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15 April 2019

Steve Moskal
BP America
380 Airport Rd.
Durango, CO 81303
RE: Table 910

Enclosed are the results of analyses for samples received by the laboratory on 04/02/19 16:10. The data to follow was performed, in whole or in part, by a subcontract laboratory with an additional report attached.

If you any 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
380 Airport Rd.
Durango CO, 81303

Project: Table 910
Project Name / Number: Leroy McCaw B#1
Project Manager: Steve Moskal

Reported:
04/15/19 12:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
SS01	1904026-01	Solid	04/02/19 12:25	04/02/19 16:10	
SS02	1904026-02	Solid	04/02/19 12:50	04/02/19 16:10	
SS03	1904026-03	Solid	04/02/19 13:25	04/02/19 16:10	
SS04	1904026-04	Solid	04/02/19 15:05	04/02/19 16:10	
WS-01	1904026-05	Water	04/02/19 14:00	04/02/19 16:10	
WS-02	1904026-06	Water	04/02/19 15:00	04/02/19 16:10	

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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SS01

1904026-01 (Solid)

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

% Dry Solids	80.7			%	1	04/05/19	EPA160.3/1684		VJL
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Saturated Paste Extraction

Calcium	35.5	0.100	0.013	mg/L	1	04/12/19	EPA200.7		AES
Conductivity	254			umhos/cm	1	04/12/19	ASA#9 10-3.3		VJL
Magnesium	6.19	0.100	0.019	mg/L	1	04/12/19	EPA200.7		AES
pH	6.66			pH Units	1	04/12/19	ASA#9 12-2.6		VJL
SAR	0.39			No Unit	1	04/12/19	Calculation		AES
Sodium	9.46	1.00	0.367	mg/L	1	04/12/19	EPA200.7		AES

Total Metals by ICP

Barium	452	5.00	0.049	mg/kg dry	100	04/05/19	6010B		AES
Cadmium	<5.00	5.00	0.122	mg/kg dry	100	04/05/19	6010B		AES
Chromium	7.17	5.00	0.075	mg/kg dry	100	04/05/19	6010B		AES
Copper	24.4	5.00	0.117	mg/kg dry	100	04/05/19	6010B		AES
Lead	16.1	10.0	0.576	mg/kg dry	100	04/05/19	6010B		AES
Nickel	10.6	5.00	0.213	mg/kg dry	100	04/05/19	6010B		AES
Selenium	<20.0	20.0	1.42	mg/kg dry	100	04/05/19	6010B		AES
Silver	<1.00	1.00	0.191	mg/kg dry	100	04/05/19	6010B		AES
Zinc	55.2	10.0	0.165	mg/kg dry	100	04/05/19	6010B		AES

Total Metals by ICPMS

Arsenic	2.64	1.00	0.214	mg/kg dry	1000	04/08/19	6020A		AES
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Total Mercury by CVAA

Mercury	<0.0496	0.0496	0.0207	mg/kg dry	200	04/09/19	EPA7471		LLG
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Hot Water Extractable

Boron	<1.20	1.20	0.059	mg/L	4	04/11/19	EPA200.7		AES
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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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SS01

1904026-01 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	0.002	mg/kg	50	04/06/19	8021B		ms
Toluene*	<0.050	0.050	0.002	mg/kg	50	04/06/19	8021B		ms
Ethylbenzene*	<0.050	0.050	0.004	mg/kg	50	04/06/19	8021B		ms
Total Xylenes*	<0.150	0.150	0.010	mg/kg	50	04/06/19	8021B		ms
Total BTEX	<0.300	0.300	0.018	mg/kg	50	04/06/19	8021B		ms

Surrogate: 4-Bromofluorobenzene (PID) 93.8 % 73.3-129 04/06/19 8021B ms

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	5.30	mg/kg	1	04/05/19	8015B		MS
DRO >C10-C28*	<10.0	10.0	1.56	mg/kg	1	04/05/19	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	1.56	mg/kg	1	04/05/19	8015B		MS

Surrogate: 1-Chlorooctane 95.1 % 41-142 04/05/19 8015B MS

Surrogate: 1-Chlorooctadecane 90.1 % 37.6-147 04/05/19 8015B MS

Polynuclear Aromatic Compounds by GC/MS

Naphthalene*	<0.014	0.040	0.014	mg/kg	40	04/08/19	8270C		MS
2-Methylnaphthalene*	<0.008	0.040	0.008	mg/kg	40	04/08/19	8270C		MS
1-Methylnaphthalene	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C	QM-07	MS
Acenaphthylene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
Acenaphthene*	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C		MS
Fluorene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
Phenanthrene*	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C		MS
Anthracene*	<0.008	0.040	0.008	mg/kg	40	04/08/19	8270C		MS
Carbazole*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
Fluoranthene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
Pyrene*	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C		MS
Benzo[a]anthracene*	<0.008	0.040	0.008	mg/kg	40	04/08/19	8270C		MS
Chrysene*	<0.010	0.040	0.010	mg/kg	40	04/08/19	8270C		MS
Benzo[b]fluoranthene*	<0.009	0.040	0.009	mg/kg	40	04/08/19	8270C		MS
Benzo[k]fluoranthene*	<0.010	0.040	0.010	mg/kg	40	04/08/19	8270C		MS
Benzo[a]pyrene*	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C		MS
Indeno[1,2,3-cd]pyrene*	<0.010	0.040	0.010	mg/kg	40	04/08/19	8270C		MS
Dibenz[a,h]anthracene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS

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Debbie Zufelt, Reports Manager

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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SS01

1904026-01 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Polynuclear Aromatic Compounds by GC/MS

Benzo[g,h,i]perylene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
Surrogate: Nitrobenzene-d5			48.8 %	10.8-154		04/08/19	8270C		MS
Surrogate: 2-Fluorobiphenyl			52.9 %	16.9-156		04/08/19	8270C		MS
Surrogate: Terphenyl-d14			63.6 %	27-170		04/08/19	8270C		MS
Cation/Anion Balance	100.								

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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SS02

1904026-02 (Solid)

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

% Dry Solids	72.3			%	1	04/05/19	EPA160.3/1684		VJL
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Saturated Paste Extraction

Calcium	111	0.500	0.064	mg/L	5	04/12/19	EPA200.7		AES
Conductivity	3870			umhos/cm	1	04/12/19	ASA#9 10-3.3		VJL
Magnesium	17.9	0.500	0.094	mg/L	5	04/12/19	EPA200.7		AES
pH	7.29			pH Units	1	04/12/19	ASA#9 12-2.6		VJL
SAR	14.1			No Unit	1	04/12/19	Calculation		AES
Sodium	607	5.00	1.83	mg/L	5	04/12/19	EPA200.7		AES

Total Metals by ICP

Barium	275	5.00	0.049	mg/kg dry	100	04/05/19	6010B		AES
Cadmium	<5.00	5.00	0.122	mg/kg dry	100	04/05/19	6010B		AES
Chromium	6.42	5.00	0.075	mg/kg dry	100	04/05/19	6010B		AES
Copper	22.5	5.00	0.117	mg/kg dry	100	04/05/19	6010B		AES
Lead	11.4	10.0	0.576	mg/kg dry	100	04/05/19	6010B		AES
Nickel	8.96	5.00	0.213	mg/kg dry	100	04/05/19	6010B		AES
Selenium	<20.0	20.0	1.42	mg/kg dry	100	04/05/19	6010B		AES
Silver	<1.00	1.00	0.191	mg/kg dry	100	04/05/19	6010B		AES
Zinc	50.5	10.0	0.165	mg/kg dry	100	04/05/19	6010B		AES

Total Metals by ICPMS

Arsenic	4.04	1.00	0.214	mg/kg dry	1000	04/08/19	6020A		AES
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Total Mercury by CVAA

Mercury	<0.0553	0.0553	0.0231	mg/kg dry	200	04/09/19	EPA7471		LLG
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Hot Water Extractable

Boron	2.18	1.20	0.059	mg/L	4	04/11/19	EPA200.7		AES
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Debbie Zufelt, Reports Manager

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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SS02

1904026-02 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	0.002	mg/kg	50	04/06/19	8021B		ms
Toluene*	<0.050	0.050	0.002	mg/kg	50	04/06/19	8021B		ms
Ethylbenzene*	<0.050	0.050	0.004	mg/kg	50	04/06/19	8021B		ms
Total Xylenes*	<0.150	0.150	0.010	mg/kg	50	04/06/19	8021B		ms
Total BTEX	<0.300	0.300	0.018	mg/kg	50	04/06/19	8021B		ms

Surrogate: 4-Bromofluorobenzene (PID) 93.3 % 73.3-129 04/06/19 8021B ms

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	5.30	mg/kg	1	04/04/19	8015B		MS
DRO >C10-C28*	<10.0	10.0	1.56	mg/kg	1	04/04/19	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	1.56	mg/kg	1	04/04/19	8015B		MS

Surrogate: 1-Chlorooctane 86.9 % 41-142 04/04/19 8015B MS

Surrogate: 1-Chlorooctadecane 86.2 % 37.6-147 04/04/19 8015B MS

Polynuclear Aromatic Compounds by GC/MS

Naphthalene*	<0.014	0.040	0.014	mg/kg	40	04/08/19	8270C		MS
2-Methylnaphthalene*	<0.008	0.040	0.008	mg/kg	40	04/08/19	8270C		MS
1-Methylnaphthalene	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C		MS
Acenaphthylene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
Acenaphthene*	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C		MS
Fluorene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
Phenanthrene*	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C		MS
Anthracene*	<0.008	0.040	0.008	mg/kg	40	04/08/19	8270C		MS
Carbazole*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
Fluoranthene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
Pyrene*	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C		MS
Benzo[a]anthracene*	<0.008	0.040	0.008	mg/kg	40	04/08/19	8270C		MS
Chrysene*	<0.010	0.040	0.010	mg/kg	40	04/08/19	8270C		MS
Benzo[b]fluoranthene*	<0.009	0.040	0.009	mg/kg	40	04/08/19	8270C		MS
Benzo[k]fluoranthene*	<0.010	0.040	0.010	mg/kg	40	04/08/19	8270C		MS
Benzo[a]pyrene*	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C		MS
Indeno[1,2,3-cd]pyrene*	<0.010	0.040	0.010	mg/kg	40	04/08/19	8270C		MS
Dibenz[a,h]anthracene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS

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Debbie Zufelt, Reports Manager

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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SS02

1904026-02 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Polynuclear Aromatic Compounds by GC/MS

Benzo[g,h,i]perylene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
<i>Surrogate: Nitrobenzene-d5</i>			44.0 %	10.8-154		04/08/19	8270C		MS
<i>Surrogate: 2-Fluorobiphenyl</i>			48.7 %	16.9-156		04/08/19	8270C		MS
<i>Surrogate: Terphenyl-d14</i>			53.3 %	27-170		04/08/19	8270C		MS
Cation/Anion Balance	100.								

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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SS03

1904026-03 (Solid)

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

% Dry Solids	60.6			%	1	04/05/19	EPA160.3/1684		VJL
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Saturated Paste Extraction

Calcium	74.7	0.200	0.026	mg/L	2	04/12/19	EPA200.7		AES
Conductivity	1770			umhos/cm	1	04/12/19	ASA#9 10-3.3		VJL
Magnesium	11.7	0.200	0.038	mg/L	2	04/12/19	EPA200.7		AES
pH	8.01			pH Units	1	04/12/19	ASA#9 12-2.6		VJL
SAR	19.3			No Unit	1	04/12/19	Calculation		AES
Sodium	681	2.00	0.734	mg/L	2	04/12/19	EPA200.7		AES

Total Metals by ICP

Barium	322	5.00	0.049	mg/kg dry	100	04/05/19	6010B		AES
Cadmium	<5.00	5.00	0.122	mg/kg dry	100	04/05/19	6010B		AES
Chromium	6.02	5.00	0.075	mg/kg dry	100	04/05/19	6010B		AES
Copper	16.3	5.00	0.117	mg/kg dry	100	04/05/19	6010B		AES
Lead	13.2	10.0	0.576	mg/kg dry	100	04/05/19	6010B		AES
Nickel	7.67	5.00	0.213	mg/kg dry	100	04/05/19	6010B		AES
Selenium	<20.0	20.0	1.42	mg/kg dry	100	04/05/19	6010B		AES
Silver	<1.00	1.00	0.191	mg/kg dry	100	04/05/19	6010B		AES
Zinc	55.6	10.0	0.165	mg/kg dry	100	04/05/19	6010B		AES

Total Metals by ICPMS

Arsenic	3.12	1.00	0.214	mg/kg dry	1000	04/08/19	6020A		AES
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Total Mercury by CVAA

Mercury	<0.0660	0.0660	0.0275	mg/kg dry	200	04/09/19	EPA7471		LLG
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Hot Water Extractable

Boron	<1.20	1.20	0.059	mg/L	4	04/11/19	EPA200.7		AES
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Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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SS03

1904026-03 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	0.002	mg/kg	50	04/06/19	8021B		ms
Toluene*	<0.050	0.050	0.002	mg/kg	50	04/06/19	8021B		ms
Ethylbenzene*	<0.050	0.050	0.004	mg/kg	50	04/06/19	8021B		ms
Total Xylenes*	<0.150	0.150	0.010	mg/kg	50	04/06/19	8021B		ms
Total BTEX	<0.300	0.300	0.018	mg/kg	50	04/06/19	8021B		ms

Surrogate: 4-Bromofluorobenzene (PID) 92.5 % 73.3-129 04/06/19 8021B ms

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	5.30	mg/kg	1	04/04/19	8015B		MS
DRO >C10-C28*	<10.0	10.0	1.56	mg/kg	1	04/04/19	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	1.56	mg/kg	1	04/04/19	8015B		MS

Surrogate: 1-Chlorooctane 87.2 % 41-142 04/04/19 8015B MS

Surrogate: 1-Chlorooctadecane 85.2 % 37.6-147 04/04/19 8015B MS

Polynuclear Aromatic Compounds by GC/MS

Naphthalene*	<0.014	0.040	0.014	mg/kg	40	04/08/19	8270C		MS
2-Methylnaphthalene*	<0.008	0.040	0.008	mg/kg	40	04/08/19	8270C		MS
1-Methylnaphthalene	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C		MS
Acenaphthylene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
Acenaphthene*	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C		MS
Fluorene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
Phenanthrene*	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C		MS
Anthracene*	<0.008	0.040	0.008	mg/kg	40	04/08/19	8270C		MS
Carbazole*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
Fluoranthene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
Pyrene*	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C		MS
Benzo[a]anthracene*	<0.008	0.040	0.008	mg/kg	40	04/08/19	8270C		MS
Chrysene*	<0.010	0.040	0.010	mg/kg	40	04/08/19	8270C		MS
Benzo[b]fluoranthene*	<0.009	0.040	0.009	mg/kg	40	04/08/19	8270C		MS
Benzo[k]fluoranthene*	<0.010	0.040	0.010	mg/kg	40	04/08/19	8270C		MS
Benzo[a]pyrene*	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C		MS
Indeno[1,2,3-cd]pyrene*	<0.010	0.040	0.010	mg/kg	40	04/08/19	8270C		MS
Dibenz[a,h]anthracene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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SS03

1904026-03 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Polynuclear Aromatic Compounds by GC/MS

Benzo[g,h,i]perylene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
Surrogate: Nitrobenzene-d5			50.0 %	10.8-154		04/08/19	8270C		MS
Surrogate: 2-Fluorobiphenyl			52.9 %	16.9-156		04/08/19	8270C		MS
Surrogate: Terphenyl-d14			54.9 %	27-170		04/08/19	8270C		MS
Cation/Anion Balance	100.								

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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SS04

1904026-04 (Solid)

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

% Dry Solids	61.4			%	1	04/05/19	EPA160.3/1684		VJL
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Saturated Paste Extraction

Calcium	74.4	0.100	0.013	mg/L	1	04/12/19	EPA200.7		AES
Conductivity	1000			umhos/cm	1	04/12/19	ASA#9 10-3.3		VJL
Magnesium	14.6	0.100	0.019	mg/L	1	04/12/19	EPA200.7		AES
pH	5.50			pH Units	1	04/12/19	ASA#9 12-2.6		VJL
SAR	2.80			No Unit	1	04/12/19	Calculation		AES
Sodium	101	1.00	0.367	mg/L	1	04/12/19	EPA200.7		AES

Total Metals by ICP

Barium	251	5.00	0.049	mg/kg dry	100	04/05/19	6010B		AES
Cadmium	<5.00	5.00	0.122	mg/kg dry	100	04/05/19	6010B		AES
Chromium	6.25	5.00	0.075	mg/kg dry	100	04/05/19	6010B		AES
Copper	16.8	5.00	0.117	mg/kg dry	100	04/05/19	6010B		AES
Lead	11.9	10.0	0.576	mg/kg dry	100	04/05/19	6010B		AES
Nickel	7.95	5.00	0.213	mg/kg dry	100	04/05/19	6010B		AES
Selenium	<20.0	20.0	1.42	mg/kg dry	100	04/05/19	6010B		AES
Silver	<1.00	1.00	0.191	mg/kg dry	100	04/05/19	6010B		AES
Zinc	51.2	10.0	0.165	mg/kg dry	100	04/05/19	6010B		AES

Total Metals by ICPMS

Arsenic	2.48	1.00	0.214	mg/kg dry	1000	04/08/19	6020A		AES
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Total Mercury by CVAA

Mercury	<0.0651	0.0651	0.0272	mg/kg dry	200	04/09/19	EPA7471		LLG
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Hot Water Extractable

Boron	<1.20	1.20	0.059	mg/L	4	04/11/19	EPA200.7		AES
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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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SS04

1904026-04 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	0.002	mg/kg	50	04/06/19	8021B		ms
Toluene*	<0.050	0.050	0.002	mg/kg	50	04/06/19	8021B		ms
Ethylbenzene*	<0.050	0.050	0.004	mg/kg	50	04/06/19	8021B		ms
Total Xylenes*	<0.150	0.150	0.010	mg/kg	50	04/06/19	8021B		ms
Total BTEX	<0.300	0.300	0.018	mg/kg	50	04/06/19	8021B		ms

Surrogate: 4-Bromofluorobenzene (PID) 91.0 % 73.3-129 04/06/19 8021B ms

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	5.30	mg/kg	1	04/05/19	8015B		MS
DRO >C10-C28*	<10.0	10.0	1.56	mg/kg	1	04/05/19	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	1.56	mg/kg	1	04/05/19	8015B		MS

Surrogate: 1-Chlorooctane 83.8 % 41-142 04/05/19 8015B MS

Surrogate: 1-Chlorooctadecane 83.5 % 37.6-147 04/05/19 8015B MS

Polynuclear Aromatic Compounds by GC/MS

Naphthalene*	<0.014	0.040	0.014	mg/kg	40	04/08/19	8270C		MS
2-Methylnaphthalene*	<0.008	0.040	0.008	mg/kg	40	04/08/19	8270C		MS
1-Methylnaphthalene	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C		MS
Acenaphthylene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
Acenaphthene*	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C		MS
Fluorene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
Phenanthrene*	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C		MS
Anthracene*	<0.008	0.040	0.008	mg/kg	40	04/08/19	8270C		MS
Carbazole*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
Fluoranthene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
Pyrene*	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C		MS
Benzo[a]anthracene*	0.009	0.040	0.008	mg/kg	40	04/08/19	8270C	J	MS
Chrysene*	<0.010	0.040	0.010	mg/kg	40	04/08/19	8270C		MS
Benzo[b]fluoranthene*	<0.009	0.040	0.009	mg/kg	40	04/08/19	8270C		MS
Benzo[k]fluoranthene*	<0.010	0.040	0.010	mg/kg	40	04/08/19	8270C		MS
Benzo[a]pyrene*	<0.007	0.040	0.007	mg/kg	40	04/08/19	8270C		MS
Indeno[1,2,3-cd]pyrene*	<0.010	0.040	0.010	mg/kg	40	04/08/19	8270C		MS
Dibenz[a,h]anthracene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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SS04

1904026-04 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Polynuclear Aromatic Compounds by GC/MS

Benzo[g,h,i]perylene*	<0.006	0.040	0.006	mg/kg	40	04/08/19	8270C		MS
Surrogate: Nitrobenzene-d5			46.7 %	10.8-154		04/08/19	8270C		MS
Surrogate: 2-Fluorobiphenyl			49.8 %	16.9-156		04/08/19	8270C		MS
Surrogate: Terphenyl-d14			52.7 %	27-170		04/08/19	8270C		MS
Cation/Anion Balance	100.								

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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WS-01

1904026-05 (Water)

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

Alkalinity, Bicarbonate as CaCO3*	1880	10.0		mg/L	5	04/12/19	2320 B		VJL
Alkalinity, Carbonate as CaCO3*	100	10.0		mg/L	5	04/12/19	2320 B		VJL
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	5	04/12/19	2320 B		VJL
Alkalinity, Total as CaCO3*	1980	10.0	3.06	mg/L	5	04/12/19	2320 B		VJL
Chloride*	771	20.0	2.05	mg/L	20	04/04/19	EPA300.0		AES
Conductivity*	5530	10.0		uS/cm	1	04/04/19	2510 B		VJL
pH*	7.79			pH Units	1	04/04/19	EPA150.1		VJL
Resistivity	181			ohm/cm	1	04/10/19	2510 B		JDA
Total Dissolved Solids*	3250	10.0		mg/L	1	04/09/19	EPA160.1		JDA
Specific Gravity	1.006	0.8000		No Unit	1	04/15/19	ASTM D1429-03		VJL
Sulfate*	<4.00	4.00	0.852	mg/L	4	04/04/19	EPA300.0		AES

Total Recoverable Metals by ICP (E200.7)

Iron*	4.90	1.00	0.348	mg/L	20	04/05/19	EPA200.7		AES
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Dissolved Metals by ICP

Hardness	51.4	3.31	0.546	mg/L	5	04/03/19	2340 B		AES
Barium*	2.93	0.100	0.010	mg/L	5	04/03/19	EPA200.7		AES
Calcium*	14.7	0.500	0.064	mg/L	5	04/03/19	EPA200.7		AES
Iron*	<0.250	0.250	0.138	mg/L	5	04/03/19	EPA200.7		AES
Magnesium*	3.54	0.500	0.094	mg/L	5	04/03/19	EPA200.7		AES
Manganese*	0.340	0.100	0.013	mg/L	5	04/03/19	EPA200.7		AES
Potassium*	7.02	5.00	0.478	mg/L	5	04/03/19	EPA200.7		AES
Sodium*	1290	5.00	1.83	mg/L	5	04/03/19	EPA200.7		AES
Strontium*	2.32	0.500	0.014	mg/L	5	04/03/19	EPA200.7		AES

Subcontracted -- Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.001	0.001	0.00007	mg/L	1	04/04/19	8021B		MS
Toluene*	<0.001	0.001	0.00005	mg/L	1	04/04/19	8021B		MS
Ethylbenzene*	<0.001	0.001	0.0001	mg/L	1	04/04/19	8021B		MS
Total Xylenes*	<0.003	0.003	0.0002	mg/L	1	04/04/19	8021B		MS
Total BTEX	<0.006	0.006	0.0005	mg/L	1	04/04/19	8021B		MS

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 81.3-128 04/04/19 8021B MS

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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WS-01

1904026-05 (Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<1.00	1.00	0.0601	mg/L	0.1	04/05/19	8015B		MS
DRO >C10-C28*	<1.00	1.00	0.164	mg/L	0.1	04/05/19	8015B		MS
EXT DRO >C28-C36	<1.00	1.00	0.164	mg/L	0.1	04/05/19	8015B		MS
<i>Surrogate: 1-Chlorooctane</i>			78.5 %	37.1-138		04/05/19	8015B		MS
<i>Surrogate: 1-Chlorooctadecane</i>			79.4 %	44.6-151		04/05/19	8015B		MS
Cation/Anion Balance	-3.34								

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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WS-02

1904026-06 (Water)

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

Alkalinity, Bicarbonate as CaCO3*	59.0	10.0		mg/L	1	04/12/19	2320 B		VJL
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	1	04/12/19	2320 B		VJL
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	1	04/12/19	2320 B		VJL
Alkalinity, Total as CaCO3*	59.0	10.0	3.06	mg/L	1	04/12/19	2320 B		VJL
Chloride*	161	10.0	1.03	mg/L	10	04/04/19	EPA300.0		AES
Conductivity*	831	10.0		uS/cm	1	04/04/19	2510 B		VJL
pH*	6.66			pH Units	1	04/04/19	EPA150.1		VJL
Resistivity	1200			ohm/cm	1	04/10/19	2510 B		JDA
Total Dissolved Solids*	470	10.0		mg/L	1	04/09/19	EPA160.1		JDA
Specific Gravity	1.003	0.8000		No Unit	1	04/15/19	ASTM D1429-03		VJL
Sulfate*	62.6	10.0	2.13	mg/L	10	04/04/19	EPA300.0		AES

Total Recoverable Metals by ICP (E200.7)

Iron*	3.14	0.250	0.087	mg/L	5	04/05/19	EPA200.7		AES
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Dissolved Metals by ICP

Hardness	182	3.31	0.546	mg/L	5	04/03/19	2340 B		AES
Barium*	0.209	0.100	0.010	mg/L	5	04/03/19	EPA200.7		AES
Calcium*	55.5	0.500	0.064	mg/L	5	04/03/19	EPA200.7		AES
Iron*	<0.250	0.250	0.138	mg/L	5	04/03/19	EPA200.7		AES
Magnesium*	10.4	0.500	0.094	mg/L	5	04/03/19	EPA200.7		AES
Manganese*	0.163	0.100	0.013	mg/L	5	04/03/19	EPA200.7		AES
Potassium*	<5.00	5.00	0.478	mg/L	5	04/03/19	EPA200.7		AES
Sodium*	93.3	5.00	1.83	mg/L	5	04/03/19	EPA200.7		AES
Strontium*	0.683	0.500	0.014	mg/L	5	04/03/19	EPA200.7		AES

Subcontracted -- Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.001	0.001	0.00007	mg/L	1	04/04/19	8021B		MS
Toluene*	<0.001	0.001	0.00005	mg/L	1	04/04/19	8021B		MS
Ethylbenzene*	<0.001	0.001	0.0001	mg/L	1	04/04/19	8021B		MS
Total Xylenes*	<0.003	0.003	0.0002	mg/L	1	04/04/19	8021B		MS
Total BTEX	<0.006	0.006	0.0005	mg/L	1	04/04/19	8021B		MS

Surrogate: 4-Bromofluorobenzene (PID) 93.3 % 81.3-128 04/04/19 8021B MS

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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WS-02

1904026-06 (Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<1.00	1.00	0.0601	mg/L	0.1	04/05/19	8015B		MS
DRO >C10-C28*	<1.00	1.00	0.164	mg/L	0.1	04/05/19	8015B		MS
EXT DRO >C28-C36	<1.00	1.00	0.164	mg/L	0.1	04/05/19	8015B		MS
<i>Surrogate: 1-Chlorooctane</i>			79.9 %	37.1-138		04/05/19	8015B		MS
<i>Surrogate: 1-Chlorooctadecane</i>			81.0 %	44.6-151		04/05/19	8015B		MS
Cation/Anion Balance	5.61								

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B904044 - General Prep - Wet Chem										
Blank (B904044-BLK1) Prepared & Analyzed: 04/03/19										
Chloride	ND	1.00	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B904044-BS1) Prepared & Analyzed: 04/03/19										
Chloride	24.6	1.00	mg/L	25.0		98.5	90-110			
Sulfate	24.4	1.00	mg/L	25.0		97.5	90-110			
LCS Dup (B904044-BSD1) Prepared & Analyzed: 04/03/19										
Chloride	24.6	1.00	mg/L	25.0		98.4	90-110	0.110	20	
Sulfate	24.4	1.00	mg/L	25.0		97.5	90-110	0.0287	20	
Batch B904049 - General Prep - Wet Chem										
Duplicate (B904049-DUP1) Source: 1904028-02 Prepared: 04/04/19 Analyzed: 04/05/19										
% Dry Solids	97.7		%			97.7		0.00361	20	
Batch B904050 - General Prep - Wet Chem										
Duplicate (B904050-DUP1) Source: 1904037-01 Prepared & Analyzed: 04/04/19										
pH	7.35		pH Units			7.33		0.272	20	
Reference (B904050-SRM1) Prepared & Analyzed: 04/04/19										
pH	6.99		pH Units			7.00	99.9	98.5-101.4		
Batch B904051 - General Prep - Wet Chem										
Duplicate (B904051-DUP1) Source: 1904026-05 Prepared & Analyzed: 04/04/19										
Conductivity	5390	10.0	uS/cm			5530		2.56	20	
Reference (B904051-SRM1) Prepared & Analyzed: 04/04/19										
Conductivity	498	10.0	uS/cm			491	101	90-110.1		
Batch B904085 - General Prep - Wet Chem										
Blank (B904085-BLK1) Prepared & Analyzed: 04/09/19										
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (B904085-DUP1) Source: 1904038-01 Prepared & Analyzed: 04/09/19										
Total Dissolved Solids	3560	10.0	mg/L			3580		0.700	20	
Reference (B904085-SRM1) Prepared & Analyzed: 04/09/19										

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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**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 B904085 - General Prep - Wet Chem (Continued)

Reference (B904085-SRM1) (Continued)

Prepared & Analyzed: 04/09/19

Total Dissolved Solids	590	10.0	mg/L	600		98.3	85-115			
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Batch B904106 - General Prep - Wet Chem

Duplicate (B904106-DUP1)

Source: 1904026-05

Prepared: 04/10/19 Analyzed: 04/15/19

Specific Gravity	1.006	0.8000	No Unit		1.006			0.00	20	
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Batch B904138 - General Prep - Wet Chem

Blank (B904138-BLK1)

Prepared: 04/11/19 Analyzed: 04/12/19

Alkalinity, Total as CaCO3	ND	10.0	mg/L							
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LCS (B904138-BS1)

Prepared: 04/11/19 Analyzed: 04/12/19

Alkalinity, Total as CaCO3	101	10.0	mg/L	100		101	85-115			
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LCS Dup (B904138-BSD1)

Prepared: 04/11/19 Analyzed: 04/12/19

Alkalinity, Total as CaCO3	92.0	10.0	mg/L	100		92.0	85-115	9.33	20	
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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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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 B904124 - Paste Extract

Blank (B904124-BLK1)

Prepared: 04/11/19 Analyzed: 04/12/19

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

Duplicate (B904124-DUP1)

Source: 1904026-01 Prepared: 04/11/19 Analyzed: 04/12/19

Calcium	30.1	0.100	mg/L		35.5			16.6	20	
Magnesium	5.85	0.100	mg/L		6.19			5.64	20	
SAR	0.38		No Unit		0.39			2.60	20	
Sodium	8.61	1.00	mg/L		9.46			9.45	20	

Batch B904125 - Paste Extract

Duplicate (B904125-DUP1)

Source: 1904026-01 Prepared: 04/11/19 Analyzed: 04/12/19

Conductivity	212		umhos/cm		254			17.6	20	
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Batch B904126 - Paste Extract

Duplicate (B904126-DUP1)

Source: 1904026-01 Prepared: 04/11/19 Analyzed: 04/12/19

pH	6.56		pH Units		6.66			1.51	20	
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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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Total 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 B904061 - EPA 3050

Blank (B904061-BLK1)

Prepared & Analyzed: 04/05/19

Barium	ND	5.00	mg/kg dry							
Cadmium	ND	5.00	mg/kg dry							
Chromium	ND	5.00	mg/kg dry							
Copper	ND	5.00	mg/kg dry							
Lead	ND	10.0	mg/kg dry							
Nickel	ND	5.00	mg/kg dry							
Selenium	ND	20.0	mg/kg dry							
Silver	ND	1.00	mg/kg dry							
Zinc	ND	10.0	mg/kg dry							

LCS (B904061-BS1)

Prepared & Analyzed: 04/05/19

Barium	186	5.00	mg/kg dry	200		93.2	80-120			
Cadmium	174	5.00	mg/kg dry	200		86.9	80-120			
Chromium	188	5.00	mg/kg dry	200		93.9	80-120			
Copper	388	5.00	mg/kg dry	400		97.1	80-120			
Lead	181	10.0	mg/kg dry	200		90.6	80-120			
Nickel	180	5.00	mg/kg dry	200		90.1	80-120			
Selenium	748	20.0	mg/kg dry	800		93.4	80-120			
Silver	8.97	1.00	mg/kg dry	10.0		89.7	80-120			
Zinc	169	10.0	mg/kg dry	200		84.4	80-120			

LCS Dup (B904061-BSD1)

Prepared & Analyzed: 04/05/19

Barium	186	5.00	mg/kg dry	200		93.1	80-120	0.0132	20	
Cadmium	173	5.00	mg/kg dry	200		86.7	80-120	0.180	20	
Chromium	188	5.00	mg/kg dry	200		94.0	80-120	0.142	20	
Copper	387	5.00	mg/kg dry	400		96.6	80-120	0.473	20	
Lead	181	10.0	mg/kg dry	200		90.5	80-120	0.102	20	
Nickel	180	5.00	mg/kg dry	200		90.0	80-120	0.128	20	
Selenium	739	20.0	mg/kg dry	800		92.3	80-120	1.21	20	
Silver	8.95	1.00	mg/kg dry	10.0		89.5	80-120	0.162	20	
Zinc	169	10.0	mg/kg dry	200		84.5	80-120	0.106	20	

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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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 B904037 - Total Rec. 200.7/200.8/200.2

Blank (B904037-BLK1)

Prepared: 04/03/19 Analyzed: 04/05/19

Iron	ND	0.050	mg/L							
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LCS (B904037-BS1)

Prepared: 04/03/19 Analyzed: 04/05/19

Iron	3.90	0.050	mg/L	4.00		97.6	85-115			
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LCS Dup (B904037-BSD1)

Prepared: 04/03/19 Analyzed: 04/05/19

Iron	3.77	0.050	mg/L	4.00		94.3	85-115	3.45	20	
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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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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 B904039 - Diss. 200.7/200.8

Blank (B904039-BLK1)

Prepared & Analyzed: 04/03/19

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 (B904039-BS1)

Prepared & Analyzed: 04/03/19

Barium	2.69	0.020	mg/L	2.50		108	85-115			
Calcium	4.93	0.100	mg/L	5.00		98.7	85-115			
Iron	4.90	0.050	mg/L	5.00		97.9	85-115			
Magnesium	28.7	0.100	mg/L	25.0		115	85-115			
Manganese	2.46	0.020	mg/L	2.50		98.4	85-115			
Potassium	11.2	1.00	mg/L	10.0		112	85-115			
Sodium	4.53	1.00	mg/L	4.05		112	85-115			
Strontium	5.74	0.100	mg/L	5.00		115	85-115			

LCS Dup (B904039-BSD1)

Prepared & Analyzed: 04/03/19

Barium	2.67	0.020	mg/L	2.50		107	85-115	0.972	20	
Calcium	4.94	0.100	mg/L	5.00		98.8	85-115	0.0993	20	
Iron	5.71	0.050	mg/L	5.00		114	85-115	15.3	20	
Magnesium	27.8	0.100	mg/L	25.0		111	85-115	3.39	20	
Manganese	2.86	0.020	mg/L	2.50		114	85-115	15.0	20	
Potassium	10.9	1.00	mg/L	10.0		109	85-115	3.20	20	
Sodium	4.42	1.00	mg/L	4.05		109	85-115	2.48	20	
Strontium	5.62	0.100	mg/L	5.00		112	85-115	2.01	20	

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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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 B904062 - EPA 3050M

Blank (B904062-BLK1) Prepared: 04/05/19 Analyzed: 04/08/19

Arsenic	ND	0.100	mg/kg dry							
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LCS (B904062-BS1) Prepared: 04/05/19 Analyzed: 04/08/19

Arsenic	5.32	0.100	mg/kg dry	5.00		106	80-120			
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LCS Dup (B904062-BSD1) Prepared: 04/05/19 Analyzed: 04/08/19

Arsenic	5.21	0.100	mg/kg dry	5.00		104	80-120	2.09	20	
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Total Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B904073 - EPA 7471

Blank (B904073-BLK1) Prepared: 04/08/19 Analyzed: 04/09/19

Mercury	ND	0.0002	mg/kg wet							
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LCS (B904073-BS1) Prepared: 04/08/19 Analyzed: 04/09/19

Mercury	0.0053	0.0002	mg/kg wet	0.00500		107	85-115			
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LCS Dup (B904073-BSD1) Prepared: 04/08/19 Analyzed: 04/09/19

Mercury	0.0054	0.0002	mg/kg wet	0.00500		107	85-115	0.336	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 B904119 - Hot Water Soluble Metals Extract

Blank (B904119-BLK1) Prepared & Analyzed: 04/11/19

Boron	ND	1.20	mg/L							
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Duplicate (B904119-DUP1) Source: 1904026-01 Prepared & Analyzed: 04/11/19

Boron	0.696	1.20	mg/L		0.693			0.367	200	
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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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Volatile Organic Compounds by EPA Method 8021 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD Limit	Notes
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Batch 9040414 - Volatiles

Blank (9040414-BLK1)

Prepared & Analyzed: 04/04/19

Surrogate: 4-Bromofluorobenzene (PID)	0.0864		mg/L	0.100		86.4	81.3-128		
Benzene	ND	0.001	mg/L						
Ethylbenzene	ND	0.001	mg/L						
Toluene	ND	0.001	mg/L						
Total BTEX	ND	0.006	mg/L						
Total Xylenes	ND	0.003	mg/L						

LCS (9040414-BS1)

Prepared & Analyzed: 04/04/19

Surrogate: 4-Bromofluorobenzene (PID)	0.0869		mg/L	0.100		86.9	81.3-128		
Benzene	0.020	0.001	mg/L	0.0200		100	86.6-118		
Ethylbenzene	0.018	0.001	mg/L	0.0200		92.0	83.9-122		
Toluene	0.020	0.001	mg/L	0.0200		98.2	84.5-122		
Total Xylenes	0.060	0.003	mg/L	0.0600		99.5	81.8-124		

LCS Dup (9040414-BSD1)

Prepared & Analyzed: 04/04/19

Surrogate: 4-Bromofluorobenzene (PID)	0.0892		mg/L	0.100		89.2	81.3-128		
Benzene	0.020	0.001	mg/L	0.0200		101	86.6-118	0.841	7.71
Ethylbenzene	0.018	0.001	mg/L	0.0200		92.4	83.9-122	0.510	11.8
Toluene	0.020	0.001	mg/L	0.0200		98.4	84.5-122	0.229	8.86
Total Xylenes	0.059	0.003	mg/L	0.0600		98.9	81.8-124	0.615	11.9

Batch 9040504 - Volatiles

Blank (9040504-BLK1)

Prepared & Analyzed: 04/05/19

Surrogate: 4-Bromofluorobenzene (PID)	0.0921		mg/kg	0.100		92.1	73.3-129		
Benzene	ND	0.050	mg/kg						
Ethylbenzene	ND	0.050	mg/kg						
Toluene	ND	0.050	mg/kg						
Total BTEX	ND	0.300	mg/kg						
Total Xylenes	ND	0.150	mg/kg						

LCS (9040504-BS1)

Prepared & Analyzed: 04/05/19

Surrogate: 4-Bromofluorobenzene (PID)	0.0914		mg/kg	0.100		91.4	73.3-129		
Benzene	2.16	0.050	mg/kg	2.00		108	72.2-131		
Ethylbenzene	2.13	0.050	mg/kg	2.00		106	68.9-126		
Toluene	2.01	0.050	mg/kg	2.00		101	71.7-126		
Total Xylenes	6.43	0.150	mg/kg	6.00		107	71.4-125		

LCS Dup (9040504-BSD1)

Prepared & Analyzed: 04/05/19

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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**Volatile Organic Compounds by EPA Method 8021 - Quality Control
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9040504 - Volatiles (Continued)

LCS Dup (9040504-BSD1) (Continued)

Prepared & Analyzed: 04/05/19

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	0.0916		mg/kg	0.100		91.6	73.3-129			
Benzene	2.10	0.050	mg/kg	2.00		105	72.2-131	2.74	6.91	
Ethylbenzene	2.05	0.050	mg/kg	2.00		103	68.9-126	3.63	7.88	
Toluene	1.94	0.050	mg/kg	2.00		97.1	71.7-126	3.59	7.12	
Total Xylenes	6.21	0.150	mg/kg	6.00		104	71.4-125	3.46	7.46	

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BP America
380 Airport Rd.
Durango CO, 81303

Project: Table 910
Project Name / Number: Leroy McCaw B#1
Project Manager: Steve Moskal

Reported:
04/15/19 12:27

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9040410 - General Prep - Organics

Blank (9040410-BLK1)

Prepared: 04/04/19 Analyzed: 04/05/19

Surrogate: 1-Chlorooctadecane	45.6		mg/kg	50.0		91.2	37.6-147			
Surrogate: 1-Chlorooctane	47.6		mg/kg	50.0		95.2	41-142			
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
GRO C6-C10	ND	10.0	mg/kg							

LCS (9040410-BS1)

Prepared: 04/04/19 Analyzed: 04/05/19

Surrogate: 1-Chlorooctadecane	49.0		mg/kg	50.0		98.1	37.6-147			
Surrogate: 1-Chlorooctane	51.8		mg/kg	50.0		104	41-142			
DRO >C10-C28	205	10.0	mg/kg	200		103	72.9-138			
GRO C6-C10	202	10.0	mg/kg	200		101	76.5-133			
Total TPH C6-C28	408	10.0	mg/kg	400		102	78-132			

LCS Dup (9040410-BSD1)

Prepared: 04/04/19 Analyzed: 04/05/19

Surrogate: 1-Chlorooctadecane	49.7		mg/kg	50.0		99.5	37.6-147			
Surrogate: 1-Chlorooctane	52.4		mg/kg	50.0		105	41-142			
DRO >C10-C28	203	10.0	mg/kg	200		101	72.9-138	1.12	20.6	
GRO C6-C10	203	10.0	mg/kg	200		101	76.5-133	0.218	20.6	
Total TPH C6-C28	406	10.0	mg/kg	400		101	78-132	0.453	18	

Batch 9040411 - General Prep - Organics

Blank (9040411-BLK1)

Prepared: 04/04/19 Analyzed: 04/05/19

Surrogate: 1-Chlorooctadecane	4.04		mg/L	5.00		80.8	44.6-151			
Surrogate: 1-Chlorooctane	3.42		mg/L	5.00		68.4	37.1-138			
DRO >C10-C28	ND	1.00	mg/L							
EXT DRO >C28-C36	ND	1.00	mg/L							
GRO C6-C10	ND	1.00	mg/L							

LCS (9040411-BS1)

Prepared: 04/04/19 Analyzed: 04/05/19

Surrogate: 1-Chlorooctadecane	4.45		mg/L	5.00		89.0	44.6-151			
Surrogate: 1-Chlorooctane	4.59		mg/L	5.00		91.9	37.1-138			
DRO >C10-C28	47.8	1.00	mg/L	50.0		95.5	77.5-117			
GRO C6-C10	46.9	1.00	mg/L	50.0		93.9	72.8-108			

LCS Dup (9040411-BSD1)

Prepared: 04/04/19 Analyzed: 04/05/19

Surrogate: 1-Chlorooctadecane	4.48		mg/L	5.00		89.6	44.6-151			
Surrogate: 1-Chlorooctane	4.64		mg/L	5.00		92.8	37.1-138			

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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**Petroleum Hydrocarbons by GC FID - Quality Control
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9040411 - General Prep - Organics (Continued)

LCS Dup (9040411-BSD1) (Continued)

Prepared: 04/04/19 Analyzed: 04/05/19

DRO >C10-C28	48.3	1.00	mg/L	50.0		96.6	77.5-117	1.07	12.1	
GRO C6-C10	47.5	1.00	mg/L	50.0		95.1	72.8-108	1.26	12	

Batch 9040416 - General Prep - Organics

Blank (9040416-BLK1)

Prepared & Analyzed: 04/04/19

Surrogate: 1-Chlorooctadecane	43.0		mg/kg	50.0		85.9	37.6-147			
Surrogate: 1-Chlorooctane	44.7		mg/kg	50.0		89.4	41-142			
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
GRO C6-C10	ND	10.0	mg/kg							

LCS (9040416-BS1)

Prepared & Analyzed: 04/04/19

Surrogate: 1-Chlorooctadecane	44.0		mg/kg	50.0		88.0	37.6-147			
Surrogate: 1-Chlorooctane	47.2		mg/kg	50.0		94.4	41-142			
DRO >C10-C28	210	10.0	mg/kg	200		105	72.9-138			
GRO C6-C10	203	10.0	mg/kg	200		101	76.5-133			
Total TPH C6-C28	413	10.0	mg/kg	400		103	78-132			

LCS Dup (9040416-BSD1)

Prepared & Analyzed: 04/04/19

Surrogate: 1-Chlorooctadecane	46.6		mg/kg	50.0		93.3	37.6-147			
Surrogate: 1-Chlorooctane	49.7		mg/kg	50.0		99.4	41-142			
DRO >C10-C28	230	10.0	mg/kg	200		115	72.9-138	9.40	20.6	
GRO C6-C10	226	10.0	mg/kg	200		113	76.5-133	10.9	20.6	
Total TPH C6-C28	457	10.0	mg/kg	400		114	78-132	10.1	18	

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BP America
380 Airport Rd.
Durango CO, 81303

Project: Table 910
Project Name / Number: Leroy McCaw B#1
Project Manager: Steve Moskal

Reported:
04/15/19 12:27

Polynuclear Aromatic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9040502 - SW846-3510

Blank (9040502-BLK1)

Prepared: 04/05/19 Analyzed: 04/08/19

1-Methylnaphthalene	ND	0.040	mg/kg							
<i>Surrogate: 2-Fluorobiphenyl</i>	1.13		mg/kg	2.00		56.3	16.9-156			
2-Methylnaphthalene	ND	0.040	mg/kg							
Acenaphthene	ND	0.040	mg/kg							
Acenaphthylene	ND	0.040	mg/kg							
Anthracene	ND	0.040	mg/kg							
Benzo[a]anthracene	ND	0.040	mg/kg							
Benzo[a]pyrene	ND	0.040	mg/kg							
Benzo[b]fluoranthene	ND	0.040	mg/kg							
Benzo[g,h,i]perylene	ND	0.040	mg/kg							
Benzo[k]fluoranthene	ND	0.040	mg/kg							
Carbazole	ND	0.040	mg/kg							
Chrysene	ND	0.040	mg/kg							
Dibenz[a,h]anthracene	ND	0.040	mg/kg							
Fluoranthene	ND	0.040	mg/kg							
Fluorene	ND	0.040	mg/kg							
Indeno[1,2,3-cd]pyrene	ND	0.040	mg/kg							
Naphthalene	ND	0.040	mg/kg							
<i>Surrogate: Nitrobenzene-d5</i>	1.08		mg/kg	2.00		53.9	10.8-154			
Phenanthrene	ND	0.040	mg/kg							
Pyrene	ND	0.040	mg/kg							
<i>Surrogate: Terphenyl-d14</i>	1.22		mg/kg	2.00		60.8	27-170			

LCS (9040502-BS1)

Prepared: 04/05/19 Analyzed: 04/08/19

1-Methylnaphthalene	0.258	0.040	mg/kg	0.400		64.5	60-140			
<i>Surrogate: 2-Fluorobiphenyl</i>	1.12		mg/kg	2.00		55.9	16.9-156			
2-Methylnaphthalene	0.263	0.040	mg/kg	0.400		65.9	36.1-121			
Acenaphthene	0.232	0.040	mg/kg	0.400		57.9	33.9-127			
Acenaphthylene	0.230	0.040	mg/kg	0.400		57.6	34-126			
Anthracene	0.240	0.040	mg/kg	0.400		60.1	39.4-124			
Benzo[a]anthracene	0.227	0.040	mg/kg	0.400		56.8	40.6-124			
Benzo[a]pyrene	0.255	0.040	mg/kg	0.400		63.7	38.3-127			
Benzo[b]fluoranthene	0.262	0.040	mg/kg	0.400		65.4	34.4-130			
Benzo[g,h,i]perylene	0.245	0.040	mg/kg	0.400		61.3	29.9-134			
Benzo[k]fluoranthene	0.242	0.040	mg/kg	0.400		60.4	35.5-135			
Carbazole	0.234	0.040	mg/kg	0.400		58.4	31.9-133			
Chrysene	0.233	0.040	mg/kg	0.400		58.2	41.3-126			
Dibenz[a,h]anthracene	0.246	0.040	mg/kg	0.400		61.6	35-132			
Fluoranthene	0.230	0.040	mg/kg	0.400		57.6	37.2-123			

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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**Polynuclear Aromatic Compounds by GC/MS - Quality Control
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Notes
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Batch 9040502 - SW846-3510 (Continued)

LCS (9040502-BS1) (Continued)

Prepared: 04/05/19 Analyzed: 04/08/19

Fluorene	0.231	0.040	mg/kg	0.400		57.9	35.4-127			
Indeno[1,2,3-cd]pyrene	0.243	0.040	mg/kg	0.400		60.8	33.7-132			
Naphthalene	0.250	0.040	mg/kg	0.400		62.6	28.3-127			
<i>Surrogate: Nitrobenzene-d5</i>	<i>1.09</i>		mg/kg	<i>2.00</i>		<i>54.6</i>	<i>10.8-154</i>			
Phenanthrene	0.238	0.040	mg/kg	0.400		59.5	40.2-125			
Pyrene	0.240	0.040	mg/kg	0.400		60.1	34.3-133			
<i>Surrogate: Terphenyl-d14</i>	<i>1.28</i>		mg/kg	<i>2.00</i>		<i>64.1</i>	<i>27-170</i>			

LCS Dup (9040502-BSD1)

Prepared: 04/05/19 Analyzed: 04/08/19

1-Methylnaphthalene	0.256	0.040	mg/kg	0.400		64.0	60-140	0.860	30	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>1.12</i>		mg/kg	<i>2.00</i>		<i>55.8</i>	<i>16.9-156</i>			
2-Methylnaphthalene	0.256	0.040	mg/kg	0.400		64.0	36.1-121	2.81	15.9	
Acenaphthene	0.230	0.040	mg/kg	0.400		57.6	33.9-127	0.459	13.1	
Acenaphthylene	0.235	0.040	mg/kg	0.400		58.7	34-126	1.90	14.2	
Anthracene	0.237	0.040	mg/kg	0.400		59.2	39.4-124	1.55	16.3	
Benzo[a]anthracene	0.228	0.040	mg/kg	0.400		57.0	40.6-124	0.475	9.66	
Benzo[a]pyrene	0.253	0.040	mg/kg	0.400		63.2	38.3-127	0.871	11.8	
Benzo[b]fluoranthene	0.256	0.040	mg/kg	0.400		63.9	34.4-130	2.33	25.2	
Benzo[g,h,i]perylene	0.241	0.040	mg/kg	0.400		60.2	29.9-134	1.79	19	
Benzo[k]fluoranthene	0.247	0.040	mg/kg	0.400		61.6	35.5-135	2.03	27.3	
Carbazole	0.235	0.040	mg/kg	0.400		58.8	31.9-133	0.601	20.8	
Chrysene	0.232	0.040	mg/kg	0.400		58.0	41.3-126	0.327	10.6	
Dibenz[a,h]anthracene	0.248	0.040	mg/kg	0.400		62.1	35-132	0.918	15	
Fluoranthene	0.239	0.040	mg/kg	0.400		59.7	37.2-123	3.56	18.3	
Fluorene	0.230	0.040	mg/kg	0.400		57.6	35.4-127	0.416	14.5	
Indeno[1,2,3-cd]pyrene	0.251	0.040	mg/kg	0.400		62.9	33.7-132	3.28	14.9	
Naphthalene	0.251	0.040	mg/kg	0.400		62.7	28.3-127	0.0758	11.3	
<i>Surrogate: Nitrobenzene-d5</i>	<i>1.07</i>		mg/kg	<i>2.00</i>		<i>53.5</i>	<i>10.8-154</i>			
Phenanthrene	0.232	0.040	mg/kg	0.400		58.0	40.2-125	2.65	13.7	
Pyrene	0.232	0.040	mg/kg	0.400		57.9	34.3-133	3.58	22.4	
<i>Surrogate: Terphenyl-d14</i>	<i>1.21</i>		mg/kg	<i>2.00</i>		<i>60.5</i>	<i>27-170</i>			

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BP America 380 Airport Rd. Durango CO, 81303	Project: Table 910 Project Name / Number: Leroy McCaw B#1 Project Manager: Steve Moskal	Reported: 04/15/19 12:27
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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 recovery.
- J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- 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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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ANALYSIS REQUEST

Company Name: BP America Production Co.
 Project Manager: Steve Moskal
 Address: 3rd 1199 Main Ave Suite 101
 City: Durango State: CO Zip: 81301
 Phone #: 1505 830-9179 Email: steven.moskal@bpc.com
 Additional Report To:
 Project Name: Leroy McLaw B#1
 Project Number:
 Sampler Name (Print): Emma Miller
 FOR LAB USE ONLY

Lab I.D.	Sample Name or Location	Collected		Matrix (check one)					# of containers					COGCC Table 910-1		ANALYSIS REQUEST	
		Date	Time	GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	OTHER :	No preservation (general)	HNO ³	HCl	H ₂ SO ₄	Other:	Other:	APF	BTEX/TPH
1907-026-01	SS01	4/2/19	1225					X		3					X		
- 02	SS02		1250					X		3					X		
- 03	SS03		1325					X		3					X		
- 04	SS04		1505					X		3					X		
- 05	WS01		1400					X		1					X		
- 06	WS02		1500	X						1					X		

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Relinquished By: Date: 10/26/18 Received By: 4/2/19
 Relinquished By: 1610 Date: 4/2/19 Received By: Emma

Relinquished By: _____ Date: _____ Received By: _____
 Relinquished By: _____ Date: _____ Received By: _____

Delivered By: (Circle One) UPS - FedEx - Kangaroo - Other: Temperature at receipt: 11.5/11.3 C CHECKED BY: me

ADDITIONAL REMARKS: _____
 Report to State? (Circle) No

* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.
 † GAL cannot always accept verbal changes. Please fax or email written change requests.