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20 October 2016

Andy Hawk  
BP America  
380 Airport Rd.  
Durango, CO 81303  
RE: Table 910

Enclosed are the results of analyses for samples received by the laboratory on 10/07/16 12:45.  
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Debbie Zufelt". The signature is written in a cursive, flowing style.

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<br>380 Airport Rd.<br>Durango CO, 81303 | Project: Table 910<br>Project Name / Number: Perino WTS<br>Project Manager: Andy Hawk | Reported:<br>10/20/16 14:39 |
|--|---|-----------------------------|

**ANALYTICAL REPORT FOR SAMPLES**

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|-----------|---------------|--------|----------------|----------------|
| SS04      | 1610055-01    | Solid  | 10/07/16 08:15 | 10/07/16 12:45 |
| SS05      | 1610055-02    | Solid  | 10/07/16 08:20 | 10/07/16 12:45 |

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|  |   |                             |
|--|---|-----------------------------|
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|--|---|-----------------------------|

**SS04**

**1610055-01 (Solid)**

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

**General Chemistry**

|              |      |  |  |   |   |          |               |  |     |
|--------------|------|--|--|---|---|----------|---------------|--|-----|
| % Dry Solids | 85.2 |  |  | % | 1 | 10/13/16 | EPA160.3/1684 |  | BDV |
|--------------|------|--|--|---|---|----------|---------------|--|-----|

**Saturated Paste Extraction**

|              |      |       |       |          |   |          |              |  |     |
|--------------|------|-------|-------|----------|---|----------|--------------|--|-----|
| Calcium      | 82.0 | 0.250 | 0.014 | mg/L     | 5 | 10/18/16 | EPA200.7     |  | LLG |
| Conductivity | 2180 |       |       | umhos/cm | 1 | 10/18/16 | ASA#9 10-3.3 |  | BDV |
| Magnesium    | 14.7 | 5.00  | 0.095 | mg/L     | 5 | 10/18/16 | EPA200.7     |  | LLG |
| pH           | 7.95 |       |       | pH Units | 1 | 10/18/16 | ASA#9 12-2.6 |  | BDV |
| SAR          | 9.57 |       |       | No Unit  | 1 | 10/18/16 | Calculation  |  | LLG |
| Sodium       | 358  | 10.0  | 0.020 | mg/L     | 5 | 10/18/16 | EPA200.7     |  | LLG |

**Total Metals by ICP**

|          |       |      |       |           |     |          |       |  |     |
|----------|-------|------|-------|-----------|-----|----------|-------|--|-----|
| Barium   | 343   | 5.00 | 2.89  | mg/kg dry | 100 | 10/19/16 | 6010B |  | LLG |
| Cadmium  | <5.00 | 5.00 | 0.722 | mg/kg dry | 100 | 10/19/16 | 6010B |  | LLG |
| Chromium | 9.86  | 5.00 | 0.240 | mg/kg dry | 100 | 10/19/16 | 6010B |  | LLG |
| Copper   | 14.8  | 5.00 | 4.41  | mg/kg dry | 100 | 10/19/16 | 6010B |  | LLG |
| Lead     | 18.5  | 10.0 | 1.70  | mg/kg dry | 100 | 10/19/16 | 6010B |  | LLG |
| Nickel   | 13.4  | 5.00 | 0.621 | mg/kg dry | 100 | 10/19/16 | 6010B |  | LLG |
| Selenium | <20.0 | 20.0 | 8.16  | mg/kg dry | 100 | 10/19/16 | 6010B |  | LLG |
| Silver   | <5.00 | 5.00 | 0.231 | mg/kg dry | 100 | 10/19/16 | 6010B |  | LLG |
| Zinc     | 67.0  | 5.00 | 2.40  | mg/kg dry | 100 | 10/19/16 | 6010B |  | LLG |

**Dissolved Metals by ICP**

|       |        |       |       |      |   |          |          |  |     |
|-------|--------|-------|-------|------|---|----------|----------|--|-----|
| Boron | <0.600 | 0.600 | 0.105 | mg/L | 2 | 10/18/16 | EPA200.7 |  | LLG |
|-------|--------|-------|-------|------|---|----------|----------|--|-----|

**Total Metals by ICPMS**

|         |      |      |       |           |      |          |       |  |     |
|---------|------|------|-------|-----------|------|----------|-------|--|-----|
| Arsenic | 3.91 | 1.00 | 0.460 | mg/kg dry | 1000 | 10/14/16 | 6020A |  | LLG |
|---------|------|------|-------|-----------|------|----------|-------|--|-----|

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|  |   |                             |
|--|---|-----------------------------|
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|--|---|-----------------------------|

**SS04**

**1610055-01 (Solid)**

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

**Total Mercury by CVAA**

|         |        |       |        |           |     |          |         |  |     |
|---------|--------|-------|--------|-----------|-----|----------|---------|--|-----|
| Mercury | <0.117 | 0.117 | 0.0147 | mg/kg dry | 500 | 10/12/16 | EPA7471 |  | LLG |
|---------|--------|-------|--------|-----------|-----|----------|---------|--|-----|

Subcontracted -- Cardinal Laboratories

**Volatile Organic Compounds by EPA Method 8021**

|                       |              |       |       |       |    |          |       |  |    |
|-----------------------|--------------|-------|-------|-------|----|----------|-------|--|----|
| <b>Benzene*</b>       | <0.050       | 0.050 | 0.002 | mg/kg | 50 | 10/12/16 | 8021B |  | CK |
| <b>Toluene*</b>       | <b>0.512</b> | 0.050 | 0.002 | mg/kg | 50 | 10/12/16 | 8021B |  | CK |
| <b>Ethylbenzene*</b>  | <0.050       | 0.050 | 0.004 | mg/kg | 50 | 10/12/16 | 8021B |  | CK |
| <b>Total Xylenes*</b> | <0.150       | 0.150 | 0.010 | mg/kg | 50 | 10/12/16 | 8021B |  | CK |
| <b>Total BTEX</b>     | <b>0.512</b> | 0.300 | 0.018 | mg/kg | 50 | 10/12/16 | 8021B |  | CK |

Surrogate: 4-Bromofluorobenzene (PID) 99.9 % 73.6-140 10/12/16 8021B CK

**Petroleum Hydrocarbons by GC FID**

|                            |       |      |      |       |   |          |       |  |    |
|----------------------------|-------|------|------|-------|---|----------|-------|--|----|
| <b>GRO C6-C10</b>          | <10.0 | 10.0 | 3.53 | mg/kg | 1 | 10/12/16 | 8015B |  | CK |
| <b>DRO &gt;C10-C28</b>     | <10.0 | 10.0 | 2.04 | mg/kg | 1 | 10/12/16 | 8015B |  | CK |
| <b>EXT DRO &gt;C28-C35</b> | <10.0 | 10.0 | 2.04 | mg/kg | 1 | 10/12/16 | 8015B |  | CK |

Surrogate: 1-Chlorooctane 74.4 % 35-147 10/12/16 8015B CK

Surrogate: 1-Chlorooctadecane 88.0 % 28-171 10/12/16 8015B CK

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|--|---|-----------------------------|

**SS05**

**1610055-02 (Solid)**

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

**General Chemistry**

|              |      |  |  |   |   |          |               |  |     |
|--------------|------|--|--|---|---|----------|---------------|--|-----|
| % Dry Solids | 86.9 |  |  | % | 1 | 10/13/16 | EPA160.3/1684 |  | BDV |
|--------------|------|--|--|---|---|----------|---------------|--|-----|

**Saturated Paste Extraction**

|              |      |       |       |          |   |          |              |  |     |
|--------------|------|-------|-------|----------|---|----------|--------------|--|-----|
| Calcium      | 69.0 | 0.250 | 0.014 | mg/L     | 5 | 10/18/16 | EPA200.7     |  | LLG |
| Conductivity | 1410 |       |       | umhos/cm | 1 | 10/18/16 | ASA#9 10-3.3 |  | BDV |
| Magnesium    | 11.7 | 5.00  | 0.095 | mg/L     | 5 | 10/18/16 | EPA200.7     |  | LLG |
| pH           | 8.18 |       |       | pH Units | 1 | 10/18/16 | ASA#9 12-2.6 |  | BDV |
| SAR          | 6.71 |       |       | No Unit  | 1 | 10/18/16 | Calculation  |  | LLG |
| Sodium       | 229  | 10.0  | 0.020 | mg/L     | 5 | 10/18/16 | EPA200.7     |  | LLG |

**Total Metals by ICP**

|          |       |      |       |           |     |          |       |  |     |
|----------|-------|------|-------|-----------|-----|----------|-------|--|-----|
| Barium   | 310   | 5.00 | 2.89  | mg/kg dry | 100 | 10/19/16 | 6010B |  | LLG |
| Cadmium  | <5.00 | 5.00 | 0.722 | mg/kg dry | 100 | 10/19/16 | 6010B |  | LLG |
| Chromium | 9.66  | 5.00 | 0.240 | mg/kg dry | 100 | 10/19/16 | 6010B |  | LLG |
| Copper   | 12.3  | 5.00 | 4.41  | mg/kg dry | 100 | 10/19/16 | 6010B |  | LLG |
| Lead     | 16.5  | 10.0 | 1.70  | mg/kg dry | 100 | 10/19/16 | 6010B |  | LLG |
| Nickel   | 11.9  | 5.00 | 0.621 | mg/kg dry | 100 | 10/19/16 | 6010B |  | LLG |
| Selenium | <20.0 | 20.0 | 8.16  | mg/kg dry | 100 | 10/19/16 | 6010B |  | LLG |
| Silver   | <5.00 | 5.00 | 0.231 | mg/kg dry | 100 | 10/19/16 | 6010B |  | LLG |
| Zinc     | 56.9  | 5.00 | 2.40  | mg/kg dry | 100 | 10/19/16 | 6010B |  | LLG |

**Dissolved Metals by ICP**

|       |        |       |       |      |   |          |          |  |     |
|-------|--------|-------|-------|------|---|----------|----------|--|-----|
| Boron | <0.600 | 0.600 | 0.105 | mg/L | 2 | 10/18/16 | EPA200.7 |  | LLG |
|-------|--------|-------|-------|------|---|----------|----------|--|-----|

**Total Metals by ICPMS**

|         |      |      |       |           |      |          |       |  |     |
|---------|------|------|-------|-----------|------|----------|-------|--|-----|
| Arsenic | 3.98 | 1.00 | 0.460 | mg/kg dry | 1000 | 10/14/16 | 6020A |  | LLG |
|---------|------|------|-------|-----------|------|----------|-------|--|-----|

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|--|---|-----------------------------|

**SS05**

**1610055-02 (Solid)**

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

**Total Mercury by CVAA**

|         |        |       |        |           |     |          |         |  |     |
|---------|--------|-------|--------|-----------|-----|----------|---------|--|-----|
| Mercury | <0.115 | 0.115 | 0.0144 | mg/kg dry | 500 | 10/12/16 | EPA7471 |  | LLG |
|---------|--------|-------|--------|-----------|-----|----------|---------|--|-----|

Subcontracted -- **Cardinal Laboratories**

**Volatile Organic Compounds by EPA Method 8021**

|                       |              |       |       |       |    |          |       |  |    |
|-----------------------|--------------|-------|-------|-------|----|----------|-------|--|----|
| <b>Benzene*</b>       | <0.050       | 0.050 | 0.002 | mg/kg | 50 | 10/12/16 | 8021B |  | CK |
| <b>Toluene*</b>       | <b>0.548</b> | 0.050 | 0.002 | mg/kg | 50 | 10/12/16 | 8021B |  | CK |
| <b>Ethylbenzene*</b>  | <0.050       | 0.050 | 0.004 | mg/kg | 50 | 10/12/16 | 8021B |  | CK |
| <b>Total Xylenes*</b> | <0.150       | 0.150 | 0.010 | mg/kg | 50 | 10/12/16 | 8021B |  | CK |
| <b>Total BTEX</b>     | <b>0.548</b> | 0.300 | 0.018 | mg/kg | 50 | 10/12/16 | 8021B |  | CK |

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 73.6-140 10/12/16 8021B CK

**Petroleum Hydrocarbons by GC FID**

|                            |       |      |      |       |   |          |       |  |    |
|----------------------------|-------|------|------|-------|---|----------|-------|--|----|
| <b>GRO C6-C10</b>          | <10.0 | 10.0 | 3.53 | mg/kg | 1 | 10/12/16 | 8015B |  | CK |
| <b>DRO &gt;C10-C28</b>     | <10.0 | 10.0 | 2.04 | mg/kg | 1 | 10/12/16 | 8015B |  | CK |
| <b>EXT DRO &gt;C28-C35</b> | <10.0 | 10.0 | 2.04 | mg/kg | 1 | 10/12/16 | 8015B |  | CK |

Surrogate: 1-Chlorooctane 103 % 35-147 10/12/16 8015B CK

Surrogate: 1-Chlorooctadecane 111 % 28-171 10/12/16 8015B CK

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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 B610102 - General Prep - Wet Chem**

**Duplicate (B610102-DUP1)** Source: 1610081-01 Prepared & Analyzed: 10/13/16

|              |      |  |   |  |      |  |  |      |    |  |
|--------------|------|--|---|--|------|--|--|------|----|--|
| % Dry Solids | 75.9 |  | % |  | 77.2 |  |  | 1.70 | 20 |  |
|--------------|------|--|---|--|------|--|--|------|----|--|

**Saturated Paste Extraction - Quality Control**

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

**Batch B610131 - Paste Extract**

**Blank (B610131-BLK1)** Prepared & Analyzed: 10/18/16

|           |    |       |      |  |  |  |  |  |  |  |
|-----------|----|-------|------|--|--|--|--|--|--|--|
| Calcium   | ND | 0.050 | mg/L |  |  |  |  |  |  |  |
| Magnesium | ND | 1.00  | mg/L |  |  |  |  |  |  |  |
| Sodium    | ND | 2.00  | mg/L |  |  |  |  |  |  |  |

**Duplicate (B610131-DUP1)** Source: 1610057-02 Prepared & Analyzed: 10/18/16

|           |      |       |         |  |      |  |  |      |    |    |
|-----------|------|-------|---------|--|------|--|--|------|----|----|
| Calcium   | 32.4 | 0.250 | mg/L    |  | 26.6 |  |  | 19.7 | 20 |    |
| Magnesium | 6.61 | 5.00  | mg/L    |  | 5.03 |  |  | 27.1 | 20 | R2 |
| SAR       | 51.1 |       | No Unit |  | 46.3 |  |  | 9.89 | 20 |    |
| Sodium    | 1220 | 10.0  | mg/L    |  | 992  |  |  | 20.4 | 20 | R1 |

**Batch B610136 - General Prep - Wet Chem**

**Duplicate (B610136-DUP1)** Source: 1610057-02 Prepared & Analyzed: 10/18/16

|              |      |  |          |  |      |  |  |       |    |  |
|--------------|------|--|----------|--|------|--|--|-------|----|--|
| Conductivity | 4620 |  | umhos/cm |  | 4610 |  |  | 0.217 | 20 |  |
|--------------|------|--|----------|--|------|--|--|-------|----|--|

**Batch B610137 - General Prep - Wet Chem**

**Duplicate (B610137-DUP1)** Source: 1610057-02 Prepared & Analyzed: 10/18/16

|    |      |  |          |  |      |  |  |       |    |  |
|----|------|--|----------|--|------|--|--|-------|----|--|
| pH | 9.13 |  | pH Units |  | 9.08 |  |  | 0.549 | 20 |  |
|----|------|--|----------|--|------|--|--|-------|----|--|

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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 |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

**Batch B610147 - EPA 3050**

**Blank (B610147-BLK1)**

Prepared & Analyzed: 10/19/16

|          |    |       |           |  |  |  |  |  |  |  |
|----------|----|-------|-----------|--|--|--|--|--|--|--|
| Barium   | ND | 0.050 | mg/kg dry |  |  |  |  |  |  |  |
| Cadmium  | ND | 0.050 | mg/kg dry |  |  |  |  |  |  |  |
| Chromium | ND | 0.050 | mg/kg dry |  |  |  |  |  |  |  |
| Copper   | ND | 0.050 | mg/kg dry |  |  |  |  |  |  |  |
| Lead     | ND | 0.100 | mg/kg dry |  |  |  |  |  |  |  |
| Nickel   | ND | 0.050 | mg/kg dry |  |  |  |  |  |  |  |
| Selenium | ND | 0.200 | mg/kg dry |  |  |  |  |  |  |  |
| Silver   | ND | 0.050 | mg/kg dry |  |  |  |  |  |  |  |
| Zinc     | ND | 0.050 | mg/kg dry |  |  |  |  |  |  |  |

**LCS (B610147-BS1)**

Prepared & Analyzed: 10/19/16

|          |       |       |           |       |  |      |        |  |  |  |
|----------|-------|-------|-----------|-------|--|------|--------|--|--|--|
| Barium   | 1.97  | 0.050 | mg/kg dry | 2.00  |  | 98.3 | 85-115 |  |  |  |
| Cadmium  | 1.96  | 0.050 | mg/kg dry | 2.00  |  | 98.0 | 85-115 |  |  |  |
| Chromium | 2.04  | 0.050 | mg/kg dry | 2.00  |  | 102  | 85-115 |  |  |  |
| Copper   | 3.93  | 0.050 | mg/kg dry | 4.00  |  | 98.2 | 85-115 |  |  |  |
| Lead     | 1.94  | 0.100 | mg/kg dry | 2.00  |  | 97.2 | 85-115 |  |  |  |
| Nickel   | 1.99  | 0.050 | mg/kg dry | 2.00  |  | 99.4 | 85-115 |  |  |  |
| Selenium | 8.38  | 0.200 | mg/kg dry | 8.00  |  | 105  | 85-115 |  |  |  |
| Silver   | 0.091 | 0.050 | mg/kg dry | 0.100 |  | 91.3 | 85-115 |  |  |  |
| Zinc     | 1.91  | 0.050 | mg/kg dry | 2.00  |  | 95.4 | 85-115 |  |  |  |

**LCS Dup (B610147-BSD1)**

Prepared & Analyzed: 10/19/16

|          |       |       |           |       |  |      |        |       |    |  |
|----------|-------|-------|-----------|-------|--|------|--------|-------|----|--|
| Barium   | 1.93  | 0.050 | mg/kg dry | 2.00  |  | 96.6 | 85-115 | 1.76  | 20 |  |
| Cadmium  | 1.91  | 0.050 | mg/kg dry | 2.00  |  | 95.6 | 85-115 | 2.52  | 20 |  |
| Chromium | 1.99  | 0.050 | mg/kg dry | 2.00  |  | 99.4 | 85-115 | 2.55  | 20 |  |
| Copper   | 3.85  | 0.050 | mg/kg dry | 4.00  |  | 96.4 | 85-115 | 1.85  | 20 |  |
| Lead     | 1.94  | 0.100 | mg/kg dry | 2.00  |  | 97.1 | 85-115 | 0.103 | 20 |  |
| Nickel   | 1.97  | 0.050 | mg/kg dry | 2.00  |  | 98.4 | 85-115 | 1.00  | 20 |  |
| Selenium | 8.26  | 0.200 | mg/kg dry | 8.00  |  | 103  | 85-115 | 1.50  | 20 |  |
| Silver   | 0.090 | 0.050 | mg/kg dry | 0.100 |  | 90.0 | 85-115 | 1.44  | 20 |  |
| Zinc     | 1.89  | 0.050 | mg/kg dry | 2.00  |  | 94.5 | 85-115 | 0.981 | 20 |  |

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|  |   |                             |
|--|---|-----------------------------|
| BP America<br>380 Airport Rd.<br>Durango CO, 81303 | Project: Table 910<br>Project Name / Number: Perino WTS<br>Project Manager: Andy Hawk | Reported:<br>10/20/16 14:39 |
|--|---|-----------------------------|

**Dissolved Metals by ICP - Quality Control**

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

**Batch B610132 - Hot Water Soluble Metals Extract**

**Blank (B610132-BLK1)** Prepared & Analyzed: 10/18/16

Boron ND 0.600 mg/L

**Duplicate (B610132-DUP1)** Source: 1610057-02 Prepared & Analyzed: 10/18/16

Boron 0.758 0.600 mg/L 0.866 13.4 20

**Total Metals by ICPMS - Quality Control**

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

**Batch B610105 - EPA 3050M**

**Blank (B610105-BLK1)** Prepared & Analyzed: 10/14/16

Arsenic ND 0.0010 mg/kg dry

**LCS (B610105-BS1)** Prepared & Analyzed: 10/14/16

Arsenic 0.0589 0.0010 mg/kg dry 0.0500 118 80-120

**LCS Dup (B610105-BSD1)** Prepared & Analyzed: 10/14/16

Arsenic 0.0561 0.0010 mg/kg dry 0.0500 112 80-120 4.81 20

**Total Mercury by CVAA - Quality Control**

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

**Batch B610090 - EPA 245.1/7470**

**Blank (B610090-BLK1)** Prepared & Analyzed: 10/12/16

Mercury ND 0.0002 mg/kg wet

**LCS (B610090-BS1)** Prepared & Analyzed: 10/12/16

Mercury 0.0018 0.0002 mg/kg wet 0.00200 88.5 85-115

**LCS Dup (B610090-BSD1)** Prepared & Analyzed: 10/12/16

Mercury 0.0019 0.0002 mg/kg wet 0.00200 94.5 85-115 6.55 20

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*Debbie Zufelt*

Debbie Zufelt, Reports Manager



|  |   |                             |
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**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 6101104 - Volatiles**

**Blank (6101104-BLK1)**

Prepared: 10/11/16 Analyzed: 10/12/16

|                                       |    |       |       |        |  |      |          |  |  |  |
|---------------------------------------|----|-------|-------|--------|--|------|----------|--|--|--|
| Surrogate: 4-Bromofluorobenzene (PID) | ND |       | mg/kg | 0.0500 |  | 99.9 | 73.6-140 |  |  |  |
| 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 (6101104-BS1)**

Prepared: 10/11/16 Analyzed: 10/12/16

|                                       |        |       |       |        |  |      |          |  |  |  |
|---------------------------------------|--------|-------|-------|--------|--|------|----------|--|--|--|
| Surrogate: 4-Bromofluorobenzene (PID) | 0.0495 |       | mg/kg | 0.0500 |  | 99.0 | 73.6-140 |  |  |  |
| Benzene                               | 2.15   | 0.050 | mg/kg | 2.00   |  | 107  | 82.6-122 |  |  |  |
| Ethylbenzene                          | 2.15   | 0.050 | mg/kg | 2.00   |  | 108  | 65.4-131 |  |  |  |
| Toluene                               | 2.21   | 0.050 | mg/kg | 2.00   |  | 111  | 72.9-122 |  |  |  |
| Total Xylenes                         | 6.47   | 0.150 | mg/kg | 6.00   |  | 108  | 73.8-125 |  |  |  |

**LCS Dup (6101104-BSD1)**

Prepared: 10/11/16 Analyzed: 10/12/16

|                                       |        |       |       |        |  |      |          |      |      |  |
|---------------------------------------|--------|-------|-------|--------|--|------|----------|------|------|--|
| Surrogate: 4-Bromofluorobenzene (PID) | 0.0496 |       | mg/kg | 0.0500 |  | 99.2 | 73.6-140 |      |      |  |
| Benzene                               | 2.20   | 0.050 | mg/kg | 2.00   |  | 110  | 82.6-122 | 2.56 | 8.23 |  |
| Ethylbenzene                          | 2.21   | 0.050 | mg/kg | 2.00   |  | 111  | 65.4-131 | 2.86 | 9.46 |  |
| Toluene                               | 2.28   | 0.050 | mg/kg | 2.00   |  | 114  | 72.9-122 | 2.87 | 8.71 |  |
| Total Xylenes                         | 6.68   | 0.150 | mg/kg | 6.00   |  | 111  | 73.8-125 | 3.14 | 8.66 |  |

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|  |   |                             |
|--|---|-----------------------------|
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|--|---|-----------------------------|

**Petroleum Hydrocarbons by GC FID - Quality Control**

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

**Batch 6101105 - General Prep - Organics**

**Blank (6101105-BLK1)**

Prepared: 10/11/16 Analyzed: 10/12/16

|                               |      |      |       |      |  |     |        |  |  |  |
|-------------------------------|------|------|-------|------|--|-----|--------|--|--|--|
| Surrogate: 1-Chlorooctadecane | 55.0 |      | mg/kg | 50.0 |  | 110 | 28-171 |  |  |  |
| Surrogate: 1-Chlorooctane     | 55.2 |      | mg/kg | 50.0 |  | 110 | 35-147 |  |  |  |
| DRO >C10-C28                  | ND   | 10.0 | mg/kg |      |  |     |        |  |  |  |
| EXT DRO >C28-C35              | ND   | 10.0 | mg/kg |      |  |     |        |  |  |  |
| GRO C6-C10                    | ND   | 10.0 | mg/kg |      |  |     |        |  |  |  |
| Total TPH C6-C28              | ND   | 10.0 | mg/kg |      |  |     |        |  |  |  |

**LCS (6101105-BS1)**

Prepared: 10/11/16 Analyzed: 10/12/16

|                               |      |      |       |      |  |     |          |  |  |  |
|-------------------------------|------|------|-------|------|--|-----|----------|--|--|--|
| Surrogate: 1-Chlorooctadecane | 57.8 |      | mg/kg | 50.0 |  | 116 | 28-171   |  |  |  |
| Surrogate: 1-Chlorooctane     | 61.3 |      | mg/kg | 50.0 |  | 123 | 35-147   |  |  |  |
| DRO >C10-C28                  | 203  | 10.0 | mg/kg | 200  |  | 101 | 78.3-122 |  |  |  |
| GRO C6-C10                    | 203  | 10.0 | mg/kg | 200  |  | 102 | 76.7-115 |  |  |  |
| Total TPH C6-C28              | 406  | 10.0 | mg/kg | 400  |  | 101 | 79.8-117 |  |  |  |

**LCS Dup (6101105-BSD1)**

Prepared: 10/11/16 Analyzed: 10/12/16

|                               |      |      |       |      |  |      |          |      |      |       |
|-------------------------------|------|------|-------|------|--|------|----------|------|------|-------|
| Surrogate: 1-Chlorooctadecane | 58.1 |      | mg/kg | 50.0 |  | 116  | 28-171   |      |      |       |
| Surrogate: 1-Chlorooctane     | 56.0 |      | mg/kg | 50.0 |  | 112  | 35-147   |      |      |       |
| DRO >C10-C28                  | 190  | 10.0 | mg/kg | 200  |  | 95.0 | 78.3-122 | 6.47 | 13.2 |       |
| GRO C6-C10                    | 177  | 10.0 | mg/kg | 200  |  | 88.4 | 76.7-115 | 13.9 | 9.42 | QR-02 |
| Total TPH C6-C28              | 367  | 10.0 | mg/kg | 400  |  | 91.7 | 79.8-117 | 10.1 | 10.7 |       |

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BP America  
380 Airport Rd.  
Durango CO, 81303

Project: Table 910  
Project Name / Number: Perino WTS  
Project Manager: Andy Hawk

Reported:  
10/20/16 14:39

### Notes and Definitions

- R2 Duplicate sample RPD exceeded the method control limit. One or more of the duplicates was less than 5X reporting limit so RPD requirements do not apply.
- R1 Duplicate sample RPD exceeded laboratory acceptance criteria. Sample(s) may be difficult to homogenize.
- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- 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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