Main Ave Suite 101 Durango CO, 81303	Project: pH, SAR, EC, B, As Project Name / Number: Tiffany Gathering Project Manager: Steve Moskal	Reported: 05/01/20 12:32
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SS05

2004167-01 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Saturated Paste Extraction

Calcium	306	0.200	0.033	mg/L	2	04/30/20 13:13	EPA200.7		AES
Conductivity	1960			umho/cm @ 25.0°C	1	04/28/20 13:40	ASA#9 10-3.3		VJW
Magnesium	46.6	0.200	0.047	mg/L	2	04/29/20 17:27	EPA200.7		AES
pH	4.70			pH Units	1	04/28/20 12:40	ASA#9 12-2.6		VJW
SAR	1.20			No Unit	1	04/29/20 17:26	Calculation		AES
Sodium	85.2	2.00	0.201	mg/L	2	04/29/20 17:26	EPA200.7		AES

Total Metals by ICPMS

Arsenic	2.74	1.00	0.0807	mg/kg dry	1000	04/29/20 14:09	6020A		AES
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Hot Water Extractable

Boron	<1.20	1.20	0.059	mg/L	4	04/29/20 17:54	EPA200.7		AES
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SS06

2004167-02 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Saturated Paste Extraction									
Calcium	197	0.200	0.033	mg/L	2	04/29/20 17:36	EPA200.7		AES
Conductivity	1390			umho/cm @ 25.0°C	1	04/28/20 13:40	ASA#9 10-3.3		VJW
Magnesium	26.8	0.200	0.047	mg/L	2	04/29/20 17:36	EPA200.7		AES
pH	6.85			pH Units	1	04/28/20 12:40	ASA#9 12-2.6		VJW
SAR	1.15			No Unit	1	04/29/20 17:36	Calculation		AES
Sodium	65.0	2.00	0.201	mg/L	2	04/29/20 17:36	EPA200.7		AES
Total Metals by ICPMS									
Arsenic	7.86	1.00	0.0807	mg/kg dry	1000	04/29/20 14:19	6020A		AES
Hot Water Extractable									
Boron	<1.20	1.20	0.059	mg/L	4	04/29/20 17:56	EPA200.7		AES

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SS07

2004167-03 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Saturated Paste Extraction

Calcium	48.5	0.100	0.017	mg/L	1	04/29/20 17:39	EPA200.7		AES
Magnesium	10.6	0.100	0.023	mg/L	1	04/29/20 17:39	EPA200.7		AES
SAR	1.01			No Unit	1	04/29/20 17:39	Calculation		AES
Sodium	29.7	1.00	0.101	mg/L	1	04/29/20 17:39	EPA200.7		AES

Total Metals by ICPMS

Arsenic	1.54	1.00	0.0807	mg/kg dry	1000	04/29/20 14:23	6020A		AES
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Saturated Paste Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B200695 - Paste Extract

Blank (B200695-BLK1) Prepared: 04/27/20 Analyzed: 04/30/20

Calcium	ND	0.100	mg/L							
Magnesium	ND	0.100	mg/L							
Sodium	ND	1.00	mg/L							

Duplicate (B200695-DUP1) Source: 2004162-01 Prepared: 04/27/20 Analyzed: 04/30/20

Calcium	183	0.200	mg/L		161			12.9	20	
Magnesium	30.9	0.200	mg/L		27.7			11.0	20	
SAR	0.10		No Unit		0.10			0.00	20	
Sodium	5.60	2.00	mg/L		5.40			3.66	20	

Batch B200696 - Paste Extract

Duplicate (B200696-DUP1) Source: 2004162-01 Prepared: 04/27/20 Analyzed: 04/28/20

pH	5.18		pH Units		5.08			1.95	20	
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Batch B200697 - Paste Extract

Duplicate (B200697-DUP1) Source: 2004162-01 Prepared: 04/27/20 Analyzed: 04/28/20

Conductivity	1020		umho/cm @ 25.0°C		913			11.4	20	
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Total Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B200690 - EPA 3050M

Blank (B200690-BLK1) Prepared: 04/27/20 Analyzed: 04/29/20

Arsenic	ND	0.100	mg/kg dry							
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LCS (B200690-BS1) Prepared: 04/27/20 Analyzed: 04/29/20

Arsenic	4.63	0.100	mg/kg dry	5.00		92.6	80-120			
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LCS Dup (B200690-BSD1) Prepared: 04/27/20 Analyzed: 04/29/20

Arsenic	4.76	0.100	mg/kg dry	5.00		95.1	80-120	2.67	20	
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Hot Water Extractable - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B200694 - Hot Water Soluble Metals Extract

Blank (B200694-BLK1)		Prepared: 04/27/20 Analyzed: 04/29/20								
Boron	ND	1.20	mg/L							
Duplicate (B200694-DUP1)		Source: 2004162-01 Prepared: 04/27/20 Analyzed: 04/29/20								
Boron	0.708	1.20	mg/L		0.691			2.44	200	

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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
*Results reported on as received basis unless designated as dry.
- RPD Relative Percent Difference
- LCS Laboratory Control Sample (Blank Spike)
- RL Report Limit
- MDL Method Detection Limit

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(970) 247-4220 service@greenanalytical.com or dzurfeit@greenanalytical.com
 Fax: (970) 247-4227 75 Suttle St Durango, CO 81303

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: BP America Production Co.

Project Manager: Steve Moskal

Address: 1199 Main Ave Suite 101

City: Durango

Phone #: (505) 330 9179

Additional Report To:

Project Name: Tiffany Gathering

Project Number:

Sampler Name (Print): Emma Millar

FOR LAB USE ONLY

Bill to (if different):

P.O. #:

Company:

Attn:

Address:

City:

State:

Zip:

Fax or Email:

Matrix (check one)

GROUNDWATER

SURFACEWATER

WASTEWATER

PRODUCEDWATER

SOIL

OTHER :

of containers

No preservation (general)

HNO₃

HCl

H₂SO₄

Other:

Other:

ANALYSIS REQUEST

Lab I.D.	Sample Name or Location	Collected		Matrix (check one)						# of containers						ANALYSIS REQUEST				
		Date	Time	GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	OTHER :	No preservation (general)	HNO ₃	HCl	H ₂ SO ₄	Other:	Other:	pH	SAR	EC	boron	arsenic
2064-167-01	SS05	4/24/20	1105					X								X	X	X	X	X
-01	SS06		1120					X								X	X	X	X	X
-03	SS07		1145					X								X	X	X	X	X

PLEASE NOTE: GAL's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by GAL within 30 days after completion. In no event shall GAL be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder.

Relinquished By:

Relinquished By:

Relinquished By:

Relinquished By:

Relinquished By:

Delivered By: (Circle One)

Sampler - UPS - FedEx - Kangaroo - Other:

Date: 04/24/20
Time: 1250

Received By: *Full Ake*

Date:

Time:

Date:

Time:

Temperature at receipt:

13.1/13.2

CHECKED BY:

FH

ADDITIONAL REMARKS:

lose r #01
on ice

Report to State? (Circle)

Yes No

* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.