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20 March 2019

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

Enclosed are the results of analyses for samples received by the laboratory on 03/14/19 14:55. 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'. The script is cursive and fluid, with the first name 'Debbie' and last name 'Zufelt' clearly distinguishable.

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 - less PAH, metals  
Project Name / Number: Thomas Jacquez E #1  
Project Manager: Steve Moskal

Reported:  
03/20/19 14:52

### ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  | Notes |
|-----------|---------------|--------|----------------|----------------|-------|
| SS 57     | 1903158-01    | Solid  | 03/14/19 09:20 | 03/14/19 14:55 |       |
| SS 58     | 1903158-02    | Solid  | 03/14/19 09:25 | 03/14/19 14:55 |       |
| SS 59     | 1903158-03    | Solid  | 03/14/19 09:55 | 03/14/19 14:55 |       |
| SS 60     | 1903158-04    | Solid  | 03/14/19 10:00 | 03/14/19 14:55 |       |
| SS 61     | 1903158-05    | Solid  | 03/14/19 10:25 | 03/14/19 14:55 |       |
| SS 62     | 1903158-06    | Solid  | 03/14/19 10:30 | 03/14/19 14:55 |       |
| SS 63     | 1903158-07    | Solid  | 03/14/19 11:00 | 03/14/19 14:55 |       |
| SS 64     | 1903158-08    | Solid  | 03/14/19 11:05 | 03/14/19 14:55 |       |
| SS 65     | 1903158-09    | Solid  | 03/14/19 11:50 | 03/14/19 14:55 |       |
| SS 66     | 1903158-10    | Solid  | 03/14/19 11:55 | 03/14/19 14:55 |       |
| SS 67     | 1903158-11    | Solid  | 03/14/19 12:10 | 03/14/19 14:55 |       |
| SS 68     | 1903158-12    | Solid  | 03/14/19 12:15 | 03/14/19 14:55 |       |
| SS 69     | 1903158-13    | Solid  | 03/14/19 13:00 | 03/14/19 14:55 |       |
| SS 70     | 1903158-14    | Solid  | 03/14/19 13:05 | 03/14/19 14:55 |       |
| SS 71     | 1903158-15    | Solid  | 03/14/19 13:50 | 03/14/19 14:55 |       |
| SS 72     | 1903158-16    | Solid  | 03/14/19 13:55 | 03/14/19 14:55 |       |

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Project Manager: Steve Moskal

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03/20/19 14:52

### SS 57

#### 1903158-01 (Solid)

| Analyte | Result | RL | MDL | Units | Dilution | Analyzed | Method | Notes | Analyst |
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|

#### Saturated Paste Extraction

|              |      |       |       |          |   |          |              |  |     |
|--------------|------|-------|-------|----------|---|----------|--------------|--|-----|
| Calcium      | 118  | 0.100 | 0.013 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| Conductivity | 724  |       |       | umhos/cm | 1 | 03/19/19 | ASA#9 10-3.3 |  | JDA |
| Magnesium    | 17.5 | 0.100 | 0.019 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| pH           | 7.51 |       |       | pH Units | 1 | 03/19/19 | ASA#9 12-2.6 |  | JDA |
| SAR          | 0.58 |       |       | No Unit  | 1 | 03/20/19 | Calculation  |  | AES |
| Sodium       | 25.4 | 1.00  | 0.367 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |

#### Subcontracted -- Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

|                |        |       |       |       |    |          |       |  |    |
|----------------|--------|-------|-------|-------|----|----------|-------|--|----|
| Benzene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Toluene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Ethylbenzene*  | <0.050 | 0.050 | 0.004 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Total Xylenes* | <0.150 | 0.150 | 0.010 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Total BTEX     | <0.300 | 0.300 | 0.018 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |

Surrogate: 4-Bromofluorobenzene (PID) 92.7 % 73.3-129 03/19/19 8021B ms

#### Petroleum Hydrocarbons by GC FID

|                  |       |      |      |       |   |          |       |  |    |
|------------------|-------|------|------|-------|---|----------|-------|--|----|
| GRO C6-C10*      | <10.0 | 10.0 | 5.30 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| DRO >C10-C28*    | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |

Surrogate: 1-Chlorooctane 108 % 41-142 03/19/19 8015B MS

Surrogate: 1-Chlorooctadecane 113 % 37.6-147 03/19/19 8015B MS

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Reported:  
03/20/19 14:52

## SS 58

### 1903158-02 (Solid)

| Analyte | Result | RL | MDL | Units | Dilution | Analyzed | Method | Notes | Analyst |
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|

#### Saturated Paste Extraction

|              |      |       |       |          |   |          |              |  |     |
|--------------|------|-------|-------|----------|---|----------|--------------|--|-----|
| Calcium      | 209  | 0.200 | 0.026 | mg/L     | 2 | 03/20/19 | EPA200.7     |  | AES |
| Conductivity | 1050 |       |       | umhos/cm | 1 | 03/19/19 | ASA#9 10-3.3 |  | JDA |
| Magnesium    | 24.6 | 0.200 | 0.038 | mg/L     | 2 | 03/20/19 | EPA200.7     |  | AES |
| pH           | 7.38 |       |       | pH Units | 1 | 03/19/19 | ASA#9 12-2.6 |  | JDA |
| SAR          | 0.63 |       |       | No Unit  | 1 | 03/20/19 | Calculation  |  | AES |
| Sodium       | 35.9 | 2.00  | 0.734 | mg/L     | 2 | 03/20/19 | EPA200.7     |  | AES |

#### Subcontracted -- Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

|                |        |       |       |       |    |          |       |  |    |
|----------------|--------|-------|-------|-------|----|----------|-------|--|----|
| Benzene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Toluene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Ethylbenzene*  | <0.050 | 0.050 | 0.004 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Total Xylenes* | <0.150 | 0.150 | 0.010 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Total BTEX     | <0.300 | 0.300 | 0.018 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |

Surrogate: 4-Bromofluorobenzene (PID) 92.6 % 73.3-129 03/19/19 8021B ms

#### Petroleum Hydrocarbons by GC FID

|                  |       |      |      |       |   |          |       |  |    |
|------------------|-------|------|------|-------|---|----------|-------|--|----|
| GRO C6-C10*      | <10.0 | 10.0 | 5.30 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| DRO >C10-C28*    | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |

Surrogate: 1-Chlorooctane 99.9 % 41-142 03/19/19 8015B MS

Surrogate: 1-Chlorooctadecane 104 % 37.6-147 03/19/19 8015B MS

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Project Name / Number: Thomas Jacquez E #1  
Project Manager: Steve Moskal

Reported:  
03/20/19 14:52

## SS 59

### 1903158-03 (Solid)

| Analyte | Result | RL | MDL | Units | Dilution | Analyzed | Method | Notes | Analyst |
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|

#### Saturated Paste Extraction

|              |      |       |       |          |   |          |              |  |     |
|--------------|------|-------|-------|----------|---|----------|--------------|--|-----|
| Calcium      | 185  | 0.200 | 0.026 | mg/L     | 2 | 03/20/19 | EPA200.7     |  | AES |
| Conductivity | 1050 |       |       | umhos/cm | 1 | 03/19/19 | ASA#9 10-3.3 |  | JDA |
| Magnesium    | 26.7 | 0.200 | 0.038 | mg/L     | 2 | 03/20/19 | EPA200.7     |  | AES |
| pH           | 7.40 |       |       | pH Units | 1 | 03/19/19 | ASA#9 12-2.6 |  | JDA |
| SAR          | 0.48 |       |       | No Unit  | 1 | 03/20/19 | Calculation  |  | AES |
| Sodium       | 26.5 | 2.00  | 0.734 | mg/L     | 2 | 03/20/19 | EPA200.7     |  | AES |

#### Subcontracted -- Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

|                |        |       |       |       |    |          |       |  |    |
|----------------|--------|-------|-------|-------|----|----------|-------|--|----|
| Benzene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Toluene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Ethylbenzene*  | <0.050 | 0.050 | 0.004 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Total Xylenes* | <0.150 | 0.150 | 0.010 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Total BTEX     | <0.300 | 0.300 | 0.018 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |

Surrogate: 4-Bromofluorobenzene (PID) 91.1 % 73.3-129 03/19/19 8021B ms

#### Petroleum Hydrocarbons by GC FID

|                  |       |      |      |       |   |          |       |  |    |
|------------------|-------|------|------|-------|---|----------|-------|--|----|
| GRO C6-C10*      | <10.0 | 10.0 | 5.30 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| DRO >C10-C28*    | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |

Surrogate: 1-Chlorooctane 102 % 41-142 03/19/19 8015B MS

Surrogate: 1-Chlorooctadecane 105 % 37.6-147 03/19/19 8015B MS

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Project: Table 910 - less PAH, metals  
Project Name / Number: Thomas Jacquez E #1  
Project Manager: Steve Moskal

Reported:  
03/20/19 14:52

## SS 60

### 1903158-04 (Solid)

| Analyte | Result | RL | MDL | Units | Dilution | Analyzed | Method | Notes | Analyst |
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|

#### Saturated Paste Extraction

|              |      |       |       |          |   |          |              |  |     |
|--------------|------|-------|-------|----------|---|----------|--------------|--|-----|
| Calcium      | 88.2 | 0.100 | 0.013 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| Conductivity | 580  |       |       | umhos/cm | 1 | 03/19/19 | ASA#9 10-3.3 |  | JDA |
| Magnesium    | 13.8 | 0.100 | 0.019 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| pH           | 7.47 |       |       | pH Units | 1 | 03/19/19 | ASA#9 12-2.6 |  | JDA |
| SAR          | 0.60 |       |       | No Unit  | 1 | 03/20/19 | Calculation  |  | AES |
| Sodium       | 23.1 | 1.00  | 0.367 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |

#### Subcontracted -- Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

|                |        |       |       |       |    |          |       |  |    |
|----------------|--------|-------|-------|-------|----|----------|-------|--|----|
| Benzene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Toluene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Ethylbenzene*  | <0.050 | 0.050 | 0.004 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Total Xylenes* | <0.150 | 0.150 | 0.010 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Total BTEX     | <0.300 | 0.300 | 0.018 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |

Surrogate: 4-Bromofluorobenzene (PID) 94.3 % 73.3-129 03/19/19 8021B ms

#### Petroleum Hydrocarbons by GC FID

|                  |       |      |      |       |   |          |       |  |    |
|------------------|-------|------|------|-------|---|----------|-------|--|----|
| GRO C6-C10*      | <10.0 | 10.0 | 5.30 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| DRO >C10-C28*    | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |

Surrogate: 1-Chlorooctane 100 % 41-142 03/19/19 8015B MS

Surrogate: 1-Chlorooctadecane 103 % 37.6-147 03/19/19 8015B MS

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Project Name / Number: Thomas Jacquez E #1  
Project Manager: Steve Moskal

Reported:  
03/20/19 14:52

## SS 61

### 1903158-05 (Solid)

| Analyte | Result | RL | MDL | Units | Dilution | Analyzed | Method | Notes | Analyst |
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|

#### Saturated Paste Extraction

|              |      |       |       |          |   |          |              |  |     |
|--------------|------|-------|-------|----------|---|----------|--------------|--|-----|
| Calcium      | 182  | 0.100 | 0.013 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| Conductivity | 970  |       |       | umhos/cm | 1 | 03/19/19 | ASA#9 10-3.3 |  | JDA |
| Magnesium    | 20.4 | 0.100 | 0.019 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| pH           | 7.50 |       |       | pH Units | 1 | 03/19/19 | ASA#9 12-2.6 |  | JDA |
| SAR          | 0.57 |       |       | No Unit  | 1 | 03/20/19 | Calculation  |  | AES |
| Sodium       | 30.2 | 1.00  | 0.367 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |

#### Subcontracted -- Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

|                |        |       |       |       |    |          |       |  |    |
|----------------|--------|-------|-------|-------|----|----------|-------|--|----|
| Benzene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Toluene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Ethylbenzene*  | <0.050 | 0.050 | 0.004 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Total Xylenes* | <0.150 | 0.150 | 0.010 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Total BTEX     | <0.300 | 0.300 | 0.018 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |

Surrogate: 4-Bromofluorobenzene (PID) 90.9 % 73.3-129 03/19/19 8021B ms

#### Petroleum Hydrocarbons by GC FID

|                  |       |      |      |       |   |          |       |  |    |
|------------------|-------|------|------|-------|---|----------|-------|--|----|
| GRO C6-C10*      | <10.0 | 10.0 | 5.30 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| DRO >C10-C28*    | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |

Surrogate: 1-Chlorooctane 104 % 41-142 03/19/19 8015B MS

Surrogate: 1-Chlorooctadecane 106 % 37.6-147 03/19/19 8015B MS

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Project Manager: Steve Moskal

Reported:  
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## SS 62

### 1903158-06 (Solid)

| Analyte | Result | RL | MDL | Units | Dilution | Analyzed | Method | Notes | Analyst |
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|

#### Saturated Paste Extraction

|              |      |       |       |          |   |          |              |  |     |
|--------------|------|-------|-------|----------|---|----------|--------------|--|-----|
| Calcium      | 339  | 0.200 | 0.026 | mg/L     | 2 | 03/20/19 | EPA200.7     |  | AES |
| Conductivity | 1610 |       |       | umhos/cm | 1 | 03/19/19 | ASA#9 10-3.3 |  | JDA |
| Magnesium    | 31.7 | 0.200 | 0.038 | mg/L     | 2 | 03/20/19 | EPA200.7     |  | AES |
| pH           | 7.29 |       |       | pH Units | 1 | 03/19/19 | ASA#9 12-2.6 |  | JDA |
| SAR          | 0.45 |       |       | No Unit  | 1 | 03/20/19 | Calculation  |  | AES |
| Sodium       | 32.5 | 2.00  | 0.734 | mg/L     | 2 | 03/20/19 | EPA200.7     |  | AES |

#### Subcontracted -- Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

|                                       |        |       |       |        |          |          |       |  |    |
|---------------------------------------|--------|-------|-------|--------|----------|----------|-------|--|----|
| Benzene*                              | <0.050 | 0.050 | 0.002 | mg/kg  | 50       | 03/19/19 | 8021B |  | ms |
| Toluene*                              | <0.050 | 0.050 | 0.002 | mg/kg  | 50       | 03/19/19 | 8021B |  | ms |
| Ethylbenzene*                         | <0.050 | 0.050 | 0.004 | mg/kg  | 50       | 03/19/19 | 8021B |  | ms |
| Total Xylenes*                        | <0.150 | 0.150 | 0.010 | mg/kg  | 50       | 03/19/19 | 8021B |  | ms |
| Total BTEX                            | <0.300 | 0.300 | 0.018 | mg/kg  | 50       | 03/19/19 | 8021B |  | ms |
| Surrogate: 4-Bromofluorobenzene (PID) |        |       |       | 92.9 % | 73.3-129 | 03/19/19 | 8021B |  | ms |

#### Petroleum Hydrocarbons by GC FID

|                               |       |      |      |        |          |          |       |  |    |
|-------------------------------|-------|------|------|--------|----------|----------|-------|--|----|
| GRO C6-C10*                   | <10.0 | 10.0 | 5.30 | mg/kg  | 1        | 03/19/19 | 8015B |  | MS |
| DRO >C10-C28*                 | <10.0 | 10.0 | 1.56 | mg/kg  | 1        | 03/19/19 | 8015B |  | MS |
| EXT DRO >C28-C36              | <10.0 | 10.0 | 1.56 | mg/kg  | 1        | 03/19/19 | 8015B |  | MS |
| Surrogate: 1-Chlorooctane     |       |      |      | 95.6 % | 41-142   | 03/19/19 | 8015B |  | MS |
| Surrogate: 1-Chlorooctadecane |       |      |      | 100 %  | 37.6-147 | 03/19/19 | 8015B |  | MS |

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BP America  
380 Airport Rd.  
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Project: Table 910 - less PAH, metals  
Project Name / Number: Thomas Jacquez E #1  
Project Manager: Steve Moskal

Reported:  
03/20/19 14:52

### SS 63

#### 1903158-07 (Solid)

| Analyte | Result | RL | MDL | Units | Dilution | Analyzed | Method | Notes | Analyst |
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|

#### Saturated Paste Extraction

|              |      |       |       |          |   |          |              |  |     |
|--------------|------|-------|-------|----------|---|----------|--------------|--|-----|
| Calcium      | 100  | 0.100 | 0.013 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| Conductivity | 624  |       |       | umhos/cm | 1 | 03/19/19 | ASA#9 10-3.3 |  | JDA |
| Magnesium    | 14.5 | 0.100 | 0.019 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| pH           | 7.50 |       |       | pH Units | 1 | 03/19/19 | ASA#9 12-2.6 |  | JDA |
| SAR          | 0.53 |       |       | No Unit  | 1 | 03/20/19 | Calculation  |  | AES |
| Sodium       | 21.4 | 1.00  | 0.367 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |

#### Subcontracted -- Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

|                |        |       |       |       |    |          |       |  |    |
|----------------|--------|-------|-------|-------|----|----------|-------|--|----|
| Benzene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Toluene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Ethylbenzene*  | <0.050 | 0.050 | 0.004 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Total Xylenes* | <0.150 | 0.150 | 0.010 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Total BTEX     | <0.300 | 0.300 | 0.018 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |

Surrogate: 4-Bromofluorobenzene (PID) 92.3 % 73.3-129 03/19/19 8021B ms

#### Petroleum Hydrocarbons by GC FID

|                  |       |      |      |       |   |          |       |  |    |
|------------------|-------|------|------|-------|---|----------|-------|--|----|
| GRO C6-C10*      | <10.0 | 10.0 | 5.30 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| DRO >C10-C28*    | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |

Surrogate: 1-Chlorooctane 101 % 41-142 03/19/19 8015B MS

Surrogate: 1-Chlorooctadecane 105 % 37.6-147 03/19/19 8015B MS

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BP America  
380 Airport Rd.  
Durango CO, 81303Project: Table 910 - less PAH, metals  
Project Name / Number: Thomas Jacquez E #1  
Project Manager: Steve MoskalReported:  
03/20/19 14:52

## SS 64

## 1903158-08 (Solid)

| Analyte | Result | RL | MDL | Units | Dilution | Analyzed | Method | Notes | Analyst |
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|

## Saturated Paste Extraction

|              |      |       |       |          |   |          |              |  |     |
|--------------|------|-------|-------|----------|---|----------|--------------|--|-----|
| Calcium      | 207  | 0.200 | 0.026 | mg/L     | 2 | 03/20/19 | EPA200.7     |  | AES |
| Conductivity | 1100 |       |       | umhos/cm | 1 | 03/19/19 | ASA#9 10-3.3 |  | JDA |
| Magnesium    | 25.1 | 0.200 | 0.038 | mg/L     | 2 | 03/20/19 | EPA200.7     |  | AES |
| pH           | 7.44 |       |       | pH Units | 1 | 03/19/19 | ASA#9 12-2.6 |  | JDA |
| SAR          | 0.56 |       |       | No Unit  | 1 | 03/20/19 | Calculation  |  | AES |
| Sodium       | 32.3 | 2.00  | 0.734 | mg/L     | 2 | 03/20/19 | EPA200.7     |  | AES |

## Subcontracted -- Cardinal Laboratories

## Volatile Organic Compounds by EPA Method 8021

|                |        |       |       |       |    |          |       |  |    |
|----------------|--------|-------|-------|-------|----|----------|-------|--|----|
| Benzene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Toluene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Ethylbenzene*  | <0.050 | 0.050 | 0.004 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Total Xylenes* | <0.150 | 0.150 | 0.010 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Total BTEX     | <0.300 | 0.300 | 0.018 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |

Surrogate: 4-Bromofluorobenzene (PID) 91.8 % 73.3-129 03/19/19 8021B ms

## Petroleum Hydrocarbons by GC FID

|                  |       |      |      |       |   |          |       |  |    |
|------------------|-------|------|------|-------|---|----------|-------|--|----|
| GRO C6-C10*      | <10.0 | 10.0 | 5.30 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| DRO >C10-C28*    | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |

Surrogate: 1-Chlorooctane 98.6 % 41-142 03/19/19 8015B MS

Surrogate: 1-Chlorooctadecane 103 % 37.6-147 03/19/19 8015B MS

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Durango CO, 81303

Project: Table 910 - less PAH, metals  
Project Name / Number: Thomas Jacquez E #1  
Project Manager: Steve Moskal

Reported:  
03/20/19 14:52

**SS 65****1903158-09 (Solid)**

| Analyte | Result | RL | MDL | Units | Dilution | Analyzed | Method | Notes | Analyst |
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|

**Saturated Paste Extraction**

|              |      |       |       |          |   |          |              |  |     |
|--------------|------|-------|-------|----------|---|----------|--------------|--|-----|
| Calcium      | 133  | 0.100 | 0.013 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| Conductivity | 829  |       |       | umhos/cm | 1 | 03/19/19 | ASA#9 10-3.3 |  | JDA |
| Magnesium    | 19.9 | 0.100 | 0.019 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| pH           | 7.45 |       |       | pH Units | 1 | 03/19/19 | ASA#9 12-2.6 |  | JDA |
| SAR          | 0.55 |       |       | No Unit  | 1 | 03/20/19 | Calculation  |  | AES |
| Sodium       | 25.5 | 1.00  | 0.367 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |

**Subcontracted -- Cardinal Laboratories****Volatile Organic Compounds by EPA Method 8021**

|                |        |       |       |       |    |          |       |  |    |
|----------------|--------|-------|-------|-------|----|----------|-------|--|----|
| Benzene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Toluene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Ethylbenzene*  | <0.050 | 0.050 | 0.004 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Total Xylenes* | <0.150 | 0.150 | 0.010 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Total BTEX     | <0.300 | 0.300 | 0.018 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |

Surrogate: 4-Bromofluorobenzene (PID) 93.2 % 73.3-129 03/19/19 8021B ms

**Petroleum Hydrocarbons by GC FID**

|                  |       |      |      |       |   |          |       |  |    |
|------------------|-------|------|------|-------|---|----------|-------|--|----|
| GRO C6-C10*      | <10.0 | 10.0 | 5.30 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| DRO >C10-C28*    | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |

Surrogate: 1-Chlorooctane 104 % 41-142 03/19/19 8015B MS

Surrogate: 1-Chlorooctadecane 108 % 37.6-147 03/19/19 8015B MS

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380 Airport Rd.  
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Project: Table 910 - less PAH, metals  
Project Name / Number: Thomas Jacquez E #1  
Project Manager: Steve Moskal

Reported:  
03/20/19 14:52

## SS 66

### 1903158-10 (Solid)

| Analyte | Result | RL | MDL | Units | Dilution | Analyzed | Method | Notes | Analyst |
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|

#### Saturated Paste Extraction

|              |      |       |       |          |   |          |              |  |     |
|--------------|------|-------|-------|----------|---|----------|--------------|--|-----|
| Calcium      | 190  | 0.100 | 0.013 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| Conductivity | 1020 |       |       | umhos/cm | 1 | 03/19/19 | ASA#9 10-3.3 |  | JDA |
| Magnesium    | 23.4 | 0.100 | 0.019 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| pH           | 7.41 |       |       | pH Units | 1 | 03/19/19 | ASA#9 12-2.6 |  | JDA |
| SAR          | 0.47 |       |       | No Unit  | 1 | 03/20/19 | Calculation  |  | AES |
| Sodium       | 25.7 | 1.00  | 0.367 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |

#### Subcontracted -- Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

|                |        |       |       |       |    |          |       |  |    |
|----------------|--------|-------|-------|-------|----|----------|-------|--|----|
| Benzene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Toluene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Ethylbenzene*  | <0.050 | 0.050 | 0.004 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Total Xylenes* | <0.150 | 0.150 | 0.010 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |
| Total BTEX     | <0.300 | 0.300 | 0.018 | mg/kg | 50 | 03/19/19 | 8021B |  | ms |

Surrogate: 4-Bromofluorobenzene (PID) 93.5 % 73.3-129 03/19/19 8021B ms

#### Petroleum Hydrocarbons by GC FID

|                  |       |      |      |       |   |          |       |  |    |
|------------------|-------|------|------|-------|---|----------|-------|--|----|
| GRO C6-C10*      | <10.0 | 10.0 | 5.30 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| DRO >C10-C28*    | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |

Surrogate: 1-Chlorooctane 100 % 41-142 03/19/19 8015B MS

Surrogate: 1-Chlorooctadecane 105 % 37.6-147 03/19/19 8015B MS

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380 Airport Rd.  
Durango CO, 81303

Project: Table 910 - less PAH, metals  
Project Name / Number: Thomas Jacquez E #1  
Project Manager: Steve Moskal

Reported:  
03/20/19 14:52

**SS 67****1903158-11 (Solid)**

| Analyte | Result | RL | MDL | Units | Dilution | Analyzed | Method | Notes | Analyst |
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|

**Saturated Paste Extraction**

|              |      |       |       |          |   |          |              |  |     |
|--------------|------|-------|-------|----------|---|----------|--------------|--|-----|
| Calcium      | 82.7 | 0.100 | 0.013 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| Conductivity | 688  |       |       | umhos/cm | 1 | 03/19/19 | ASA#9 10-3.3 |  | JDA |
| Magnesium    | 14.7 | 0.100 | 0.019 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| pH           | 7.63 |       |       | pH Units | 1 | 03/19/19 | ASA#9 12-2.6 |  | JDA |
| SAR          | 0.53 |       |       | No Unit  | 1 | 03/20/19 | Calculation  |  | AES |
| Sodium       | 20.0 | 1.00  | 0.367 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |

**Subcontracted -- Cardinal Laboratories****Volatile Organic Compounds by EPA Method 8021**

|                |        |       |       |       |    |          |       |  |    |
|----------------|--------|-------|-------|-------|----|----------|-------|--|----|
| Benzene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Toluene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Ethylbenzene*  | <0.050 | 0.050 | 0.004 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Total Xylenes* | <0.150 | 0.150 | 0.010 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Total BTEX     | <0.300 | 0.300 | 0.018 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |

Surrogate: 4-Bromofluorobenzene (PID) 93.2 % 73.3-129 03/20/19 8021B ms

**Petroleum Hydrocarbons by GC FID**

|                  |       |      |      |       |   |          |       |  |    |
|------------------|-------|------|------|-------|---|----------|-------|--|----|
| GRO C6-C10*      | <10.0 | 10.0 | 5.30 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| DRO >C10-C28*    | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/19/19 | 8015B |  | MS |

Surrogate: 1-Chlorooctane 97.7 % 41-142 03/19/19 8015B MS

Surrogate: 1-Chlorooctadecane 102 % 37.6-147 03/19/19 8015B MS

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Project: Table 910 - less PAH, metals  
Project Name / Number: Thomas Jacquez E #1  
Project Manager: Steve Moskal

Reported:  
03/20/19 14:52

## SS 68

### 1903158-12 (Solid)

| Analyte | Result | RL | MDL | Units | Dilution | Analyzed | Method | Notes | Analyst |
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|

#### Saturated Paste Extraction

|              |      |       |       |          |   |          |              |  |     |
|--------------|------|-------|-------|----------|---|----------|--------------|--|-----|
| Calcium      | 70.1 | 0.100 | 0.013 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| Conductivity | 550  |       |       | umhos/cm | 1 | 03/19/19 | ASA#9 10-3.3 |  | JDA |
| Magnesium    | 12.1 | 0.100 | 0.019 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| pH           | 7.60 |       |       | pH Units | 1 | 03/19/19 | ASA#9 12-2.6 |  | JDA |
| SAR          | 0.54 |       |       | No Unit  | 1 | 03/20/19 | Calculation  |  | AES |
| Sodium       | 18.6 | 1.00  | 0.367 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |

#### Subcontracted -- Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

|                |        |       |       |       |    |          |       |  |    |
|----------------|--------|-------|-------|-------|----|----------|-------|--|----|
| Benzene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Toluene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Ethylbenzene*  | <0.050 | 0.050 | 0.004 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Total Xylenes* | <0.150 | 0.150 | 0.010 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Total BTEX     | <0.300 | 0.300 | 0.018 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |

Surrogate: 4-Bromofluorobenzene (PID) 93.0 % 73.3-129 03/20/19 8021B ms

#### Petroleum Hydrocarbons by GC FID

|                  |       |      |      |       |   |          |       |  |    |
|------------------|-------|------|------|-------|---|----------|-------|--|----|
| GRO C6-C10*      | <10.0 | 10.0 | 5.30 | mg/kg | 1 | 03/20/19 | 8015B |  | MS |
| DRO >C10-C28*    | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/20/19 | 8015B |  | MS |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/20/19 | 8015B |  | MS |

Surrogate: 1-Chlorooctane 103 % 41-142 03/20/19 8015B MS

Surrogate: 1-Chlorooctadecane 108 % 37.6-147 03/20/19 8015B MS

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Project: Table 910 - less PAH, metals  
Project Name / Number: Thomas Jacquez E #1  
Project Manager: Steve Moskal

Reported:  
03/20/19 14:52

## SS 69

### 1903158-13 (Solid)

| Analyte | Result | RL | MDL | Units | Dilution | Analyzed | Method | Notes | Analyst |
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|

#### Saturated Paste Extraction

|              |      |       |       |          |   |          |              |  |     |
|--------------|------|-------|-------|----------|---|----------|--------------|--|-----|
| Calcium      | 77.9 | 0.100 | 0.013 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| Conductivity | 530  |       |       | umhos/cm | 1 | 03/19/19 | ASA#9 10-3.3 |  | JDA |
| Magnesium    | 10.1 | 0.100 | 0.019 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| pH           | 7.59 |       |       | pH Units | 1 | 03/19/19 | ASA#9 12-2.6 |  | JDA |
| SAR          | 0.55 |       |       | No Unit  | 1 | 03/20/19 | Calculation  |  | AES |
| Sodium       | 19.3 | 1.00  | 0.367 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |

#### Subcontracted -- Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

|                |        |       |       |       |    |          |       |  |    |
|----------------|--------|-------|-------|-------|----|----------|-------|--|----|
| Benzene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Toluene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Ethylbenzene*  | <0.050 | 0.050 | 0.004 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Total Xylenes* | <0.150 | 0.150 | 0.010 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Total BTEX     | <0.300 | 0.300 | 0.018 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |

Surrogate: 4-Bromofluorobenzene (PID) 91.3 % 73.3-129 03/20/19 8021B ms

#### Petroleum Hydrocarbons by GC FID

|                  |       |      |      |       |   |          |       |  |    |
|------------------|-------|------|------|-------|---|----------|-------|--|----|
| GRO C6-C10*      | <10.0 | 10.0 | 5.30 | mg/kg | 1 | 03/20/19 | 8015B |  | MS |
| DRO >C10-C28*    | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/20/19 | 8015B |  | MS |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/20/19 | 8015B |  | MS |

Surrogate: 1-Chlorooctane 104 % 41-142 03/20/19 8015B MS

Surrogate: 1-Chlorooctadecane 110 % 37.6-147 03/20/19 8015B MS

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Debbie Zufelt, Reports Manager

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BP America  
380 Airport Rd.  
Durango CO, 81303

Project: Table 910 - less PAH, metals  
Project Name / Number: Thomas Jacquez E #1  
Project Manager: Steve Moskal

Reported:  
03/20/19 14:52

## SS 70

### 1903158-14 (Solid)

| Analyte | Result | RL | MDL | Units | Dilution | Analyzed | Method | Notes | Analyst |
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|

#### Saturated Paste Extraction

|              |      |       |       |          |   |          |              |  |     |
|--------------|------|-------|-------|----------|---|----------|--------------|--|-----|
| Calcium      | 142  | 0.100 | 0.013 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| Conductivity | 852  |       |       | umhos/cm | 1 | 03/19/19 | ASA#9 10-3.3 |  | JDA |
| Magnesium    | 18.4 | 0.100 | 0.019 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| pH           | 7.56 |       |       | pH Units | 1 | 03/19/19 | ASA#9 12-2.6 |  | JDA |
| SAR          | 0.44 |       |       | No Unit  | 1 | 03/20/19 | Calculation  |  | AES |
| Sodium       | 20.8 | 1.00  | 0.367 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |

#### Subcontracted -- Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

|                |        |       |       |       |    |          |       |  |    |
|----------------|--------|-------|-------|-------|----|----------|-------|--|----|
| Benzene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Toluene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Ethylbenzene*  | <0.050 | 0.050 | 0.004 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Total Xylenes* | <0.150 | 0.150 | 0.010 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Total BTEX     | <0.300 | 0.300 | 0.018 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |

Surrogate: 4-Bromofluorobenzene (PID) 93.3 % 73.3-129 03/20/19 8021B ms

#### Petroleum Hydrocarbons by GC FID

|                  |       |      |      |       |   |          |       |  |    |
|------------------|-------|------|------|-------|---|----------|-------|--|----|
| GRO C6-C10*      | <10.0 | 10.0 | 5.30 | mg/kg | 1 | 03/20/19 | 8015B |  | MS |
| DRO >C10-C28*    | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/20/19 | 8015B |  | MS |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/20/19 | 8015B |  | MS |

Surrogate: 1-Chlorooctane 101 % 41-142 03/20/19 8015B MS

Surrogate: 1-Chlorooctadecane 106 % 37.6-147 03/20/19 8015B MS

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BP America  
380 Airport Rd.  
Durango CO, 81303

Project: Table 910 - less PAH, metals  
Project Name / Number: Thomas Jacquez E #1  
Project Manager: Steve Moskal

Reported:  
03/20/19 14:52

**SS 71****1903158-15 (Solid)**

| Analyte | Result | RL | MDL | Units | Dilution | Analyzed | Method | Notes | Analyst |
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|

**Saturated Paste Extraction**

|              |      |       |       |          |   |          |              |  |     |
|--------------|------|-------|-------|----------|---|----------|--------------|--|-----|
| Calcium      | 180  | 0.100 | 0.013 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| Conductivity | 956  |       |       | umhos/cm | 1 | 03/19/19 | ASA#9 10-3.3 |  | JDA |
| Magnesium    | 17.6 | 0.100 | 0.019 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| pH           | 7.35 |       |       | pH Units | 1 | 03/19/19 | ASA#9 12-2.6 |  | JDA |
| SAR          | 0.47 |       |       | No Unit  | 1 | 03/20/19 | Calculation  |  | AES |
| Sodium       | 24.8 | 1.00  | 0.367 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |

**Subcontracted -- Cardinal Laboratories****Volatile Organic Compounds by EPA Method 8021**

|                |        |       |       |       |    |          |       |  |    |
|----------------|--------|-------|-------|-------|----|----------|-------|--|----|
| Benzene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Toluene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Ethylbenzene*  | <0.050 | 0.050 | 0.004 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Total Xylenes* | <0.150 | 0.150 | 0.010 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Total BTEX     | <0.300 | 0.300 | 0.018 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |

Surrogate: 4-Bromofluorobenzene (PID) 92.2 % 73.3-129 03/20/19 8021B ms

**Petroleum Hydrocarbons by GC FID**

|                  |       |      |      |       |   |          |       |  |    |
|------------------|-------|------|------|-------|---|----------|-------|--|----|
| GRO C6-C10*      | <10.0 | 10.0 | 5.30 | mg/kg | 1 | 03/20/19 | 8015B |  | MS |
| DRO >C10-C28*    | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/20/19 | 8015B |  | MS |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/20/19 | 8015B |  | MS |

Surrogate: 1-Chlorooctane 105 % 41-142 03/20/19 8015B MS

Surrogate: 1-Chlorooctadecane 113 % 37.6-147 03/20/19 8015B MS

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BP America  
380 Airport Rd.  
Durango CO, 81303Project: Table 910 - less PAH, metals  
Project Name / Number: Thomas Jacquez E #1  
Project Manager: Steve MoskalReported:  
03/20/19 14:52

## SS 72

## 1903158-16 (Solid)

| Analyte | Result | RL | MDL | Units | Dilution | Analyzed | Method | Notes | Analyst |
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|
|---------|--------|----|-----|-------|----------|----------|--------|-------|---------|

## Saturated Paste Extraction

|              |      |       |       |          |   |          |              |  |     |
|--------------|------|-------|-------|----------|---|----------|--------------|--|-----|
| Calcium      | 92.2 | 0.100 | 0.013 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| Conductivity | 590  |       |       | umhos/cm | 1 | 03/19/19 | ASA#9 10-3.3 |  | JDA |
| Magnesium    | 13.8 | 0.100 | 0.019 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |
| pH           | 7.68 |       |       | pH Units | 1 | 03/19/19 | ASA#9 12-2.6 |  | JDA |
| SAR          | 0.30 |       |       | No Unit  | 1 | 03/20/19 | Calculation  |  | AES |
| Sodium       | 11.8 | 1.00  | 0.367 | mg/L     | 1 | 03/20/19 | EPA200.7     |  | AES |

## Subcontracted -- Cardinal Laboratories

## Volatile Organic Compounds by EPA Method 8021

|                |        |       |       |       |    |          |       |  |    |
|----------------|--------|-------|-------|-------|----|----------|-------|--|----|
| Benzene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Toluene*       | <0.050 | 0.050 | 0.002 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Ethylbenzene*  | <0.050 | 0.050 | 0.004 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Total Xylenes* | <0.150 | 0.150 | 0.010 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |
| Total BTEX     | <0.300 | 0.300 | 0.018 | mg/kg | 50 | 03/20/19 | 8021B |  | ms |

Surrogate: 4-Bromofluorobenzene (PID)

92.9 % 73.3-129

03/20/19

8021B

ms

## Petroleum Hydrocarbons by GC FID

|                  |       |      |      |       |   |          |       |  |    |
|------------------|-------|------|------|-------|---|----------|-------|--|----|
| GRO C6-C10*      | <10.0 | 10.0 | 5.30 | mg/kg | 1 | 03/20/19 | 8015B |  | MS |
| DRO >C10-C28*    | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/20/19 | 8015B |  | MS |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 1.56 | mg/kg | 1 | 03/20/19 | 8015B |  | MS |

Surrogate: 1-Chlorooctane

100 % 41-142

03/20/19

8015B

MS

Surrogate: 1-Chlorooctadecane

106 % 37.6-147

03/20/19

8015B

MS

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BP America  
380 Airport Rd.  
Durango CO, 81303

Project: Table 910 - less PAH, metals  
Project Name / Number: Thomas Jacquez E #1  
Project Manager: Steve Moskal

Reported:  
03/20/19 14:52

### Saturated Paste Extraction - Quality Control

| Analyte | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

#### Batch B903165 - Paste Extract

##### Blank (B903165-BLK1)

Prepared: 03/19/19 Analyzed: 03/20/19

|           |      |       |         |  |  |  |  |  |  |  |
|-----------|------|-------|---------|--|--|--|--|--|--|--|
| Calcium   | ND   | 0.100 | mg/L    |  |  |  |  |  |  |  |
| Magnesium | ND   | 0.100 | mg/L    |  |  |  |  |  |  |  |
| SAR       | 0.00 |       | No Unit |  |  |  |  |  |  |  |
| Sodium    | ND   | 1.00  | mg/L    |  |  |  |  |  |  |  |

##### Duplicate (B903165-DUP1)

Source: 1903158-10 Prepared: 03/19/19 Analyzed: 03/20/19

|           |      |       |         |  |      |  |  |       |    |  |
|-----------|------|-------|---------|--|------|--|--|-------|----|--|
| Calcium   | 194  | 0.100 | mg/L    |  | 190  |  |  | 1.80  | 20 |  |
| Magnesium | 23.6 | 0.100 | mg/L    |  | 23.4 |  |  | 0.812 | 20 |  |
| SAR       | 0.46 |       | No Unit |  | 0.47 |  |  | 2.15  | 20 |  |
| Sodium    | 25.6 | 1.00  | mg/L    |  | 25.7 |  |  | 0.221 | 20 |  |

#### Batch B903166 - Paste Extract

##### Duplicate (B903166-DUP1)

Source: 1903158-10 Prepared & Analyzed: 03/19/19

|    |      |  |          |  |      |  |  |      |    |  |
|----|------|--|----------|--|------|--|--|------|----|--|
| pH | 7.41 |  | pH Units |  | 7.41 |  |  | 0.00 | 20 |  |
|----|------|--|----------|--|------|--|--|------|----|--|

#### Batch B903167 - Paste Extract

##### Duplicate (B903167-DUP1)

Source: 1903158-10 Prepared & Analyzed: 03/19/19

|              |      |  |          |  |      |  |  |      |    |  |
|--------------|------|--|----------|--|------|--|--|------|----|--|
| Conductivity | 1030 |  | umhos/cm |  | 1020 |  |  | 1.08 | 20 |  |
|--------------|------|--|----------|--|------|--|--|------|----|--|

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BP America  
380 Airport Rd.  
Durango CO, 81303

Project: Table 910 - less PAH, metals  
Project Name / Number: Thomas Jacquez E #1  
Project Manager: Steve Moskal

Reported:  
03/20/19 14:52

### Volatile Organic Compounds by EPA Method 8021 - Quality Control

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

#### Batch 9031913 - Volatiles

##### Blank (9031913-BLK1)

Prepared &amp; Analyzed: 03/19/19

|                                       |        |       |       |       |  |      |          |  |  |  |
|---------------------------------------|--------|-------|-------|-------|--|------|----------|--|--|--|
| Surrogate: 4-Bromofluorobenzene (PID) | 0.0906 |       | mg/kg | 0.100 |  | 90.6 | 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 (9031913-BS1)

Prepared &amp; Analyzed: 03/19/19

|                                       |        |       |       |       |  |      |          |  |  |  |
|---------------------------------------|--------|-------|-------|-------|--|------|----------|--|--|--|
| Surrogate: 4-Bromofluorobenzene (PID) | 0.0888 |       | mg/kg | 0.100 |  | 88.8 | 73.3-129 |  |  |  |
| Benzene                               | 1.83   | 0.050 | mg/kg | 2.00  |  | 91.7 | 72.2-131 |  |  |  |
| Ethylbenzene                          | 1.76   | 0.050 | mg/kg | 2.00  |  | 87.9 | 68.9-126 |  |  |  |
| Toluene                               | 1.68   | 0.050 | mg/kg | 2.00  |  | 84.0 | 71.7-126 |  |  |  |
| Total Xylenes                         | 5.39   | 0.150 | mg/kg | 6.00  |  | 89.8 | 71.4-125 |  |  |  |

##### LCS Dup (9031913-BSD1)

Prepared &amp; Analyzed: 03/19/19

|                                       |        |       |       |       |  |      |          |       |      |  |
|---------------------------------------|--------|-------|-------|-------|--|------|----------|-------|------|--|
| Surrogate: 4-Bromofluorobenzene (PID) | 0.0887 |       | mg/kg | 0.100 |  | 88.7 | 73.3-129 |       |      |  |
| Benzene                               | 1.83   | 0.050 | mg/kg | 2.00  |  | 91.5 | 72.2-131 | 0.217 | 6.91 |  |
| Ethylbenzene                          | 1.78   | 0.050 | mg/kg | 2.00  |  | 89.1 | 68.9-126 | 1.33  | 7.88 |  |
| Toluene                               | 1.71   | 0.050 | mg/kg | 2.00  |  | 85.5 | 71.7-126 | 1.76  | 7.12 |  |
| Total Xylenes                         | 5.37   | 0.150 | mg/kg | 6.00  |  | 89.6 | 71.4-125 | 0.271 | 7.46 |  |

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BP America  
380 Airport Rd.  
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Project: Table 910 - less PAH, metals  
Project Name / Number: Thomas Jacquez E #1  
Project Manager: Steve Moskal

Reported:  
03/20/19 14:52

### Petroleum Hydrocarbons by GC FID - Quality Control

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

#### Batch 9031904 - General Prep - Organics

##### Blank (9031904-BLK1)

Prepared & Analyzed: 03/19/19

|                               |      |      |       |      |  |     |          |  |  |  |
|-------------------------------|------|------|-------|------|--|-----|----------|--|--|--|
| Surrogate: 1-Chlorooctadecane | 50.7 |      | mg/kg | 50.0 |  | 101 | 37.6-147 |  |  |  |
| Surrogate: 1-Chlorooctane     | 50.0 |      | mg/kg | 50.0 |  | 100 | 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 (9031904-BS1)

Prepared & Analyzed: 03/19/19

|                               |      |      |       |      |  |      |          |  |  |  |
|-------------------------------|------|------|-------|------|--|------|----------|--|--|--|
| Surrogate: 1-Chlorooctadecane | 50.5 |      | mg/kg | 50.0 |  | 101  | 37.6-147 |  |  |  |
| Surrogate: 1-Chlorooctane     | 52.7 |      | mg/kg | 50.0 |  | 105  | 41-142   |  |  |  |
| DRO >C10-C28                  | 169  | 10.0 | mg/kg | 200  |  | 84.7 | 72.9-138 |  |  |  |
| GRO C6-C10                    | 192  | 10.0 | mg/kg | 200  |  | 96.1 | 76.5-133 |  |  |  |
| Total TPH C6-C28              | 362  | 10.0 | mg/kg | 400  |  | 90.4 | 78-132   |  |  |  |

##### LCS Dup (9031904-BSD1)

Prepared & Analyzed: 03/19/19

|                               |      |      |       |      |  |      |          |      |      |  |
|-------------------------------|------|------|-------|------|--|------|----------|------|------|--|
| Surrogate: 1-Chlorooctadecane | 53.1 |      | mg/kg | 50.0 |  | 106  | 37.6-147 |      |      |  |
| Surrogate: 1-Chlorooctane     | 53.4 |      | mg/kg | 50.0 |  | 107  | 41-142   |      |      |  |
| DRO >C10-C28                  | 191  | 10.0 | mg/kg | 200  |  | 95.7 | 72.9-138 | 12.1 | 20.6 |  |
| GRO C6-C10                    | 202  | 10.0 | mg/kg | 200  |  | 101  | 76.5-133 | 4.74 | 20.6 |  |
| Total TPH C6-C28              | 393  | 10.0 | mg/kg | 400  |  | 98.2 | 78-132   | 8.28 | 18   |  |

### 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<br>*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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75 Suttle St Durango, CO 81303

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 2

Company Name: BP America Production Co.

Project Manager: Steve Moskal

Address: 1199 Main Ave Suite 101

City: Durango State: CO Zip: 81301

Phone #: (505) 330 9179 Email: steven.moskal@bpx.com

Additional Report To:

Project Name: Thomas Jacques E #1

Project Number:

Sampler Name (Print): Emma Millar

FOR LAB USE ONLY

Bill to (if different):

P.O. #:

Company:

Attn:

Address:

City:

State: Zip:

Phone #:

Fax or Email:

ANALYSIS REQUEST

Lab I.D.

Sample Name or Location

158

1903758-01

SS57

SS58

SS59

SS60

SS61

SS62

SS63

SS64

SS65

SS67

SS66

Date Time

3/14/19 0920

3/14/19 0925

3/14/19 0955

3/14/19 1000

3/14/19 1025

3/14/19 1030

3/14/19 1100

3/14/19 1105

3/14/19 1150

3/14/19 1155

Collected

Matrix (check one)

# of containers

GROUNDWATER  
SURFACEWATER  
WASTEWATER  
PRODUCEDWATER  
SOIL  
OTHER :  
No preservation (general)  
HNO<sub>3</sub>  
HCl  
H<sub>2</sub>SO<sub>4</sub>  
Other:  
Other:

See attached list of analytes

Relinquished By:

Date: 3/14/19

Received By:

emma millar

ADDITIONAL REMARKS:

Report to State? (Circle)

Yes

No

Relinquished By:

Date: 1455

Received By:

emma millar

Relinquished By:

Date: 1455

Received By:

emma millar

Relinquished By:

Date: 1455

Received By:

emma millar

Relinquished By:

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Date: 1455

Received By:

emma millar

RUSH ASAP

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



All samples will be analyzed for BTEX, TPH, SAR, pH, and EC.