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03 September 2015

Kerry Smith  
Monument Global Resources  
12160 N. Abrams Rd. Suite 160  
Dallas, TX 75243  
RE: Table 910

Enclosed are the results of analyses for samples received by the laboratory on 08/13/15 14:35.  
If you need any further assistance, please feel free to contact me.

Sincerely,

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

Debbie Zufelt  
Reports Manager

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

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

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



|  |  |                                    |
|--|--|------------------------------------|
| Monument Global Resources<br>12160 N. Abrams Rd. Suite 160<br>Dallas TX, 75243 | Project: Table 910<br>Project Name / Number: Cache Unit Spill #4<br>Project Manager: Kerry Smith | <b>Reported:</b><br>09/03/15 20:26 |
|--|--|------------------------------------|

**ANALYTICAL REPORT FOR SAMPLES**

| Sample ID   | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|-------------|---------------|--------|----------------|----------------|
| S4#1        | 1508196-01    | Solid  | 08/13/15 10:59 | 08/13/15 14:35 |
| S4#2 Source | 1508196-02    | Solid  | 08/13/15 10:56 | 08/13/15 14:35 |
| S4#3        | 1508196-03    | Solid  | 08/13/15 10:51 | 08/13/15 14:35 |
| S4#4        | 1508196-04    | Solid  | 08/13/15 10:46 | 08/13/15 14:35 |
| S4#5 Centre | 1508196-05    | Solid  | 08/13/15 10:53 | 08/13/15 14:35 |

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Debbie Zufelt, Reports Manager

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

**S4#1**

**1508196-01 (Solid)**

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

**General Chemistry**

|                                   |             |      |       |          |   |          |                |    |     |
|-----------------------------------|-------------|------|-------|----------|---|----------|----------------|----|-----|
| <b>% Dry Solids</b>               | <b>96.3</b> |      |       | %        | 1 | 08/31/15 | EPA160.3/2540C | H2 | MAJ |
| <b>Saturated Paste Extraction</b> |             |      |       |          |   |          |                |    |     |
| Calcium                           | 42.9        | 5.00 | 0.020 | mg/L     | 5 | 08/31/15 | EPA200.7       |    | JGS |
| Conductivity                      | 425         |      |       | umhos/cm | 1 | 08/26/15 | ASA#9 10-3.3   |    | LLG |
| Magnesium                         | 5.50        | 5.00 | 0.095 | mg/L     | 5 | 08/31/15 | EPA200.7       |    | JGS |
| pH                                | 7.90        |      |       | pH Units | 1 | 08/26/15 | ASA#9 12-2.6   |    | LLG |
| SAR                               | 1.73        |      |       | [blank]  | 1 | 08/31/15 | Calculation    |    | JGS |
| Sodium                            | 45.4        | 10.0 | 0.020 | mg/L     | 5 | 08/31/15 | EPA200.7       |    | JGS |

**Total Metals by ICP**

|          |       |      |       |           |     |          |           |  |     |
|----------|-------|------|-------|-----------|-----|----------|-----------|--|-----|
| Barium   | 141   | 1.00 | 0.191 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Cadmium  | <5.00 | 5.00 | 0.117 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Chromium | 5.96  | 5.00 | 0.636 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Copper   | 7.01  | 2.00 | 0.650 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Lead     | <10.0 | 10.0 | 1.84  | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Nickel   | 9.37  | 5.00 | 1.55  | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Selenium | <20.0 | 20.0 | 3.61  | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Silver   | <5.00 | 5.00 | 0.231 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Zinc     | 39.6  | 5.00 | 0.792 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |

**Total Metals by ICPMS**

|         |      |       |       |           |      |          |        |  |     |
|---------|------|-------|-------|-----------|------|----------|--------|--|-----|
| Arsenic | 2.76 | 0.500 | 0.260 | mg/kg dry | 1000 | 08/27/15 | 6020 A |  | JGS |
|---------|------|-------|-------|-----------|------|----------|--------|--|-----|

**Total Mercury by CVAA**

|         |         |        |        |           |     |          |         |  |     |
|---------|---------|--------|--------|-----------|-----|----------|---------|--|-----|
| Mercury | <0.0997 | 0.0997 | 0.0108 | mg/kg dry | 480 | 09/03/15 | EPA7471 |  | JGS |
|---------|---------|--------|--------|-----------|-----|----------|---------|--|-----|

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

**S4#1**

**1508196-01 (Solid)**

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

**Hot Water Extractable**

|              |        |       |       |      |   |          |          |  |     |
|--------------|--------|-------|-------|------|---|----------|----------|--|-----|
| <b>Boron</b> | <0.600 | 0.600 | 0.065 | mg/L | 2 | 08/24/15 | EPA200.7 |  | JGS |
|--------------|--------|-------|-------|------|---|----------|----------|--|-----|

Subcontracted -- **Cardinal Laboratories**

**Volatile Organic Compounds by EPA Method 8021**

|                       |        |       |       |       |    |          |       |  |    |
|-----------------------|--------|-------|-------|-------|----|----------|-------|--|----|
| <b>Benzene*</b>       | <0.050 | 0.050 | 0.010 | mg/kg | 50 | 08/18/15 | 8021B |  | MS |
| <b>Toluene*</b>       | <0.050 | 0.050 | 0.015 | mg/kg | 50 | 08/18/15 | 8021B |  | MS |
| <b>Ethylbenzene*</b>  | <0.050 | 0.050 | 0.008 | mg/kg | 50 | 08/18/15 | 8021B |  | MS |
| <b>Total Xylenes*</b> | <0.150 | 0.150 | 0.018 | mg/kg | 50 | 08/18/15 | 8021B |  | MS |
| <b>Total BTEX</b>     | <0.300 | 0.300 |       | mg/kg | 50 | 08/18/15 | 8021B |  | MS |

Surrogate: 4-Bromofluorobenzene (PID) 102 % 85.6-137 08/18/15 8021B MS

**Petroleum Hydrocarbons by GC FID**

|                            |       |      |      |       |   |          |       |  |    |
|----------------------------|-------|------|------|-------|---|----------|-------|--|----|
| <b>GRO C6-C10</b>          | <10.0 | 10.0 | 1.30 | mg/kg | 1 | 08/18/15 | 8015B |  | MS |
| <b>DRO &gt;C10-C28</b>     | <10.0 | 10.0 | 2.91 | mg/kg | 1 | 08/18/15 | 8015B |  | MS |
| <b>EXT DRO &gt;C28-C35</b> | <10.0 | 10.0 | 2.91 | mg/kg | 1 | 08/18/15 | 8015B |  | MS |

Surrogate: 1-Chlorooctane 85.9 % 47.2-157 08/18/15 8015B MS

Surrogate: 1-Chlorooctadecane 91.6 % 52.1-176 08/18/15 8015B MS

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

S4#1

1508196-01 (Solid)

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

Subcontracted -- Cardinal Laboratories

Semivolatile Organic Compounds by GCMS

|                             |        |       |        |          |    |          |       |   |    |
|-----------------------------|--------|-------|--------|----------|----|----------|-------|---|----|
| Naphthalene                 | <0.002 | 0.040 | 0.002  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| 2-Methylnaphthalene         | <0.003 | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| 1-Methylnaphthalene         | <0.001 | 0.020 | 0.001  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Acenaphthylene              | <0.003 | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Acenaphthene                | <0.003 | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Fluorene                    | <0.003 | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Phenanthrene                | <0.006 | 0.040 | 0.006  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Anthracene                  | <0.003 | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Carbazole                   | <0.004 | 0.040 | 0.004  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Fluoranthene                | <0.007 | 0.040 | 0.007  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Pyrene                      | <0.003 | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Benzo[a]anthracene          | <0.016 | 0.040 | 0.016  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Chrysene                    | 0.025  | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C | J | MS |
| Benzo[b]fluoranthene        | <0.003 | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Benzo[k]fluoranthene        | <0.004 | 0.040 | 0.004  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Benzo[a]pyrene              | 0.004  | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C | J | MS |
| Indeno[1,2,3-cd]pyrene      | <0.003 | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Dibenz[a,h]anthracene       | <0.003 | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Benzo[g,h,i]perylene        | <0.030 | 0.040 | 0.030  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Surrogate: Nitrobenzene-d5  |        |       | 71.3 % | 20.4-109 |    | 08/18/15 | 8270C |   | MS |
| Surrogate: 2-Fluorobiphenyl |        |       | 77.9 % | 23.4-133 |    | 08/18/15 | 8270C |   | MS |
| Surrogate: Terphenyl-d14    |        |       | 95.2 % | 38.4-163 |    | 08/18/15 | 8270C |   | MS |

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

**S4#2 Source**

**1508196-02 (Solid)**

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

**General Chemistry**

|              |      |  |  |   |   |          |                |    |     |
|--------------|------|--|--|---|---|----------|----------------|----|-----|
| % Dry Solids | 94.9 |  |  | % | 1 | 08/31/15 | EPA160.3/2540C | H2 | MAJ |
|--------------|------|--|--|---|---|----------|----------------|----|-----|

**Saturated Paste Extraction**

|              |       |      |       |          |    |          |              |  |     |
|--------------|-------|------|-------|----------|----|----------|--------------|--|-----|
| Calcium      | 405   | 10.0 | 0.039 | mg/L     | 10 | 08/31/15 | EPA200.7     |  | JGS |
| Conductivity | 11000 |      |       | umhos/cm | 1  | 08/26/15 | ASA#9 10-3.3 |  | LLG |
| Magnesium    | 64.5  | 10.0 | 0.190 | mg/L     | 10 | 08/31/15 | EPA200.7     |  | JGS |
| pH           | 7.48  |      |       | pH Units | 1  | 08/26/15 | ASA#9 12-2.6 |  | LLG |
| SAR          | 18.5  |      |       | [blank]  | 1  | 08/31/15 | Calculation  |  | JGS |
| Sodium       | 1520  | 20.0 | 0.041 | mg/L     | 10 | 08/31/15 | EPA200.7     |  | JGS |

**Total Metals by ICP**

|          |       |      |       |           |     |          |           |  |     |
|----------|-------|------|-------|-----------|-----|----------|-----------|--|-----|
| Barium   | 178   | 1.00 | 0.191 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Cadmium  | <5.00 | 5.00 | 0.117 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Chromium | <5.00 | 5.00 | 0.636 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Copper   | 5.34  | 2.00 | 0.650 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Lead     | <10.0 | 10.0 | 1.84  | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Nickel   | 6.37  | 5.00 | 1.55  | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Selenium | <20.0 | 20.0 | 3.61  | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Silver   | <5.00 | 5.00 | 0.231 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Zinc     | 28.2  | 5.00 | 0.792 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |

**Total Metals by ICPMS**

|         |      |       |       |           |      |          |        |  |     |
|---------|------|-------|-------|-----------|------|----------|--------|--|-----|
| Arsenic | 2.22 | 0.500 | 0.260 | mg/kg dry | 1000 | 08/27/15 | 6020 A |  | JGS |
|---------|------|-------|-------|-----------|------|----------|--------|--|-----|

**Total Mercury by CVAA**

|         |        |       |        |           |     |          |         |  |     |
|---------|--------|-------|--------|-----------|-----|----------|---------|--|-----|
| Mercury | <0.105 | 0.105 | 0.0114 | mg/kg dry | 500 | 09/03/15 | EPA7471 |  | JGS |
|---------|--------|-------|--------|-----------|-----|----------|---------|--|-----|

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Debbie Zufelt, Reports Manager

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

**S4#2 Source**

**1508196-02 (Solid)**

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

**Hot Water Extractable**

|              |        |       |       |      |   |          |          |  |     |
|--------------|--------|-------|-------|------|---|----------|----------|--|-----|
| <b>Boron</b> | <0.600 | 0.600 | 0.065 | mg/L | 2 | 08/24/15 | EPA200.7 |  | JGS |
|--------------|--------|-------|-------|------|---|----------|----------|--|-----|

Subcontracted -- **Cardinal Laboratories**

**Volatile Organic Compounds by EPA Method 8021**

|                       |        |       |       |       |    |          |       |  |    |
|-----------------------|--------|-------|-------|-------|----|----------|-------|--|----|
| <b>Benzene*</b>       | <0.050 | 0.050 | 0.010 | mg/kg | 50 | 08/19/15 | 8021B |  | MS |
| <b>Toluene*</b>       | <0.050 | 0.050 | 0.015 | mg/kg | 50 | 08/19/15 | 8021B |  | MS |
| <b>Ethylbenzene*</b>  | <0.050 | 0.050 | 0.008 | mg/kg | 50 | 08/19/15 | 8021B |  | MS |
| <b>Total Xylenes*</b> | <0.150 | 0.150 | 0.018 | mg/kg | 50 | 08/19/15 | 8021B |  | MS |
| <b>Total BTEX</b>     | <0.300 | 0.300 |       | mg/kg | 50 | 08/19/15 | 8021B |  | MS |

Surrogate: 4-Bromofluorobenzene (PID) 102 % 85.6-137 08/19/15 8021B MS

**Petroleum Hydrocarbons by GC FID**

|                            |            |      |      |       |   |          |       |  |    |
|----------------------------|------------|------|------|-------|---|----------|-------|--|----|
| <b>GRO C6-C10</b>          | <10.0      | 10.0 | 1.30 | mg/kg | 1 | 08/18/15 | 8015B |  | MS |
| <b>DRO &gt;C10-C28</b>     | <b>610</b> | 10.0 | 2.91 | mg/kg | 1 | 08/18/15 | 8015B |  | MS |
| <b>EXT DRO &gt;C28-C35</b> | <b>135</b> | 10.0 | 2.91 | mg/kg | 1 | 08/18/15 | 8015B |  | MS |

Surrogate: 1-Chlorooctane 85.4 % 47.2-157 08/18/15 8015B MS

Surrogate: 1-Chlorooctadecane 95.2 % 52.1-176 08/18/15 8015B MS

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

**S4#2 Source**

**1508196-02 (Solid)**

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

Subcontracted -- Cardinal Laboratories

**Semivolatile Organic Compounds by GCMS**

|                             |              |       |        |          |    |          |       |  |    |
|-----------------------------|--------------|-------|--------|----------|----|----------|-------|--|----|
| Naphthalene                 | <0.002       | 0.040 | 0.002  | mg/kg    | 40 | 08/18/15 | 8270C |  | MS |
| 2-Methylnaphthalene         | <0.003       | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |  | MS |
| 1-Methylnaphthalene         | <0.001       | 0.020 | 0.001  | mg/kg    | 40 | 08/18/15 | 8270C |  | MS |
| Acenaphthylene              | <0.003       | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |  | MS |
| Acenaphthene                | <0.003       | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |  | MS |
| Fluorene                    | <0.003       | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |  | MS |
| Phenanthrene                | <0.006       | 0.040 | 0.006  | mg/kg    | 40 | 08/18/15 | 8270C |  | MS |
| Anthracene                  | <0.003       | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |  | MS |
| Carbazole                   | <0.004       | 0.040 | 0.004  | mg/kg    | 40 | 08/18/15 | 8270C |  | MS |
| Fluoranthene                | <0.007       | 0.040 | 0.007  | mg/kg    | 40 | 08/18/15 | 8270C |  | MS |
| Pyrene                      | <0.003       | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |  | MS |
| Benzo[a]anthracene          | <0.016       | 0.040 | 0.016  | mg/kg    | 40 | 08/18/15 | 8270C |  | MS |
| Chrysene                    | <b>0.285</b> | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |  | MS |
| Benzo[b]fluoranthene        | <0.003       | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |  | MS |
| Benzo[k]fluoranthene        | <0.004       | 0.040 | 0.004  | mg/kg    | 40 | 08/18/15 | 8270C |  | MS |
| Benzo[a]pyrene              | <b>0.134</b> | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |  | MS |
| Indeno[1,2,3-cd]pyrene      | <0.003       | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |  | MS |
| Dibenz[a,h]anthracene       | <0.003       | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |  | MS |
| Benzo[g,h,i]perylene        | <0.030       | 0.040 | 0.030  | mg/kg    | 40 | 08/18/15 | 8270C |  | MS |
| Surrogate: Nitrobenzene-d5  |              |       | 103 %  | 20.4-109 |    | 08/18/15 | 8270C |  | MS |
| Surrogate: 2-Fluorobiphenyl |              |       | 101 %  | 23.4-133 |    | 08/18/15 | 8270C |  | MS |
| Surrogate: Terphenyl-d14    |              |       | 96.5 % | 38.4-163 |    | 08/18/15 | 8270C |  | MS |

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*Debbie Zufelt*

Debbie Zufelt, Reports Manager

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

**S4#3**

**1508196-03 (Solid)**

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

**General Chemistry**

|              |      |  |  |   |   |          |                |    |     |
|--------------|------|--|--|---|---|----------|----------------|----|-----|
| % Dry Solids | 97.8 |  |  | % | 1 | 08/31/15 | EPA160.3/2540C | H2 | MAJ |
|--------------|------|--|--|---|---|----------|----------------|----|-----|

**Saturated Paste Extraction**

|              |      |      |       |          |   |          |              |  |     |
|--------------|------|------|-------|----------|---|----------|--------------|--|-----|
| Calcium      | 72.1 | 5.00 | 0.020 | mg/L     | 5 | 08/31/15 | EPA200.7     |  | JGS |
| Conductivity | 501  |      |       | umhos/cm | 1 | 08/26/15 | ASA#9 10-3.3 |  | LLG |
| Magnesium    | 7.89 | 5.00 | 0.095 | mg/L     | 5 | 08/31/15 | EPA200.7     |  | JGS |
| pH           | 7.94 |      |       | pH Units | 1 | 08/26/15 | ASA#9 12-2.6 |  | LLG |
| SAR          | 0.56 |      |       | [blank]  | 1 | 08/31/15 | Calculation  |  | JGS |
| Sodium       | 18.9 | 10.0 | 0.020 | mg/L     | 5 | 08/31/15 | EPA200.7     |  | JGS |

**Total Metals by ICP**

|          |       |      |       |           |     |          |           |  |     |
|----------|-------|------|-------|-----------|-----|----------|-----------|--|-----|
| Barium   | 131   | 1.00 | 0.191 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Cadmium  | <5.00 | 5.00 | 0.117 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Chromium | <5.00 | 5.00 | 0.636 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Copper   | 4.45  | 2.00 | 0.650 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Lead     | <10.0 | 10.0 | 1.84  | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Nickel   | 5.53  | 5.00 | 1.55  | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Selenium | <20.0 | 20.0 | 3.61  | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Silver   | <5.00 | 5.00 | 0.231 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Zinc     | 26.6  | 5.00 | 0.792 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |

**Total Metals by ICPMS**

|         |      |       |       |           |      |          |        |  |     |
|---------|------|-------|-------|-----------|------|----------|--------|--|-----|
| Arsenic | 2.24 | 0.500 | 0.260 | mg/kg dry | 1000 | 08/27/15 | 6020 A |  | JGS |
|---------|------|-------|-------|-----------|------|----------|--------|--|-----|

**Total Mercury by CVAA**

|         |        |       |        |           |     |          |         |  |     |
|---------|--------|-------|--------|-----------|-----|----------|---------|--|-----|
| Mercury | <0.101 | 0.101 | 0.0109 | mg/kg dry | 495 | 09/03/15 | EPA7471 |  | JGS |
|---------|--------|-------|--------|-----------|-----|----------|---------|--|-----|

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

**S4#3**

**1508196-03 (Solid)**

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

**Hot Water Extractable**

|              |        |       |       |      |   |          |          |  |     |
|--------------|--------|-------|-------|------|---|----------|----------|--|-----|
| <b>Boron</b> | <0.600 | 0.600 | 0.065 | mg/L | 2 | 08/24/15 | EPA200.7 |  | JGS |
|--------------|--------|-------|-------|------|---|----------|----------|--|-----|

Subcontracted -- **Cardinal Laboratories**

**Volatile Organic Compounds by EPA Method 8021**

|                       |        |       |       |       |    |          |       |  |    |
|-----------------------|--------|-------|-------|-------|----|----------|-------|--|----|
| <b>Benzene*</b>       | <0.050 | 0.050 | 0.010 | mg/kg | 50 | 08/19/15 | 8021B |  | MS |
| <b>Toluene*</b>       | <0.050 | 0.050 | 0.015 | mg/kg | 50 | 08/19/15 | 8021B |  | MS |
| <b>Ethylbenzene*</b>  | <0.050 | 0.050 | 0.008 | mg/kg | 50 | 08/19/15 | 8021B |  | MS |
| <b>Total Xylenes*</b> | <0.150 | 0.150 | 0.018 | mg/kg | 50 | 08/19/15 | 8021B |  | MS |
| <b>Total BTEX</b>     | <0.300 | 0.300 |       | mg/kg | 50 | 08/19/15 | 8021B |  | MS |

Surrogate: 4-Bromofluorobenzene (PID) 103 % 85.6-137 08/19/15 8021B MS

**Petroleum Hydrocarbons by GC FID**

|                            |       |      |      |       |   |          |       |  |    |
|----------------------------|-------|------|------|-------|---|----------|-------|--|----|
| <b>GRO C6-C10</b>          | <10.0 | 10.0 | 1.30 | mg/kg | 1 | 08/18/15 | 8015B |  | MS |
| <b>DRO &gt;C10-C28</b>     | <10.0 | 10.0 | 2.91 | mg/kg | 1 | 08/18/15 | 8015B |  | MS |
| <b>EXT DRO &gt;C28-C35</b> | <10.0 | 10.0 | 2.91 | mg/kg | 1 | 08/18/15 | 8015B |  | MS |

Surrogate: 1-Chlorooctane 86.4 % 47.2-157 08/18/15 8015B MS

Surrogate: 1-Chlorooctadecane 82.4 % 52.1-176 08/18/15 8015B MS

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

**S4#3**

**1508196-03 (Solid)**

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

Subcontracted -- Cardinal Laboratories

**Semivolatile Organic Compounds by GCMS**

|                             |              |       |        |          |    |          |       |   |    |
|-----------------------------|--------------|-------|--------|----------|----|----------|-------|---|----|
| Naphthalene                 | <0.002       | 0.040 | 0.002  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| 2-Methylnaphthalene         | <0.003       | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| 1-Methylnaphthalene         | <0.001       | 0.020 | 0.001  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Acenaphthylene              | <0.003       | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Acenaphthene                | <0.003       | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Fluorene                    | <b>0.010</b> | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C | J | MS |
| Phenanthrene                | <0.006       | 0.040 | 0.006  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Anthracene                  | <0.003       | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Carbazole                   | <0.004       | 0.040 | 0.004  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Fluoranthene                | <0.007       | 0.040 | 0.007  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Pyrene                      | <0.003       | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Benzo[a]anthracene          | <0.016       | 0.040 | 0.016  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Chrysene                    | <b>0.007</b> | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C | J | MS |
| Benzo[b]fluoranthene        | <0.003       | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Benzo[k]fluoranthene        | <0.004       | 0.040 | 0.004  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Benzo[a]pyrene              | <0.003       | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Indeno[1,2,3-cd]pyrene      | <0.003       | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Dibenz[a,h]anthracene       | <0.003       | 0.040 | 0.003  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Benzo[g,h,i]perylene        | <0.030       | 0.040 | 0.030  | mg/kg    | 40 | 08/18/15 | 8270C |   | MS |
| Surrogate: Nitrobenzene-d5  |              |       | 82.0 % | 20.4-109 |    | 08/18/15 | 8270C |   | MS |
| Surrogate: 2-Fluorobiphenyl |              |       | 87.0 % | 23.4-133 |    | 08/18/15 | 8270C |   | MS |
| Surrogate: Terphenyl-d14    |              |       | 106 %  | 38.4-163 |    | 08/18/15 | 8270C |   | MS |

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

**S4#4**

**1508196-04 (Solid)**

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

**General Chemistry**

|              |      |  |  |   |   |          |                |    |     |
|--------------|------|--|--|---|---|----------|----------------|----|-----|
| % Dry Solids | 97.0 |  |  | % | 1 | 08/31/15 | EPA160.3/2540C | H2 | MAJ |
|--------------|------|--|--|---|---|----------|----------------|----|-----|

**Saturated Paste Extraction**

|              |      |      |       |          |    |          |              |  |     |
|--------------|------|------|-------|----------|----|----------|--------------|--|-----|
| Calcium      | 201  | 10.0 | 0.039 | mg/L     | 10 | 08/31/15 | EPA200.7     |  | JGS |
| Conductivity | 2480 |      |       | umhos/cm | 1  | 08/26/15 | ASA#9 10-3.3 |  | LLG |
| Magnesium    | 30.7 | 10.0 | 0.190 | mg/L     | 10 | 08/31/15 | EPA200.7     |  | JGS |
| pH           | 7.52 |      |       | pH Units | 1  | 08/26/15 | ASA#9 12-2.6 |  | LLG |
| SAR          | 5.68 |      |       | [blank]  | 1  | 08/31/15 | Calculation  |  | JGS |
| Sodium       | 328  | 20.0 | 0.041 | mg/L     | 10 | 08/31/15 | EPA200.7     |  | JGS |

**Total Metals by ICP**

|          |       |      |       |           |     |          |           |  |     |
|----------|-------|------|-------|-----------|-----|----------|-----------|--|-----|
| Barium   | 178   | 1.00 | 0.191 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Cadmium  | <5.00 | 5.00 | 0.117 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Chromium | <5.00 | 5.00 | 0.636 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Copper   | 5.50  | 2.00 | 0.650 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Lead     | <10.0 | 10.0 | 1.84  | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Nickel   | 6.11  | 5.00 | 1.55  | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Selenium | <20.0 | 20.0 | 3.61  | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Silver   | <5.00 | 5.00 | 0.231 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Zinc     | 76.0  | 5.00 | 0.792 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |

**Total Metals by ICPMS**

|         |      |       |       |           |      |          |        |  |     |
|---------|------|-------|-------|-----------|------|----------|--------|--|-----|
| Arsenic | 2.25 | 0.500 | 0.260 | mg/kg dry | 1000 | 08/27/15 | 6020 A |  | JGS |
|---------|------|-------|-------|-----------|------|----------|--------|--|-----|

**Total Mercury by CVAA**

|         |        |       |        |           |     |          |         |  |     |
|---------|--------|-------|--------|-----------|-----|----------|---------|--|-----|
| Mercury | <0.101 | 0.101 | 0.0109 | mg/kg dry | 490 | 09/03/15 | EPA7471 |  | JGS |
|---------|--------|-------|--------|-----------|-----|----------|---------|--|-----|

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

**S4#4**

**1508196-04 (Solid)**

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

**Hot Water Extractable**

|              |        |       |       |      |   |          |          |  |     |
|--------------|--------|-------|-------|------|---|----------|----------|--|-----|
| <b>Boron</b> | <0.600 | 0.600 | 0.065 | mg/L | 2 | 08/24/15 | EPA200.7 |  | JGS |
|--------------|--------|-------|-------|------|---|----------|----------|--|-----|

Subcontracted -- **Cardinal Laboratories**

**Volatile Organic Compounds by EPA Method 8021**

|                       |        |       |       |       |    |          |       |  |    |
|-----------------------|--------|-------|-------|-------|----|----------|-------|--|----|
| <b>Benzene*</b>       | <0.050 | 0.050 | 0.010 | mg/kg | 50 | 08/19/15 | 8021B |  | MS |
| <b>Toluene*</b>       | <0.050 | 0.050 | 0.015 | mg/kg | 50 | 08/19/15 | 8021B |  | MS |
| <b>Ethylbenzene*</b>  | <0.050 | 0.050 | 0.008 | mg/kg | 50 | 08/19/15 | 8021B |  | MS |
| <b>Total Xylenes*</b> | <0.150 | 0.150 | 0.018 | mg/kg | 50 | 08/19/15 | 8021B |  | MS |
| <b>Total BTEX</b>     | <0.300 | 0.300 |       | mg/kg | 50 | 08/19/15 | 8021B |  | MS |

Surrogate: 4-Bromofluorobenzene (PID) 99.2 % 85.6-137 08/19/15 8021B MS

**Petroleum Hydrocarbons by GC FID**

|                            |             |      |      |       |   |          |       |  |    |
|----------------------------|-------------|------|------|-------|---|----------|-------|--|----|
| <b>GRO C6-C10</b>          | <50.0       | 50.0 | 6.52 | mg/kg | 5 | 08/18/15 | 8015B |  | MS |
| <b>DRO &gt;C10-C28</b>     | <b>2300</b> | 50.0 | 14.6 | mg/kg | 5 | 08/18/15 | 8015B |  | MS |
| <b>EXT DRO &gt;C28-C35</b> | <b>914</b>  | 50.0 | 14.6 | mg/kg | 5 | 08/18/15 | 8015B |  | MS |

Surrogate: 1-Chlorooctane 67.2 % 47.2-157 08/18/15 8015B MS

Surrogate: 1-Chlorooctadecane 125 % 52.1-176 08/18/15 8015B MS

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

S4#4

1508196-04 (Solid)

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

Subcontracted -- Cardinal Laboratories

Semivolatile Organic Compounds by GCMS

|                             |        |      |        |          |      |          |       |   |    |
|-----------------------------|--------|------|--------|----------|------|----------|-------|---|----|
| Naphthalene                 | <0.088 | 2.00 | 0.088  | mg/kg    | 2000 | 08/18/15 | 8270C |   | MS |
| 2-Methylnaphthalene         | <0.144 | 2.00 | 0.144  | mg/kg    | 2000 | 08/18/15 | 8270C |   | MS |
| 1-Methylnaphthalene         | <0.056 | 1.00 | 0.056  | mg/kg    | 2000 | 08/18/15 | 8270C |   | MS |
| Acenaphthylene              | <0.155 | 2.00 | 0.155  | mg/kg    | 2000 | 08/18/15 | 8270C |   | MS |
| Acenaphthene                | <0.130 | 2.00 | 0.130  | mg/kg    | 2000 | 08/18/15 | 8270C |   | MS |
| Fluorene                    | <0.155 | 2.00 | 0.155  | mg/kg    | 2000 | 08/18/15 | 8270C |   | MS |
| Phenanthrene                | 0.532  | 2.00 | 0.298  | mg/kg    | 2000 | 08/18/15 | 8270C | J | MS |
| Anthracene                  | <0.162 | 2.00 | 0.162  | mg/kg    | 2000 | 08/18/15 | 8270C |   | MS |
| Carbazole                   | <0.184 | 2.00 | 0.184  | mg/kg    | 2000 | 08/18/15 | 8270C |   | MS |
| Fluoranthene                | <0.356 | 2.00 | 0.356  | mg/kg    | 2000 | 08/18/15 | 8270C |   | MS |
| Pyrene                      | 0.279  | 2.00 | 0.151  | mg/kg    | 2000 | 08/18/15 | 8270C | J | MS |
| Benzo[a]anthracene          | <0.780 | 2.00 | 0.780  | mg/kg    | 2000 | 08/18/15 | 8270C |   | MS |
| Chrysene                    | 1.41   | 2.00 | 0.166  | mg/kg    | 2000 | 08/18/15 | 8270C | J | MS |
| Benzo[b]fluoranthene        | <0.170 | 2.00 | 0.170  | mg/kg    | 2000 | 08/18/15 | 8270C |   | MS |
| Benzo[k]fluoranthene        | <0.184 | 2.00 | 0.184  | mg/kg    | 2000 | 08/18/15 | 8270C |   | MS |
| Benzo[a]pyrene              | 0.554  | 2.00 | 0.142  | mg/kg    | 2000 | 08/18/15 | 8270C | J | MS |
| Indeno[1,2,3-cd]pyrene      | <0.133 | 2.00 | 0.133  | mg/kg    | 2000 | 08/18/15 | 8270C |   | MS |
| Dibenz[a,h]anthracene       | <0.128 | 2.00 | 0.128  | mg/kg    | 2000 | 08/18/15 | 8270C |   | MS |
| Benzo[g,h,i]perylene        | <1.48  | 2.00 | 1.48   | mg/kg    | 2000 | 08/18/15 | 8270C |   | MS |
| Surrogate: Nitrobenzene-d5  |        |      | 82.0 % | 20.4-109 |      | 08/18/15 | 8270C |   | MS |
| Surrogate: 2-Fluorobiphenyl |        |      | 83.3 % | 23.4-133 |      | 08/18/15 | 8270C |   | MS |
| Surrogate: Terphenyl-d14    |        |      | 94.8 % | 38.4-163 |      | 08/18/15 | 8270C |   | MS |

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*Debbie Zufelt*

Debbie Zufelt, Reports Manager

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|  |  |                             |
|--|--|-----------------------------|
| Monument Global Resources<br>12160 N. Abrams Rd. Suite 160<br>Dallas TX, 75243 | Project: Table 910<br>Project Name / Number: Cache Unit Spill #4<br>Project Manager: Kerry Smith | Reported:<br>09/03/15 20:26 |
|--|--|-----------------------------|

**S4#5 Centre**

**1508196-05 (Solid)**

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

**General Chemistry**

|              |      |  |  |   |   |          |                |    |     |
|--------------|------|--|--|---|---|----------|----------------|----|-----|
| % Dry Solids | 97.1 |  |  | % | 1 | 08/31/15 | EPA160.3/2540C | H2 | MAJ |
|--------------|------|--|--|---|---|----------|----------------|----|-----|

**Saturated Paste Extraction**

|              |       |      |       |          |    |          |              |  |     |
|--------------|-------|------|-------|----------|----|----------|--------------|--|-----|
| Calcium      | 405   | 10.0 | 0.039 | mg/L     | 10 | 08/31/15 | EPA200.7     |  | JGS |
| Conductivity | 15300 |      |       | umhos/cm | 1  | 08/26/15 | ASA#9 10-3.3 |  | LLG |
| Magnesium    | 71.6  | 10.0 | 0.190 | mg/L     | 10 | 08/31/15 | EPA200.7     |  | JGS |
| pH           | 7.38  |      |       | pH Units | 1  | 08/26/15 | ASA#9 12-2.6 |  | LLG |
| SAR          | 30.3  |      |       | [blank]  | 1  | 08/31/15 | Calculation  |  | JGS |
| Sodium       | 2520  | 20.0 | 0.041 | mg/L     | 10 | 08/31/15 | EPA200.7     |  | JGS |

**Total Metals by ICP**

|          |       |      |       |           |     |          |           |  |     |
|----------|-------|------|-------|-----------|-----|----------|-----------|--|-----|
| Barium   | 142   | 1.00 | 0.191 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Cadmium  | <5.00 | 5.00 | 0.117 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Chromium | <5.00 | 5.00 | 0.636 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Copper   | 5.53  | 2.00 | 0.650 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Lead     | <10.0 | 10.0 | 1.84  | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Nickel   | 7.96  | 5.00 | 1.55  | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Selenium | <20.0 | 20.0 | 3.61  | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Silver   | <5.00 | 5.00 | 0.231 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |
| Zinc     | 34.2  | 5.00 | 0.792 | mg/kg dry | 100 | 08/24/15 | EPA6010 B |  | JGS |

**Total Metals by ICPMS**

|         |      |       |       |           |      |          |        |  |     |
|---------|------|-------|-------|-----------|------|----------|--------|--|-----|
| Arsenic | 2.06 | 0.500 | 0.260 | mg/kg dry | 1000 | 08/27/15 | 6020 A |  | JGS |
|---------|------|-------|-------|-----------|------|----------|--------|--|-----|

**Total Mercury by CVAA**

|         |         |        |        |           |     |          |         |  |     |
|---------|---------|--------|--------|-----------|-----|----------|---------|--|-----|
| Mercury | <0.0999 | 0.0999 | 0.0108 | mg/kg dry | 485 | 09/03/15 | EPA7471 |  | JGS |
|---------|---------|--------|--------|-----------|-----|----------|---------|--|-----|

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

**S4#5 Centre**

**1508196-05 (Solid)**

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

**Hot Water Extractable**

|              |              |       |       |      |   |          |          |  |     |
|--------------|--------------|-------|-------|------|---|----------|----------|--|-----|
| <b>Boron</b> | <b>0.820</b> | 0.600 | 0.065 | mg/L | 2 | 08/24/15 | EPA200.7 |  | JGS |
|--------------|--------------|-------|-------|------|---|----------|----------|--|-----|

Subcontracted -- **Cardinal Laboratories**

**Volatile Organic Compounds by EPA Method 8021**

|                       |        |       |       |       |    |          |       |  |    |
|-----------------------|--------|-------|-------|-------|----|----------|-------|--|----|
| <b>Benzene*</b>       | <0.050 | 0.050 | 0.010 | mg/kg | 50 | 08/19/15 | 8021B |  | MS |
| <b>Toluene*</b>       | <0.050 | 0.050 | 0.015 | mg/kg | 50 | 08/19/15 | 8021B |  | MS |
| <b>Ethylbenzene*</b>  | <0.050 | 0.050 | 0.008 | mg/kg | 50 | 08/19/15 | 8021B |  | MS |
| <b>Total Xylenes*</b> | <0.150 | 0.150 | 0.018 | mg/kg | 50 | 08/19/15 | 8021B |  | MS |
| <b>Total BTEX</b>     | <0.300 | 0.300 |       | mg/kg | 50 | 08/19/15 | 8021B |  | MS |

Surrogate: 4-Bromofluorobenzene (PID) 101 % 85.6-137 08/19/15 8021B MS

**Petroleum Hydrocarbons by GC FID**

**S-06**

|                            |             |      |      |       |   |          |       |  |    |
|----------------------------|-------------|------|------|-------|---|----------|-------|--|----|
| <b>GRO C6-C10</b>          | <50.0       | 50.0 | 6.52 | mg/kg | 5 | 08/18/15 | 8015B |  | MS |
| <b>DRO &gt;C10-C28</b>     | <b>6520</b> | 50.0 | 14.6 | mg/kg | 5 | 08/18/15 | 8015B |  | MS |
| <b>EXT DRO &gt;C28-C35</b> | <b>1640</b> | 50.0 | 14.6 | mg/kg | 5 | 08/18/15 | 8015B |  | MS |

Surrogate: 1-Chlorooctane 97.5 % 47.2-157 08/18/15 8015B MS

Surrogate: 1-Chlorooctadecane 177 % 52.1-176 08/18/15 8015B MS

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

**S4#5 Centre**

**1508196-05 (Solid)**

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

Subcontracted -- Cardinal Laboratories

**Semivolatile Organic Compounds by GCMS**

|                             |              |      |        |          |      |          |       |   |    |
|-----------------------------|--------------|------|--------|----------|------|----------|-------|---|----|
| Naphthalene                 | <0.088       | 2.00 | 0.088  | mg/kg    | 2000 | 08/19/15 | 8270C |   | MS |
| 2-Methylnaphthalene         | <0.144       | 2.00 | 0.144  | mg/kg    | 2000 | 08/19/15 | 8270C |   | MS |
| 1-Methylnaphthalene         | <0.056       | 1.00 | 0.056  | mg/kg    | 2000 | 08/19/15 | 8270C |   | MS |
| Acenaphthylene              | <0.155       | 2.00 | 0.155  | mg/kg    | 2000 | 08/19/15 | 8270C |   | MS |
| Acenaphthene                | <0.130       | 2.00 | 0.130  | mg/kg    | 2000 | 08/19/15 | 8270C |   | MS |
| Fluorene                    | <0.155       | 2.00 | 0.155  | mg/kg    | 2000 | 08/19/15 | 8270C |   | MS |
| Phenanthrene                | <b>0.952</b> | 2.00 | 0.298  | mg/kg    | 2000 | 08/19/15 | 8270C | J | MS |
| Anthracene                  | <0.162       | 2.00 | 0.162  | mg/kg    | 2000 | 08/19/15 | 8270C |   | MS |
| Carbazole                   | <0.184       | 2.00 | 0.184  | mg/kg    | 2000 | 08/19/15 | 8270C |   | MS |
| Fluoranthene                | <0.356       | 2.00 | 0.356  | mg/kg    | 2000 | 08/19/15 | 8270C |   | MS |
| Pyrene                      | <b>0.518</b> | 2.00 | 0.151  | mg/kg    | 2000 | 08/19/15 | 8270C | J | MS |
| Benzo[a]anthracene          | <0.780       | 2.00 | 0.780  | mg/kg    | 2000 | 08/19/15 | 8270C |   | MS |
| Chrysene                    | <b>1.88</b>  | 2.00 | 0.166  | mg/kg    | 2000 | 08/19/15 | 8270C | J | MS |
| Benzo[b]fluoranthene        | <0.170       | 2.00 | 0.170  | mg/kg    | 2000 | 08/19/15 | 8270C |   | MS |
| Benzo[k]fluoranthene        | <0.184       | 2.00 | 0.184  | mg/kg    | 2000 | 08/19/15 | 8270C |   | MS |
| Benzo[a]pyrene              | <b>0.547</b> | 2.00 | 0.142  | mg/kg    | 2000 | 08/19/15 | 8270C | J | MS |
| Indeno[1,2,3-cd]pyrene      | <0.133       | 2.00 | 0.133  | mg/kg    | 2000 | 08/19/15 | 8270C |   | MS |
| Dibenz[a,h]anthracene       | <0.128       | 2.00 | 0.128  | mg/kg    | 2000 | 08/19/15 | 8270C |   | MS |
| Benzo[g,h,i]perylene        | <1.48        | 2.00 | 1.48   | mg/kg    | 2000 | 08/19/15 | 8270C |   | MS |
| Surrogate: Nitrobenzene-d5  |              |      | 85.6 % | 20.4-109 |      | 08/19/15 | 8270C |   | MS |
| Surrogate: 2-Fluorobiphenyl |              |      | 85.3 % | 23.4-133 |      | 08/19/15 | 8270C |   | MS |
| Surrogate: Terphenyl-d14    |              |      | 89.9 % | 38.4-163 |      | 08/19/15 | 8270C |   | MS |

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

**Batch B508279 - General Prep - Wet Chem**

|                                 |      |                           |          |  |                               |  |  |       |    |  |
|---------------------------------|------|---------------------------|----------|--|-------------------------------|--|--|-------|----|--|
| <b>Duplicate (B508279-DUP1)</b> |      | <b>Source: 1508196-01</b> |          |  | Prepared & Analyzed: 08/26/15 |  |  |       |    |  |
| pH                              | 7.88 |                           | pH Units |  | 7.90                          |  |  | 0.253 | 20 |  |

**Batch B508280 - General Prep - Wet Chem**

|                                 |     |                           |          |  |                               |  |  |      |    |  |
|---------------------------------|-----|---------------------------|----------|--|-------------------------------|--|--|------|----|--|
| <b>Duplicate (B508280-DUP1)</b> |     | <b>Source: 1508196-01</b> |          |  | Prepared & Analyzed: 08/26/15 |  |  |      |    |  |
| Conductivity                    | 430 |                           | umhos/cm |  | 425                           |  |  | 1.17 | 20 |  |

**Batch B508295 - Paste Extract**

|                                 |      |                           |      |  |                                       |  |  |      |    |  |
|---------------------------------|------|---------------------------|------|--|---------------------------------------|--|--|------|----|--|
| <b>Duplicate (B508295-DUP2)</b> |      | <b>Source: 1508196-01</b> |      |  | Prepared: 08/27/15 Analyzed: 08/31/15 |  |  |      |    |  |
| Calcium                         | 45.1 | 5.00                      | mg/L |  | 42.9                                  |  |  | 5.00 | 20 |  |
| Magnesium                       | 5.84 | 5.00                      | mg/L |  | 5.50                                  |  |  | 6.00 | 20 |  |
| Sodium                          | 46.8 | 10.0                      | mg/L |  | 45.4                                  |  |  | 3.19 | 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 B508252 - EPA 3050**

| Blank (B508252-BLK1) Prepared & Analyzed: 08/24/15 |    |       |           |  |  |  |  |  |  |  |
|--|----|-------|-----------|--|--|--|--|--|--|--|
| Barium   | ND | 0.010 | mg/kg dry |  |  |  |  |  |  |  |
| Cadmium  | ND | 0.050 | mg/kg dry |  |  |  |  |  |  |  |
| Chromium   | ND | 0.050 | mg/kg dry |  |  |  |  |  |  |  |
| Copper   | ND | 0.020 | 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 (B508252-BS1) Prepared & Analyzed: 08/24/15 |       |       |           |       |  |      |        |  |  |  |
|---|-------|-------|-----------|-------|--|------|--------|--|--|--|
| Barium  | 1.90  | 0.010 | mg/kg dry | 2.00  |  | 95.1 | 85-115 |  |  |  |
| Cadmium   | 1.82  | 0.050 | mg/kg dry | 2.00  |  | 91.1 | 85-115 |  |  |  |
| Chromium  | 2.00  | 0.050 | mg/kg dry | 2.00  |  | 100  | 85-115 |  |  |  |
| Copper  | 3.97  | 0.020 | mg/kg dry | 4.00  |  | 99.3 | 85-115 |  |  |  |
| Lead  | 1.94  | 0.100 | mg/kg dry | 2.00  |  | 97.2 | 85-115 |  |  |  |
| Nickel  | 1.88  | 0.050 | mg/kg dry | 2.00  |  | 93.8 | 85-115 |  |  |  |
| Selenium  | 7.70  | 0.200 | mg/kg dry | 8.00  |  | 96.2 | 85-115 |  |  |  |
| Silver  | 0.094 | 0.050 | mg/kg dry | 0.100 |  | 93.9 | 85-115 |  |  |  |
| Zinc  | 1.81  | 0.050 | mg/kg dry | 2.00  |  | 90.4 | 85-115 |  |  |  |

| LCS Dup (B508252-BSD1) Prepared & Analyzed: 08/24/15 |       |       |           |       |  |      |        |        |    |  |
|--|-------|-------|-----------|-------|--|------|--------|--------|----|--|
| Barium   | 1.88  | 0.010 | mg/kg dry | 2.00  |  | 94.1 | 85-115 | 1.08   | 20 |  |
| Cadmium  | 1.80  | 0.050 | mg/kg dry | 2.00  |  | 90.0 | 85-115 | 1.19   | 20 |  |
| Chromium   | 1.98  | 0.050 | mg/kg dry | 2.00  |  | 99.1 | 85-115 | 0.945  | 20 |  |
| Copper   | 3.98  | 0.020 | mg/kg dry | 4.00  |  | 99.5 | 85-115 | 0.197  | 20 |  |
| Lead   | 1.92  | 0.100 | mg/kg dry | 2.00  |  | 96.0 | 85-115 | 1.31   | 20 |  |
| Nickel   | 1.88  | 0.050 | mg/kg dry | 2.00  |  | 93.9 | 85-115 | 0.0414 | 20 |  |
| Selenium   | 7.55  | 0.200 | mg/kg dry | 8.00  |  | 94.4 | 85-115 | 1.89   | 20 |  |
| Silver   | 0.093 | 0.050 | mg/kg dry | 0.100 |  | 93.0 | 85-115 | 0.992  | 20 |  |
| Zinc   | 1.79  | 0.050 | mg/kg dry | 2.00  |  | 89.6 | 85-115 | 0.816  | 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 B508254 - EPA 3050**

**Blank (B508254-BLK1)**

Prepared & Analyzed: 08/24/15

|          |    |       |           |  |  |  |  |  |  |  |
|----------|----|-------|-----------|--|--|--|--|--|--|--|
| Barium   | ND | 0.010 | mg/kg dry |  |  |  |  |  |  |  |
| Cadmium  | ND | 0.050 | mg/kg dry |  |  |  |  |  |  |  |
| Chromium | ND | 0.050 | mg/kg dry |  |  |  |  |  |  |  |
| Copper   | ND | 0.020 | 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 (B508254-BS1)**

Prepared & Analyzed: 08/24/15

|          |       |       |           |       |  |      |        |  |  |  |
|----------|-------|-------|-----------|-------|--|------|--------|--|--|--|
| Barium   | 1.90  | 0.010 | mg/kg dry | 2.00  |  | 95.1 | 85-115 |  |  |  |
| Cadmium  | 1.82  | 0.050 | mg/kg dry | 2.00  |  | 91.1 | 85-115 |  |  |  |
| Chromium | 2.00  | 0.050 | mg/kg dry | 2.00  |  | 100  | 85-115 |  |  |  |
| Copper   | 3.97  | 0.020 | mg/kg dry | 4.00  |  | 99.3 | 85-115 |  |  |  |
| Lead     | 1.94  | 0.100 | mg/kg dry | 2.00  |  | 97.2 | 85-115 |  |  |  |
| Nickel   | 1.88  | 0.050 | mg/kg dry | 2.00  |  | 93.8 | 85-115 |  |  |  |
| Selenium | 7.70  | 0.200 | mg/kg dry | 8.00  |  | 96.2 | 85-115 |  |  |  |
| Silver   | 0.094 | 0.050 | mg/kg dry | 0.100 |  | 93.9 | 85-115 |  |  |  |
| Zinc     | 1.81  | 0.050 | mg/kg dry | 2.00  |  | 90.4 | 85-115 |  |  |  |

**LCS Dup (B508254-BSD1)**

Prepared & Analyzed: 08/24/15

|          |       |       |           |       |  |      |        |        |    |  |
|----------|-------|-------|-----------|-------|--|------|--------|--------|----|--|
| Barium   | 1.88  | 0.010 | mg/kg dry | 2.00  |  | 94.1 | 85-115 | 1.08   | 20 |  |
| Cadmium  | 1.80  | 0.050 | mg/kg dry | 2.00  |  | 90.0 | 85-115 | 1.19   | 20 |  |
| Chromium | 1.98  | 0.050 | mg/kg dry | 2.00  |  | 99.1 | 85-115 | 0.945  | 20 |  |
| Copper   | 3.98  | 0.020 | mg/kg dry | 4.00  |  | 99.5 | 85-115 | 0.197  | 20 |  |
| Lead     | 1.92  | 0.100 | mg/kg dry | 2.00  |  | 96.0 | 85-115 | 1.31   | 20 |  |
| Nickel   | 1.88  | 0.050 | mg/kg dry | 2.00  |  | 93.9 | 85-115 | 0.0414 | 20 |  |
| Selenium | 7.55  | 0.200 | mg/kg dry | 8.00  |  | 94.4 | 85-115 | 1.89   | 20 |  |
| Silver   | 0.093 | 0.050 | mg/kg dry | 0.100 |  | 93.0 | 85-115 | 0.992  | 20 |  |
| Zinc     | 1.79  | 0.050 | mg/kg dry | 2.00  |  | 89.6 | 85-115 | 0.816  | 20 |  |

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| Monument Global Resources<br>12160 N. Abrams Rd. Suite 160<br>Dallas TX, 75243 | Project: Table 910<br>Project Name / Number: Cache Unit Spill #4<br>Project Manager: Kerry Smith | Reported:<br>09/03/15 20:26 |
|--|--|-----------------------------|

**Total Metals by ICPMS - Quality Control**

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

**Batch B508289 - EPA 3050M**

|                               |        |        |           |        |  |     |        |      |    |  |
|-------------------------------|--------|--------|-----------|--------|--|-----|--------|------|----|--|
| <b>Blank (B508289-BLK1)</b>   |        |        |           |        |  |     |        |      |    |  |
| Prepared & Analyzed: 08/27/15 |        |        |           |        |  |     |        |      |    |  |
| Arsenic                       | ND     | 0.0005 | mg/kg dry |        |  |     |        |      |    |  |
| <b>LCS (B508289-BS1)</b>      |        |        |           |        |  |     |        |      |    |  |
| Prepared & Analyzed: 08/27/15 |        |        |           |        |  |     |        |      |    |  |
| Arsenic                       | 0.0559 | 0.0005 | mg/kg dry | 0.0500 |  | 112 | 85-115 |      |    |  |
| <b>LCS Dup (B508289-BSD1)</b> |        |        |           |        |  |     |        |      |    |  |
| Prepared & Analyzed: 08/27/15 |        |        |           |        |  |     |        |      |    |  |
| Arsenic                       | 0.0535 | 0.0005 | mg/kg dry | 0.0500 |  | 107 | 85-115 | 4.38 | 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 |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

**Batch B509038 - EPA 7471**

|                                       |        |        |           |         |  |      |        |      |    |  |
|---------------------------------------|--------|--------|-----------|---------|--|------|--------|------|----|--|
| <b>Blank (B509038-BLK1)</b>           |        |        |           |         |  |      |        |      |    |  |
| Prepared: 09/02/15 Analyzed: 09/03/15 |        |        |           |         |  |      |        |      |    |  |
| Mercury                               | ND     | 0.0002 | mg/kg wet |         |  |      |        |      |    |  |
| <b>LCS (B509038-BS1)</b>              |        |        |           |         |  |      |        |      |    |  |
| Prepared: 09/02/15 Analyzed: 09/03/15 |        |        |           |         |  |      |        |      |    |  |
| Mercury                               | 0.0020 | 0.0002 | mg/kg wet | 0.00200 |  | 98.4 | 85-115 |      |    |  |
| <b>LCS Dup (B509038-BSD1)</b>         |        |        |           |         |  |      |        |      |    |  |
| Prepared: 09/02/15 Analyzed: 09/03/15 |        |        |           |         |  |      |        |      |    |  |
| Mercury                               | 0.0019 | 0.0002 | mg/kg wet | 0.00200 |  | 96.7 | 85-115 | 1.64 | 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 |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

**Batch B508243 - Hot Water Soluble Metals Extract**

|                               |      |       |      |                               |  |      |        |       |    |  |
|-------------------------------|------|-------|------|-------------------------------|--|------|--------|-------|----|--|
| <b>Blank (B508243-BLK1)</b>   |      |       |      | Prepared & Analyzed: 08/24/15 |  |      |        |       |    |  |
| Boron                         | ND   | 0.300 | mg/L |                               |  |      |        |       |    |  |
| <b>LCS (B508243-BS1)</b>      |      |       |      | Prepared & Analyzed: 08/24/15 |  |      |        |       |    |  |
| Boron                         | 4.61 | 0.300 | mg/L | 5.00                          |  | 92.1 | 85-115 |       |    |  |
| <b>LCS Dup (B508243-BSD1)</b> |      |       |      | Prepared & Analyzed: 08/24/15 |  |      |        |       |    |  |
| Boron                         | 4.58 | 0.300 | mg/L | 5.00                          |  | 91.5 | 85-115 | 0.630 | 20 |  |

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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 5081407 - Volatiles**

**Blank (5081407-BLK1)**

Prepared: 08/14/15 Analyzed: 08/18/15

|                                       |        |       |       |        |  |     |          |  |  |  |
|---------------------------------------|--------|-------|-------|--------|--|-----|----------|--|--|--|
| Surrogate: 4-Bromofluorobenzene (PID) | 0.0503 |       | mg/kg | 0.0500 |  | 101 | 85.6-137 |  |  |  |
| 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 (5081407-BS1)**

Prepared: 08/14/15 Analyzed: 08/18/15

|                                       |        |       |       |        |  |      |          |  |  |  |
|---------------------------------------|--------|-------|-------|--------|--|------|----------|--|--|--|
| Surrogate: 4-Bromofluorobenzene (PID) | 0.0464 |       | mg/kg | 0.0500 |  | 92.7 | 85.6-137 |  |  |  |
| Benzene                               | 2.26   | 0.050 | mg/kg | 2.00   |  | 113  | 73-130   |  |  |  |
| Ethylbenzene                          | 2.28   | 0.050 | mg/kg | 2.00   |  | 114  | 71.9-119 |  |  |  |
| Toluene                               | 2.13   | 0.050 | mg/kg | 2.00   |  | 107  | 77-117   |  |  |  |
| Total Xylenes                         | 6.40   | 0.150 | mg/kg | 6.00   |  | 107  | 76.2-112 |  |  |  |

**LCS Dup (5081407-BSD1)**

Prepared: 08/14/15 Analyzed: 08/18/15

|                                       |        |       |       |        |  |      |          |      |      |  |
|---------------------------------------|--------|-------|-------|--------|--|------|----------|------|------|--|
| Surrogate: 4-Bromofluorobenzene (PID) | 0.0481 |       | mg/kg | 0.0500 |  | 96.2 | 85.6-137 |      |      |  |
| Benzene                               | 2.29   | 0.050 | mg/kg | 2.00   |  | 115  | 73-130   | 1.34 | 6.59 |  |
| Ethylbenzene                          | 2.37   | 0.050 | mg/kg | 2.00   |  | 119  | 71.9-119 | 3.96 | 8.3  |  |
| Toluene                               | 2.18   | 0.050 | mg/kg | 2.00   |  | 109  | 77-117   | 2.43 | 6.92 |  |
| Total Xylenes                         | 6.53   | 0.150 | mg/kg | 6.00   |  | 109  | 76.2-112 | 2.03 | 8.93 |  |

**Batch 5081902 - Volatiles**

**Blank (5081902-BLK1)**

Prepared & Analyzed: 08/19/15

|                                       |        |       |       |        |  |     |          |  |  |  |
|---------------------------------------|--------|-------|-------|--------|--|-----|----------|--|--|--|
| Surrogate: 4-Bromofluorobenzene (PID) | 0.0508 |       | mg/kg | 0.0500 |  | 102 | 85.6-137 |  |  |  |
| 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 |        |  |     |          |  |  |  |

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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 5081902 - Volatiles**

**LCS (5081902-BS1)**

Prepared & Analyzed: 08/19/15

|                                       |        |       |       |        |  |      |          |  |  |  |
|---------------------------------------|--------|-------|-------|--------|--|------|----------|--|--|--|
| Surrogate: 4-Bromofluorobenzene (PID) | 0.0476 |       | mg/kg | 0.0500 |  | 95.2 | 85.6-137 |  |  |  |
| Benzene                               | 2.20   | 0.050 | mg/kg | 2.00   |  | 110  | 73-130   |  |  |  |
| Ethylbenzene                          | 2.23   | 0.050 | mg/kg | 2.00   |  | 112  | 71.9-119 |  |  |  |
| Toluene                               | 2.08   | 0.050 | mg/kg | 2.00   |  | 104  | 77-117   |  |  |  |
| Total Xylenes                         | 6.25   | 0.150 | mg/kg | 6.00   |  | 104  | 76.2-112 |  |  |  |

**LCS Dup (5081902-BSD1)**

Prepared & Analyzed: 08/19/15

|                                       |        |       |       |        |  |      |          |       |      |  |
|---------------------------------------|--------|-------|-------|--------|--|------|----------|-------|------|--|
| Surrogate: 4-Bromofluorobenzene (PID) | 0.0467 |       | mg/kg | 0.0500 |  | 93.4 | 85.6-137 |       |      |  |
| Benzene                               | 2.18   | 0.050 | mg/kg | 2.00   |  | 109  | 73-130   | 0.756 | 6.59 |  |
| Ethylbenzene                          | 2.20   | 0.050 | mg/kg | 2.00   |  | 110  | 71.9-119 | 1.49  | 8.3  |  |
| Toluene                               | 2.06   | 0.050 | mg/kg | 2.00   |  | 103  | 77-117   | 0.692 | 6.92 |  |
| Total Xylenes                         | 6.19   | 0.150 | mg/kg | 6.00   |  | 103  | 76.2-112 | 1.00  | 8.93 |  |

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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 5081708 - General Prep - Organics**

**Blank (5081708-BLK1)**

Prepared: 08/17/15 Analyzed: 08/18/15

|                               |      |      |       |      |  |      |          |  |  |  |
|-------------------------------|------|------|-------|------|--|------|----------|--|--|--|
| Surrogate: 1-Chlorooctadecane | 44.7 |      | mg/kg | 50.0 |  | 89.4 | 52.1-176 |  |  |  |
| Surrogate: 1-Chlorooctane     | 46.8 |      | mg/kg | 50.0 |  | 93.7 | 47.2-157 |  |  |  |
| 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 (5081708-BS1)**

Prepared: 08/17/15 Analyzed: 08/18/15

|                               |      |      |       |      |  |      |          |  |  |  |
|-------------------------------|------|------|-------|------|--|------|----------|--|--|--|
| Surrogate: 1-Chlorooctadecane | 48.3 |      | mg/kg | 50.0 |  | 96.7 | 52.1-176 |  |  |  |
| Surrogate: 1-Chlorooctane     | 50.8 |      | mg/kg | 50.0 |  | 102  | 47.2-157 |  |  |  |
| DRO >C10-C28                  | 193  | 10.0 | mg/kg | 200  |  | 96.6 | 81.3-118 |  |  |  |
| GRO C6-C10                    | 187  | 10.0 | mg/kg | 200  |  | 93.7 | 72.5-115 |  |  |  |
| Total TPH C6-C28              | 381  | 10.0 | mg/kg | 400  |  | 95.2 | 80-113   |  |  |  |

**LCS Dup (5081708-BSD1)**

Prepared: 08/17/15 Analyzed: 08/18/15

|                               |      |      |       |      |  |      |          |      |      |  |
|-------------------------------|------|------|-------|------|--|------|----------|------|------|--|
| Surrogate: 1-Chlorooctadecane | 53.1 |      | mg/kg | 50.0 |  | 106  | 52.1-176 |      |      |  |
| Surrogate: 1-Chlorooctane     | 51.9 |      | mg/kg | 50.0 |  | 104  | 47.2-157 |      |      |  |
| DRO >C10-C28                  | 205  | 10.0 | mg/kg | 200  |  | 102  | 81.3-118 | 5.65 | 15.3 |  |
| GRO C6-C10                    | 190  | 10.0 | mg/kg | 200  |  | 95.0 | 72.5-115 | 1.45 | 10.1 |  |
| Total TPH C6-C28              | 395  | 10.0 | mg/kg | 400  |  | 98.6 | 80-113   | 3.60 | 12.1 |  |

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

**Semivolatile Organic Compounds by GCMS - Quality Control**

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

**Batch 5080503 - SW846-3510**

**Blank (5080503-BLK1)**

Prepared: 08/05/15 Analyzed: 08/06/15

|                                    |      |       |       |      |  |      |          |  |  |  |
|------------------------------------|------|-------|-------|------|--|------|----------|--|--|--|
| 1-Methylnaphthalene                | ND   | 0.020 | mg/kg |      |  |      |          |  |  |  |
| <i>Surrogate: 2-Fluorobiphenyl</i> | 1.77 |       | mg/kg | 2.00 |  | 88.3 | 23.4-133 |  |  |  |
| 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>  | 1.77 |       | mg/kg | 2.00 |  | 88.5 | 20.4-109 |  |  |  |
| Phenanthrene                       | ND   | 0.040 | mg/kg |      |  |      |          |  |  |  |
| Pyrene                             | ND   | 0.040 | mg/kg |      |  |      |          |  |  |  |
| <i>Surrogate: Terphenyl-dl4</i>    | 2.07 |       | mg/kg | 2.00 |  | 104  | 38.4-163 |  |  |  |

**LCS (5080503-BS1)**

Prepared: 08/05/15 Analyzed: 08/06/15

|                                    |       |       |       |       |  |      |          |  |  |  |
|------------------------------------|-------|-------|-------|-------|--|------|----------|--|--|--|
| <i>Surrogate: 2-Fluorobiphenyl</i> | 1.57  |       | mg/kg | 2.00  |  | 78.3 | 23.4-133 |  |  |  |
| 2-Methylnaphthalene                | 0.588 | 0.040 | mg/kg | 0.800 |  | 73.5 | 41.4-151 |  |  |  |
| Acenaphthene                       | 0.607 | 0.040 | mg/kg | 0.800 |  | 75.8 | 39.3-154 |  |  |  |
| Acenaphthylene                     | 0.592 | 0.040 | mg/kg | 0.800 |  | 74.0 | 39.2-150 |  |  |  |
| Anthracene                         | 0.610 | 0.040 | mg/kg | 0.800 |  | 76.3 | 33.5-162 |  |  |  |
| Benzo[a]anthracene                 | 0.616 | 0.040 | mg/kg | 0.800 |  | 76.9 | 28.6-167 |  |  |  |
| Benzo[a]pyrene                     | 0.619 | 0.040 | mg/kg | 0.800 |  | 77.4 | 27.2-163 |  |  |  |
| Benzo[b]fluoranthene               | 0.608 | 0.040 | mg/kg | 0.800 |  | 76.0 | 24-168   |  |  |  |
| Benzo[g,h,i]perylene               | 0.661 | 0.040 | mg/kg | 0.800 |  | 82.6 | 14.1-172 |  |  |  |
| Benzo[k]fluoranthene               | 0.652 | 0.040 | mg/kg | 0.800 |  | 81.5 | 28.9-170 |  |  |  |
| Carbazole                          | 0.611 | 0.040 | mg/kg | 0.800 |  | 76.4 | 31.6-163 |  |  |  |
| Chrysene                           | 0.625 | 0.040 | mg/kg | 0.800 |  | 78.1 | 27.7-171 |  |  |  |
| Dibenz[a,h]anthracene              | 0.682 | 0.040 | mg/kg | 0.800 |  | 85.2 | 19-164   |  |  |  |
| Fluoranthene                       | 0.595 | 0.040 | mg/kg | 0.800 |  | 74.4 | 38.5-165 |  |  |  |

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| Monument Global Resources<br>12160 N. Abrams Rd. Suite 160<br>Dallas TX, 75243 | Project: Table 910<br>Project Name / Number: Cache Unit Spill #4<br>Project Manager: Kerry Smith | Reported:<br>09/03/15 20:26 |
|--|--|-----------------------------|

**Semivolatile Organic Compounds by GCMS - Quality Control**

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

**Batch 5080503 - SW846-3510**

**LCS (5080503-BS1)**

Prepared: 08/05/15 Analyzed: 08/06/15

|                                   |             |       |       |             |  |             |                 |  |  |  |
|-----------------------------------|-------------|-------|-------|-------------|--|-------------|-----------------|--|--|--|
| Fluorene                          | 0.601       | 0.040 | mg/kg | 0.800       |  | 75.1        | 40.4-158        |  |  |  |
| Indeno[1,2,3-cd]pyrene            | 0.685       | 0.040 | mg/kg | 0.800       |  | 85.7        | 21.9-162        |  |  |  |
| Naphthalene                       | 0.584       | 0.040 | mg/kg | 0.800       |  | 73.0        | 33.8-147        |  |  |  |
| <i>Surrogate: Nitrobenzene-d5</i> | <i>1.61</i> |       | mg/kg | <i>2.00</i> |  | <i>80.6</i> | <i>20.4-109</i> |  |  |  |
| Phenanthrene                      | 0.617       | 0.040 | mg/kg | 0.800       |  | 77.2        | 34.7-164        |  |  |  |
| Pyrene                            | 0.576       | 0.040 | mg/kg | 0.800       |  | 72.0        | 28-180          |  |  |  |
| <i>Surrogate: Terphenyl-d14</i>   | <i>1.77</i> |       | mg/kg | <i>2.00</i> |  | <i>88.7</i> | <i>38.4-163</i> |  |  |  |

**LCS Dup (5080503-BS1)**

Prepared: 08/05/15 Analyzed: 08/06/15

|                                    |             |       |       |             |  |             |                 |        |      |  |
|------------------------------------|-------------|-------|-------|-------------|--|-------------|-----------------|--------|------|--|
| <i>Surrogate: 2-Fluorobiphenyl</i> | <i>1.57</i> |       | mg/kg | <i>2.00</i> |  | <i>78.4</i> | <i>23.4-133</i> |        |      |  |
| 2-Methylnaphthalene                | 0.582       | 0.040 | mg/kg | 0.800       |  | 72.8        | 41.4-151        | 0.977  | 20   |  |
| Acenaphthene                       | 0.603       | 0.040 | mg/kg | 0.800       |  | 75.4        | 39.3-154        | 0.600  | 20   |  |
| Acenaphthylene                     | 0.599       | 0.040 | mg/kg | 0.800       |  | 74.8        | 39.2-150        | 1.11   | 20   |  |
| Anthracene                         | 0.610       | 0.040 | mg/kg | 0.800       |  | 76.3        | 33.5-162        | 0.0393 | 20   |  |
| Benzo[a]anthracene                 | 0.612       | 0.040 | mg/kg | 0.800       |  | 76.5        | 28.6-167        | 0.529  | 20   |  |
| Benzo[a]pyrene                     | 0.621       | 0.040 | mg/kg | 0.800       |  | 77.7        | 27.2-163        | 0.350  | 20   |  |
| Benzo[b]fluoranthene               | 0.633       | 0.040 | mg/kg | 0.800       |  | 79.1        | 24-168          | 3.93   | 21.5 |  |
| Benzo[g,h,i]perylene               | 0.664       | 0.040 | mg/kg | 0.800       |  | 83.0        | 14.1-172        | 0.474  | 39.3 |  |
| Benzo[k]fluoranthene               | 0.638       | 0.040 | mg/kg | 0.800       |  | 79.8        | 28.9-170        | 2.16   | 20.5 |  |
| Carbazole                          | 0.617       | 0.040 | mg/kg | 0.800       |  | 77.2        | 31.6-163        | 0.988  | 20   |  |
| Chrysene                           | 0.623       | 0.040 | mg/kg | 0.800       |  | 77.8        | 27.7-171        | 0.313  | 20   |  |
| Dibenz[a,h]anthracene              | 0.686       | 0.040 | mg/kg | 0.800       |  | 85.8        | 19-164          | 0.680  | 30.5 |  |
| Fluoranthene                       | 0.599       | 0.040 | mg/kg | 0.800       |  | 74.9        | 38.5-165        | 0.703  | 20   |  |
| Fluorene                           | 0.598       | 0.040 | mg/kg | 0.800       |  | 74.7        | 40.4-158        | 0.456  | 20   |  |
| Indeno[1,2,3-cd]pyrene             | 0.684       | 0.040 | mg/kg | 0.800       |  | 85.6        | 21.9-162        | 0.134  | 32.1 |  |
| Naphthalene                        | 0.578       | 0.040 | mg/kg | 0.800       |  | 72.3        | 33.8-147        | 1.01   | 20   |  |
| <i>Surrogate: Nitrobenzene-d5</i>  | <i>1.60</i> |       | mg/kg | <i>2.00</i> |  | <i>79.8</i> | <i>20.4-109</i> |        |      |  |
| Phenanthrene                       | 0.617       | 0.040 | mg/kg | 0.800       |  | 77.2        | 34.7-164        | 0.0130 | 20   |  |
| Pyrene                             | 0.569       | 0.040 | mg/kg | 0.800       |  | 71.1        | 28-180          | 1.19   | 20   |  |
| <i>Surrogate: Terphenyl-d14</i>    | <i>1.78</i> |       | mg/kg | <i>2.00</i> |  | <i>89.0</i> | <i>38.4-163</i> |        |      |  |

Green Analytical Laboratories

*Debbie Zufelt*

Debbie Zufelt, Reports Manager

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|  |  |                             |
|--|--|-----------------------------|
| Monument Global Resources<br>12160 N. Abrams Rd. Suite 160<br>Dallas TX, 75243 | Project: Table 910<br>Project Name / Number: Cache Unit Spill #4<br>Project Manager: Kerry Smith | Reported:<br>09/03/15 20:26 |
|--|--|-----------------------------|

Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- H2 Sample analysis performed past hold time specified by the method.
- 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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