



30-045-23827

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13 March 2019

Sabre Beebe
BP America
380 Airport Rd.
Durango, CO 81303
RE: API

NMOC
MAR 13 2019
DISTRICT III

Enclosed are the results of analyses for samples received by the laboratory on 02/25/19 12:30.
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script 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.



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BP America	Project: API	
380 Airport Rd.	Project Name / Number: [none]	Reported:
Durango CO, 81303	Project Manager: Sabre Beebe	03/13/19 09:46

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Florance 117	1902141-01	Water	02/25/19 10:20	02/25/19 12:30	

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Project: API
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Project Manager: Sabre Beebe

Reported:
03/13/19 09:46

Florance 117

1902141-01 (Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	145	10.0		mg/L	5	02/28/19	2320 B		JDA
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	5	02/28/19	2320 B		JDA
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	02/28/19	2320 B		JDA
Alkalinity, Total as CaCO ₃ *	145	10.0		mg/L	5	02/28/19	2320 B		JDA
Chloride*	11.9	1.00	0.103	mg/L	1	02/25/19	EPA300.0		AES
Conductivity*	1400	10.0		uS/cm	1	02/26/19	2510 B		JDA
pH*	6.25			pH Units	1	02/26/19	EPA150.1		JDA
Resistivity	714			ohm/cm	1	03/01/19	2510 B		JDA
Total Dissolved Solids*	710	20.0		mg/L	2	02/26/19	EPA160.1		jda
Specific Gravity	1.004	0.8000		No Unit	1	03/01/19	ASTM D1429-03		JDA
Sulfate*	3.95	1.00	0.213	mg/L	1	02/25/19	EPA300.0		AES

Total Recoverable Metals by ICP (E200.7)

Iron*	1060	1.00	0.348	mg/L	20	02/28/19	EPA200.7		AES
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Dissolved Metals by ICP

Hardness	<13.2	13.2	2.19	mg/L	20	02/25/19	2340 B		AES
Barium*	<0.400	0.400	0.042	mg/L	20	02/25/19	EPA200.7		AES
Calcium*	4.69	2.00	0.257	mg/L	20	02/25/19	EPA200.7		AES
Iron*	51.7	1.00	0.553	mg/L	20	02/25/19	EPA200.7		AES
Magnesium*	<2.00	2.00	0.375	mg/L	20	02/25/19	EPA200.7		AES
Manganese*	0.872	0.400	0.054	mg/L	20	02/25/19	EPA200.7		AES
Potassium*	<20.0	20.0	1.91	mg/L	20	02/25/19	EPA200.7		AES
Sodium*	240	20.0	7.34	mg/L	20	02/25/19	EPA200.7		AES
Strontium*	<2.00	2.00	0.057	mg/L	20	02/25/19	EPA200.7		AES

Cation/Anion Balance	80.44
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BP America 380 Airport Rd. Durango CO, 81303	Project: API Project Name / Number: [none] Project Manager: Sabre Beebe	Reported: 03/13/19 09:46
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General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B902178 - General Prep - Wet Chem

Blank (B902178-BLK1)		Prepared & Analyzed: 02/25/19								
Chloride	ND	1.00	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B902178-BS1)		Prepared & Analyzed: 02/25/19								
Chloride	23.7	1.00	mg/L	25.0		94.8	90-110			
Sulfate	24.0	1.00	mg/L	25.0		95.9	90-110			
LCS Dup (B902178-BSD1)		Prepared & Analyzed: 02/25/19								
Chloride	23.6	1.00	mg/L	25.0		94.4	90-110	0.495	20	
Sulfate	23.5	1.00	mg/L	25.0		93.9	90-110	2.08	20	

Batch B902185 - General Prep - Wet Chem

Blank (B902185-BLK1)		Prepared & Analyzed: 02/26/19								
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (B902185-DUP1)		Source: 1902112-01 Prepared & Analyzed: 02/26/19								
Total Dissolved Solids	305	10.0	mg/L		320			4.79	20	
Reference (B902185-SRM1)		Prepared & Analyzed: 02/26/19								
Total Dissolved Solids	415	10.0	mg/L	380		109	85-115			

Batch B902207 - General Prep - Wet Chem

Blank (B902207-BLK1)		Prepared & Analyzed: 02/28/19								
Alkalinity, Total as CaCO3	ND	10.0	mg/L							
LCS (B902207-BS1)		Prepared & Analyzed: 02/28/19								
Alkalinity, Total as CaCO3	102	10.0	mg/L	100		102	85-115			
LCS Dup (B902207-BSD1)		Prepared & Analyzed: 02/28/19								
Alkalinity, Total as CaCO3	100	10.0	mg/L	100		100	85-115	1.98	20	

Batch B903002 - General Prep - Wet Chem

Duplicate (B903002-DUP1)		Source: 1902137-01 Prepared & Analyzed: 03/01/19								
Specific Gravity	1.013	0.8000	No Unit		1.013			0.00	20	

Batch B903004 - General Prep - Wet Chem

Duplicate (B903004-DUP1)		Source: 1902141-01 Prepared & Analyzed: 02/26/19								
Conductivity	1390	10.0	uS/cm		1400			0.715	20	
Reference (B903004-SRM1)		Prepared & Analyzed: 02/26/19								
Conductivity	509	10.0	uS/cm	491		104	90-110.1			

Batch B903008 - General Prep - Wet Chem

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03/13/19 09:46

**General Chemistry - Quality Control
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B903008 - General Prep - Wet Chem (Continued)

Duplicate (B903008-DUP1) Source: 1902141-01 Prepared & Analyzed: 02/26/19

pH	6.28		pH Units	6.25				0.479	20	
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Reference (B903008-SRM1) Prepared & Analyzed: 02/26/19

pH	8.97		pH Units	9.13		98.2	97.8-102.2			
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Total Recoverable Metals by ICP (E200.7) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B902186 - Total Rec. 200.7/200.8/200.2

Blank (B902186-BLK1) Prepared: 02/26/19 Analyzed: 02/28/19

Iron	ND	0.050	mg/L							
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LCS (B902186-BS1) Prepared: 02/26/19 Analyzed: 02/28/19

Iron	4.09	0.050	mg/L	4.00		102	85-115			
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LCS Dup (B902186-BSD1) Prepared: 02/26/19 Analyzed: 02/28/19

Iron	4.12	0.050	mg/L	4.00		103	85-115	0.746	20	
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Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B902176 - Diss. 200.7/200.8

Blank (B902176-BLK1)

Prepared & Analyzed: 02/25/19

Barium	ND	0.020	mg/L
Calcium	ND	0.100	mg/L
Iron	ND	0.050	mg/L
Magnesium	ND	0.100	mg/L
Manganese	ND	0.020	mg/L
Potassium	ND	1.00	mg/L
Sodium	ND	1.00	mg/L
Strontium	ND	0.100	mg/L

LCS (B902176-BS1)

Prepared & Analyzed: 02/25/19

Barium	2.38	0.020	mg/L	2.50	95.4	85-115
Calcium	5.06	0.100	mg/L	5.00	101	85-115
Iron	4.97	0.050	mg/L	5.00	99.5	85-115
Magnesium	25.1	0.100	mg/L	25.0	100	85-115
Manganese	2.44	0.020	mg/L	2.50	97.8	85-115
Potassium	10.3	1.00	mg/L	10.0	103	85-115
Sodium	4.01	1.00	mg/L	4.05	99.0	85-115
Strontium	5.08	0.100	mg/L	5.00	102	85-115

LCS Dup (B902176-BSD1)

Prepared & Analyzed: 02/25/19

Barium	2.37	0.020	mg/L	2.50	94.9	85-115	0.455	20
Calcium	4.96	0.100	mg/L	5.00	99.2	85-115	1.95	20
Iron	4.83	0.050	mg/L	5.00	96.6	85-115	2.92	20
Magnesium	24.5	0.100	mg/L	25.0	98.0	85-115	2.28	20
Manganese	2.40	0.020	mg/L	2.50	96.0	85-115	1.81	20
Potassium	10.6	1.00	mg/L	10.0	106	85-115	2.84	20
Sodium	3.91	1.00	mg/L	4.05	96.7	85-115	2.42	20
Strontium	5.02	0.100	mg/L	5.00	100	85-115	1.25	20

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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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