

**Table 1**  
**RMV 216-21 Groundwater Monitoring**  
**2013 Water Quality Data Summary**

| SAMPLE SUMMARY                   |                                     |                                   |        |                |                |                |                |                     |                |
|----------------------------------|-------------------------------------|-----------------------------------|--------|----------------|----------------|----------------|----------------|---------------------|----------------|
| Location Description             | RMV 216-21 GW Monitoring            |                                   |        |                |                |                |                |                     |                |
| Sample Type                      | Groundwater                         |                                   |        |                |                |                |                |                     |                |
| LABORATORY DATA SUMMARY          |                                     |                                   |        |                |                |                |                |                     |                |
| Sample ID                        | CDPHE<br>Regulation 41<br>Standards | COGCC Table<br>910-1<br>Standards | UNITS  | RMV 216-21 MW1 | RMV 216-21 MW1 | RMV 216-21 MW1 | RMV 216-21 MW1 | RMV 216-21 MW2      | RMV 216-21 MW2 |
| Depth to Water (feet)            |                                     |                                   |        | 84.45          | 84.54          | 84.56          | 84.45          | 79.2                | NS             |
| Sample Date                      |                                     |                                   |        | 3/7/2013       | 6/25/2013      | 8/20/2013      | 11/21/2013     | 3/7/2013            | 6/25/2013      |
| Analytical Parameters            |                                     |                                   |        |                |                |                |                |                     |                |
| <b>BTEX</b>                      |                                     |                                   |        |                |                |                |                |                     |                |
| Benzene                          | 5                                   | 5                                 | ug/l   | <0.20          | <0.20          | 0.70J          | <1.0           | <0.20               | NS             |
| Toluene                          | 560 to 1000                         | 560 to 1000                       | ug/l   | <1.0           | <1.0           | <1.0           | <2.0           | <1.0                | NS             |
| Ethylbenzene                     | 700                                 | 700                               | ug/l   | <1.0           | <1.0           | <1.0           | <2.0           | <1.0                | NS             |
| Xylene (total)                   | 1400 to 10000                       | 1400 to 10000                     | ug/l   | <2.0           | <2.0           | <2.0           | <2.0           | <2.0                | NS             |
| <b>Metals</b>                    |                                     |                                   |        |                |                |                |                |                     |                |
| Calcium                          | NA                                  | NA                                | mg/l   | 212            | 214            | 226            | 225            | 209                 | NS             |
| Iron                             | 0.3                                 | NA                                | mg/l   | <0.07          | <0.07          | <0.07          | <0.070         | <0.07               | NS             |
| Magnesium                        | NA                                  | NA                                | mg/l   | 213            | 201            | 201            | 196            | 171                 | NS             |
| Manganese                        | 0.05                                | NA                                | mg/l   | 0.369          | 0.378          | 0.429          | 0.438          | 0.0488              | NS             |
| Potassium                        | 23                                  | NA                                | mg/l   | 6.34           | 5.24           | 5.65           | 10.2           | 6.43                | NS             |
| Selenium                         | 0.05                                | NA                                | mg/l   | <0.05          | <0.05          | <0.05          | <0.050         | <0.05               | NS             |
| Sodium                           | 390                                 | NA                                | mg/l   | 446            | 391            | 3.93           | 412            | 343                 | NS             |
| <b>General Chemistry</b>         |                                     |                                   |        |                |                |                |                |                     |                |
| Alkalinity, Bicarbonate as CaCO3 | NA                                  | NA                                | mg/l   | 726            | 577            | 559            | 569            | 638                 | NS             |
| Alkalinity, Carbonate            | NA                                  | NA                                | mg/l   | <5.0           | <5.0           | <5.0           | <5.0           | <5.0                | NS             |
| Alkalinity, Total as CaCO3       | NA                                  | NA                                | mg/l   | 729            | 577            | 559            | 569            | 638                 | NS             |
| Chloride                         | 250                                 | 1.25 x bkgd                       | mg/l   | 225            | 213            | 199            | 193            | 17                  | NS             |
| Nitrogen, Nitrate                | 10                                  | NA                                | mg/l   | 31.1           | 32             | 28.5           | 27.6           | 25.9                | NS             |
| Nitrogen Nitrite                 | 1.0                                 | NA                                | mg/l   | 0.15           | 0.16           | 0.12           | 0.14           | <0.020 <sup>b</sup> | NS             |
| Solids, Total Dissolved          | 10,000                              | NA                                | mg/l   | 3210           | 3230           | 3160           | 3110           | 2780                | NS             |
| Sulfate                          | 250                                 | 1.25 x bkgd                       | mg/l   | 1390           | 1460           | 1310           | 1310           | 1350                | NS             |
| pH                               | NA                                  | NA                                | su     | 7.04           | 7.2            | 7.29           | 7.29           | 7.13                | NS             |
| <b>Field Readings</b>            |                                     |                                   |        |                |                |                |                |                     |                |
| Temperature                      | NA                                  | NA                                | deg. C | 14.34          | 14.20          | 14.20          | 13.70          | 14.20               | NS             |
| Specific Conductivity            | NA                                  | NA                                | mS/cm  | 3.91           | 3.852          | 3.787          | 3.817          | 2.94                | NS             |
| Dissolved Oxygen                 | NA                                  | NA                                | mg/l   | 1.05           | 1.26           | 0.75           | 0.45           | 0.81                | NS             |
| pH                               | NA                                  | NA                                | su     | 7.60           | 7.29           | 7.51           | 7.12           | 7.04                | NS             |
| Solids, Total Dissolved          | NA                                  | NA                                | mg/l   | 2.5            | 2.5            | 2.4            | 2.4830         | 1.9                 | NS             |
| Turbidity                        | NA                                  | NA                                | NTU    | 5999           | NT             | NT             | NT             | 5999                | NS             |

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NTU - nephelometric turbidity units  
NT - not tested

a - Dilution required due to matrix interference  
b - Elevated detection limit due to matrix interference  
c - Elevated detection limit due to dilution required for possible matrix interference

| SAMPLE SUMMARY                   |                |                |                |                |                |                |                     |                |
|----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------|----------------|
| Location Description             |                |                |                |                |                |                |                     |                |
| Sample Type                      |                |                |                |                |                |                |                     |                |
| LABORATORY DATA SUMMARY          |                |                |                |                |                |                |                     |                |
| Sample ID                        | RMV 216-21 MW2 | RMV 216-21 MW2 | RMV 216-21 MW3 | RMV 216-21 MW3 | RMV 216-21 MW3 | RMV 216-21 MW3 | RMV 216-21 MW4      | RMV 216-21 MW4 |
| Depth to Water (feet)            | NT             | 79.2           | 68.14          | NS             | NT             | 68.16          | 85.69               | NS             |
| Sample Date                      | 8/20/2013      | 11/21/2013     | 3/7/2013       | 6/25/2013      | 8/20/2013      | 11/21/2013     | 3/7/2013            | 6/25/2013      |
| Analytical Parameters            |                |                |                |                |                |                |                     |                |
| BTEX                             |                |                |                |                |                |                |                     |                |
| Benzene                          | NT             | NT             | <0.20          | NS             | NT             | NT             | <0.20               | NS             |
| Toluene                          | NT             | NT             | <1.0           | NS             | NT             | NT             | <1.0                | NS             |
| Ethylbenzene                     | NT             | NT             | <1.0           | NS             | NT             | NT             | <1.0                | NS             |
| Xylene (total)                   | NT             | NT             | <2.0           | NS             | NT             | NT             | <2.0                | NS             |
| Metals                           |                |                |                |                |                |                |                     |                |
| Calcium                          | NT             | NT             | 222            | NS             | NT             | NT             | 225                 | NS             |
| Iron                             | NT             | NT             | <0.07          | NS             | NT             | NT             | <0.07               | NS             |
| Magnesium                        | NT             | NT             | 184            | NS             | NT             | NT             | 183                 | NS             |
| Manganese                        | NT             | NT             | 0.137          | NS             | NT             | NT             | <0.005              | NS             |
| Potassium                        | NT             | NT             | 6.62           | NS             | NT             | NT             | 6.59                | NS             |
| Selenium                         | NT             | NT             | <0.05          | NS             | NT             | NT             | <0.05               | NS             |
| Sodium                           | NT             | NT             | 358            | NS             | NT             | NT             | 345                 | NS             |
| General Chemistry                |                |                |                |                |                |                |                     |                |
| Alkalinity, Bicarbonate as CaCO3 | NT             | NT             | 567            | NS             | NT             | NT             | 577                 | NS             |
| Alkalinity, Carbonate            | NT             | NT             | <5.0           | NS             | NT             | NT             | <5.0                | NS             |
| Alkalinity, Total as CaCO3       | NT             | NT             | 567            | NS             | NT             | NT             | 577                 | NS             |
| Chloride                         | NT             | NT             | 29.2           | NS             | NT             | NT             | 15.6                | NS             |
| Nitrogen, Nitrate                | NT             | NT             | 44.9           | NS             | NT             | NT             | 19.7                | NS             |
| Nitrogen Nitrite                 | NT             | NT             | 0.04           | NS             | NT             | NT             | <0.020 <sup>b</sup> | NS             |
| Solids, Total Dissolved          | NT             | NT             | 2890           | NS             | NT             | NT             | 2980                | NS             |
| Sulfate                          | NT             | NT             | 1400           | NS             | NT             | NT             | 1480                | NS             |
| pH                               | NT             | NT             | 7.16           | NS             | NT             | NT             | 7.14                | NS             |
| Field Readings                   |                |                |                |                |                |                |                     |                |
| Temperature                      | NT             | NT             | 14.53          | NS             | NT             | NT             | 14.37               | NS             |
| Specific Conductivity            | NT             | NT             | 3.36           | NS             | NT             | NT             | 3.24                | NS             |
| Dissolved Oxygen                 | NT             | NT             | 1.48           | NS             | NT             | NT             | 2.21                | NS             |
| pH                               | NT             | NT             | 7.67           | NS             | NT             | NT             | 7.00                | NS             |
| Solids, Total Dissolved          | NT             | NT             | 2.2            | NS             | NT             | NT             | 2.1                 | NS             |
| Turbidity                        | NT             | NT             | 1509           | NS             | NT             | NT             | 2000                | NS             |

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| <b>SAMPLE SUMMARY</b>                        |                |                |                |                |                |                |                |                |
|----------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <b>Location Description</b>                  |                |                |                |                |                |                |                |                |
| <b>Sample Type</b>                           |                |                |                |                |                |                |                |                |
| <b>LABORATORY DATA SUMMARY</b>               |                |                |                |                |                |                |                |                |
| <b>Sample ID</b>                             | RMV 216-21 MW4 | RMV 216-21 MW4 | RMV 216-21 MW5 | RMV 216-21 MWX | RMV 216-21 MW5 | RMV 216-21 MW5 | RMV 216-21 MW5 | RMV 216-21 MW6 |
| <b>Depth to Water (feet)</b>                 | NT             | 85.85          | 85.81          | MW5 Duplicate  | 85.95          | 86.01          | 86             | 81.79          |
| <b>Sample Date</b>                           | 8/20/2013      | 11/21/2013     | 3/7/2013       | 3/7/2013       | 6/25/2013      | 8/20/2013      | 11/21/2013     | 3/7/2013       |
| <b>Analytical Parameters</b>                 |                |                |                |                |                |                |                |                |
| <b>BTEX</b>                                  |                |                |                |                |                |                |                |                |
| Benzene                                      | NT             | NT             | <0.20          | <0.20          | <0.20          | <0.20          | <1.0           | 17.3           |
| Toluene                                      | NT             | NT             | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | <1.0           |
| Ethylbenzene                                 | NT             | NT             | <1.0           | <1.0           | <1.0           | <1.0           | <2.0           | <1.0           |
| Xylene (total)                               | NT             | NT             | <2.0           | <2.0           | <2.0           | <2.0           | <2.0           | <2.0           |
| <b>Metals</b>                                |                |                |                |                |                |                |                |                |
| Calcium                                      | NT             | NT             | 221            | 221            | 222            | 238            | 243            | 217            |
| Iron                                         | NT             | NT             | <0.07          | <0.07          | <0.07          | <0.07          | 0.158          | <0.07          |
| Magnesium                                    | NT             | NT             | 234            | 234            | 227            | 225            | 219            | 252            |
| Manganese                                    | NT             | NT             | 0.123          | 0.124          | 0.113          | 0.117          | 0.112          | 0.182          |
| Potassium                                    | NT             | NT             | 6.51           | 6.29           | 5.17           | 5.66           | 5.55           | 7.07           |
| Selenium                                     | NT             | NT             | <0.05          | <0.05          | <0.05          | <0.05          | <0.050         | <0.05          |
| Sodium                                       | NT             | NT             | 500            | 490            | 446            | 4.52           | 478            | 593            |
| <b>General Chemistry</b>                     |                |                |                |                |                |                |                |                |
| Alkalinity, Bicarbonate as CaCO <sub>3</sub> | NT             | NT             | 565            | 548            | 525            | 536            | 524            | 1050           |
| Alkalinity, Carbonate                        | NT             | NT             | <5.0           | <5.0           | <5.0           | <5.0           | <5.0           | <5.0           |
| Alkalinity, Total as CaCO <sub>3</sub>       | NT             | NT             | 565            | 548            | 525            | 536            | 524            | 1050           |
| Chloride                                     | NT             | NT             | 325            | 331            | 325            | 284            | 272            | 493            |
| Nitrogen, Nitrate                            | NT             | NT             | 33.1           | 33.4           | 33.7           | 31.8           | 30.6           | 35             |
| Nitrogen Nitrite                             | NT             | NT             | 0.031          | 0.043          | <0.040         | <0.020         | <0.020         | 4.5            |
| Solids, Total Dissolved                      | NT             | NT             | 3470           | 3470           | 3530           | 3480           | 3380           | 3830           |
| Sulfate                                      | NT             | NT             | 1480           | 1480           | 1490           | 1390           | 1390           | 1460           |
| pH                                           | NT             | NT             | 7.07           | 7.12           | 7.47           | 7.26           | 7.26           | 7.04           |
| <b>Field Readings</b>                        |                |                |                |                |                |                |                |                |
| Temperature                                  | NT             | NT             | 26.37          | 26.37          | 14.10          | 14.40          | 14.00          | 18.93          |
| Specific Conductivity                        | NT             | NT             | 4.24           | 4.24           | 4.166          | 4.19           | 3.882          | 4.93           |
| Dissolved Oxygen                             | NT             | NT             | 1.65           | 1.65           | 0.58           | 0.32           | 0.34           | 1.3            |
| pH                                           | NT             | NT             | 6.97           | 6.97           | 7.22           | 7.31           | 7.16           | 6.95           |
| Solids, Total Dissolved                      | NT             | NT             | 2.8            | 2.8            | 2.7            | 2.7            | 2.5285         | 3.2            |
| Turbidity                                    | NT             | NT             | 11.3           | 11.3           | NT             | NT             | NT             | 859            |

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| SAMPLE SUMMARY                   |                |                |                |                |                |                |                |                     |
|----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------|
| Location Description             |                |                |                |                |                |                |                |                     |
| Sample Type                      |                |                |                |                |                |                |                |                     |
| LABORATORY DATA SUMMARY          |                |                |                |                |                |                |                |                     |
| Sample ID                        | RMV 216-21 MW6 | RMV 216-21 MW6 | RMV 216-21 MW6 | RMV 216-21 MW7 | RMV 216-21 MW7 | RMV 216-21 MW7 | RMV 216-21 MW7 | RMV 216-21 MW8      |
| Depth to Water (feet)            | 82.89          | 82.91          | 82.83          | 90.79          | 90.95          | 91.0           | 91.1           | 88.23               |
| Sample Date                      | 6/25/2013      | 8/20/2013      | 11/21/2013     | 3/7/2013       | 6/25/2013      | 8/20/2013      | 11/21/2013     | 3/7/2013            |
| Analytical Parameters            |                |                |                |                |                |                |                |                     |
| BTEX                             |                |                |                |                |                |                |                |                     |
| Benzene                          | 16.7           | 14.7           | 9.8            | <0.20          | <0.20          | <0.20          | <1.0           | <0.20               |
| Toluene                          | <1.0           | <1.0           | <2.0           | <1.0           | <1.0           | <1.0           | <2.0           | <1.0                |
| Ethylbenzene                     | <1.0           | <1.0           | <2.0           | <1.0           | <1.0           | <1.0           | <2.0           | <1.0                |
| Xylene (total)                   | <2.0           | <2.0           | <2.0           | <2.0           | <2.0           | <2.0           | <2.0           | <2.0                |
| Metals                           |                |                |                |                |                |                |                |                     |
| Calcium                          | 212            | 231            | 233            | 224            | 220            | 233            | 239            | 202                 |
| Iron                             | <0.07          | <0.07          | <0.070         | <0.07          | <0.07          | <0.07          | <0.070         | <0.07               |
| Magnesium                        | 234            | 250            | 244            | 219            | 206            | 209            | 201            | 248                 |
| Manganese                        | 0.171          | 0.207          | 0.189          | 0.0076         | 0.0069         | <0.005         | <0.005         | 0.0133              |
| Potassium                        | 5.45           | 6.14           | 8.24           | 6.46           | 5.39           | 5.58           | 6              | 6.67                |
| Selenium                         | <0.05          | <0.05          | <0.050         | <0.05          | <0.05          | <0.05          | <0.050         | <0.05               |
| Sodium                           | 513            | 5.48           | 556            | 464            | 403            | 4.1            | 423            | 494                 |
| General Chemistry                |                |                |                |                |                |                |                |                     |
| Alkalinity, Bicarbonate as CaCO3 | 827            | 599            | 584            | 727            | 615            | 563            | 553            | 822                 |
| Alkalinity, Carbonate            | <5.0           | <5.0           | <5.0           | <5.0           | <5.0           | <5.0           | <5.0           | <5.0                |
| Alkalinity, Total as CaCO3       | 827            | 599            | 584            | 727            | 615            | 563            | 553            | 822                 |
| Chloride                         | 466            | 430            | 480            | 215            | 192            | 201            | 137            | 319                 |
| Nitrogen, Nitrate                | 35.3           | 33.2           | 31.6           | 24.6           | 25.9           | 23.8           | 21.8           | 33.9                |
| Nitrogen Nitrite                 | 4.1            | 4              | 4.2            | 0.024          | <0.040         | <0.020         | <0.020         | <0.020 <sup>b</sup> |
| Solids, Total Dissolved          | 3570           | 3610           | 3670           | 3330           | 3270           | 3270           | 3130           | 3490                |
| Sulfate                          | 1440           | 1360           | 1350           | 1490           | 1530           | 1400           | 1390           | 1500                |
| pH                               | 7.23           | 7.27           | 7.19           | 7.15           | 7.29           | 7.3            | 7.27           | 7.17                |
| Field Readings                   |                |                |                |                |                |                |                |                     |
| Temperature                      | 15.10          | 14.80          | 14.00          | 13.77          | 14.40          | 14.50          | 13.90          | 17.48               |
| Specific Conductivity            | 4.687          | 4.766          | 5.591          | 3.94           | 3.802          | 3.787          | 3.679          | 4.13                |
| Dissolved Oxygen                 | 0.2            | 1.02           | 0.57           | 2.17           | 2.01           | 1.7            | 1.54           | 1.6                 |
| pH                               | 7.13           | 7.29           | 7.18           | 7.60           | 7.26           | 7.40           | 7.15           | 7.01                |
| Solids, Total Dissolved          | 3.0            | 3.1            | 3.4515         | 2.5            | 2.5            | 2.5            | 2.3855         | 2.7                 |
| Turbidity                        | NT             | NT             | NT             | 1834           | NT             | NT             | NT             | 568                 |

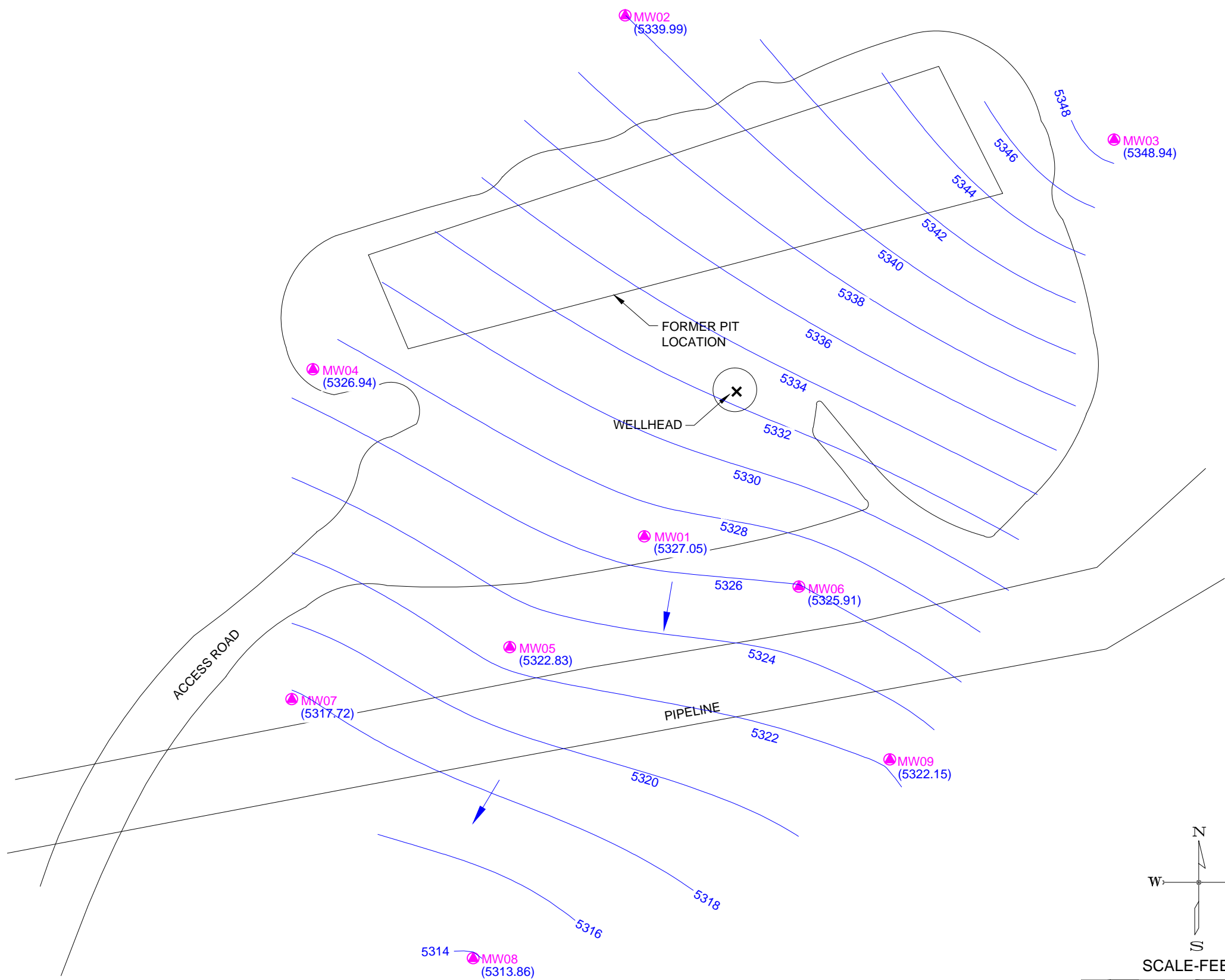
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**2013 Water Quality Data Summary**

| <b>SAMPLE SUMMARY</b>            |                       |                       |                       |                       |                       |                       |                       |
|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <b>Location Description</b>      |                       |                       |                       |                       |                       |                       |                       |
| <b>Sample Type</b>               |                       |                       |                       |                       |                       |                       |                       |
| <b>LABORATORY DATA SUMMARY</b>   |                       |                       |                       |                       |                       |                       |                       |
| <b>Sample ID</b>                 | <b>RMV 216-21 MW8</b> | <b>RMV 216-21 MW8</b> | <b>RMV 216-21 MW8</b> | <b>RMV 216-21 MW9</b> | <b>RMV 216-21 MW9</b> | <b>RMV 216-21 MW9</b> | <b>RMV 216-21 MW9</b> |
| <b>Depth to Water (feet)</b>     | 88.34                 | 88.36                 | 88.36                 | 81.54                 | 81.66                 | 81.72                 | 81.69                 |
| <b>Sample Date</b>               | 6/25/2013             | 8/20/2013             | 11/21/2013            | 3/7/2013              | 6/25/2013             | 8/20/2013             | 11/21/2013            |
| <b>Analytical Parameters</b>     |                       |                       |                       |                       |                       |                       |                       |
| <b>BTEX</b>                      |                       |                       |                       |                       |                       |                       |                       |
| Benzene                          | <0.20                 | <0.20                 | <1.0                  | 2.9                   | 4.9                   | 6.1                   | 4.3                   |
| Toluene                          | <1.0                  | <1.0                  | <2.0                  | <1.0                  | <1.0                  | <1.0                  | <2.0                  |
| Ethylbenzene                     | <1.0                  | <1.0                  | <2.0                  | <1.0                  | <1.0                  | <1.0                  | <2.0                  |
| Xylene (total)                   | <2.0                  | <2.0                  | <2.0                  | <2.0                  | <2.0                  | <2.0                  | <2.0                  |
| <b>Metals</b>                    |                       |                       |                       |                       |                       |                       |                       |
| Calcium                          | 199                   | 203                   | 218                   | 256                   | 236                   | 259                   | 255                   |
| Iron                             | <0.07                 | <0.07                 | <0.070                | <0.07                 | <0.07                 | <0.07                 | <0.070                |
| Magnesium                        | 236                   | 222                   | 233                   | 266                   | 245                   | 248                   | 242                   |
| Manganese                        | 0.0168                | 0.0177                | 0.0205                | 0.0933                | 0.1340                | 0.1160                | 0.1290                |
| Potassium                        | 5.5                   | 5.63                  | 7.19                  | 7.73                  | 6.2                   | 6.56                  | 7.65                  |
| Selenium                         | <0.05                 | <0.05                 | <0.050                | <0.05                 | <0.05                 | <0.05                 | 0.0501                |
| Sodium                           | 4.41                  | 4.27                  | 496                   | 502                   | 457                   | 4.43                  | 492                   |
| <b>General Chemistry</b>         |                       |                       |                       |                       |                       |                       |                       |
| Alkalinity, Bicarbonate as CaCO3 | 541                   | 569                   | 528                   | 975                   | 576                   | 610                   | 644                   |
| Alkalinity, Carbonate            | <5.0                  | <5.0                  | <5.0                  | <5.0                  | <5.0                  | <5.0                  | <5.0                  |
| Alkalinity, Total as CaCO3       | 541                   | 569                   | 528                   | 975                   | 576                   | 610                   | 644                   |
| Chloride                         | 296                   | 282                   | 304                   | 427                   | 383                   | 337                   | 325                   |
| Nitrogen, Nitrate                | 33.4                  | 31.9                  | 31.7                  | 46.8                  | 45.8                  | 43.1                  | 40.5                  |
| Nitrogen Nitrite                 | <0.040                | <0.020                | <0.020                | 3.3                   | 2.7                   | 2.7                   | 2.2                   |
| Solids, Total Dissolved          | 3490                  | 3420                  | 3380                  | 3830                  | 3710                  | 3570                  | 3620                  |
| Sulfate                          | 1440                  | 1370                  | 1420                  | 1560                  | 1540                  | 1430                  | 1420                  |
| pH                               | 7.25                  | 7.34                  | 7.32                  | 7.03                  | 7.28                  | 7.27                  | 7.13                  |
| <b>Field Readings</b>            |                       |                       |                       |                       |                       |                       |                       |
| Temperature                      | 14.30                 | 14.40                 | 14.00                 | 14.31                 | 15.30                 | 14.50                 | 14.00                 |
| Specific Conductivity            | 4.146                 | 4.123                 | 3.987                 | 4.79                  | 4.47                  | 4.491                 | 4.334                 |
| Dissolved Oxygen                 | 0.78                  | 0.61                  | 0.84                  | 0.92                  | 0.52                  | 0.41                  | 0.43                  |
| pH                               | 7.25                  | 7.40                  | 7.25                  | 7.62                  | 7.17                  | 7.40                  | 7.09                  |
| Solids, Total Dissolved          | 2.7                   | 2.7                   | 2.5870                | 3.1                   | 2.9                   | 2.9                   | 2.8080                |
| Turbidity                        | NT                    | NT                    | NT                    | 2000                  | NT                    | NT                    | NT                    |

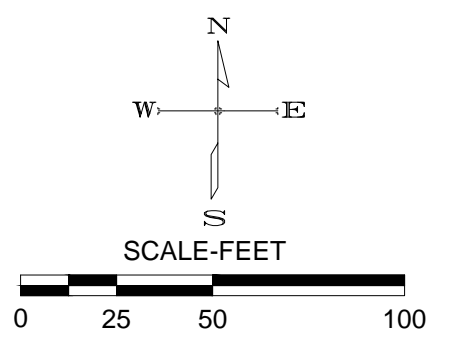
ug/l -micrograms per liter  
mg/l -milligrams per liter  
J - indicates an estimated value  
umhos/cm - micromhos per centimeter  
mS/cm - millisiemens per centimeter  
su - standard units  
NA - not applicable  
NTU - nephelometric turbidity units  
NT - not tested

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**LEGEND:**

- MW01 MONITORING WELL/BOREHOLE
- 5325.0 GROUNDWATER ELEVATION CONTOUR (FT-MSL)
- (5325.55) GROUNDWATER ELEVATION (FT-MSL)
- GROUNDWATER FLOW DIRECTION
- NS NOT SAMPLED

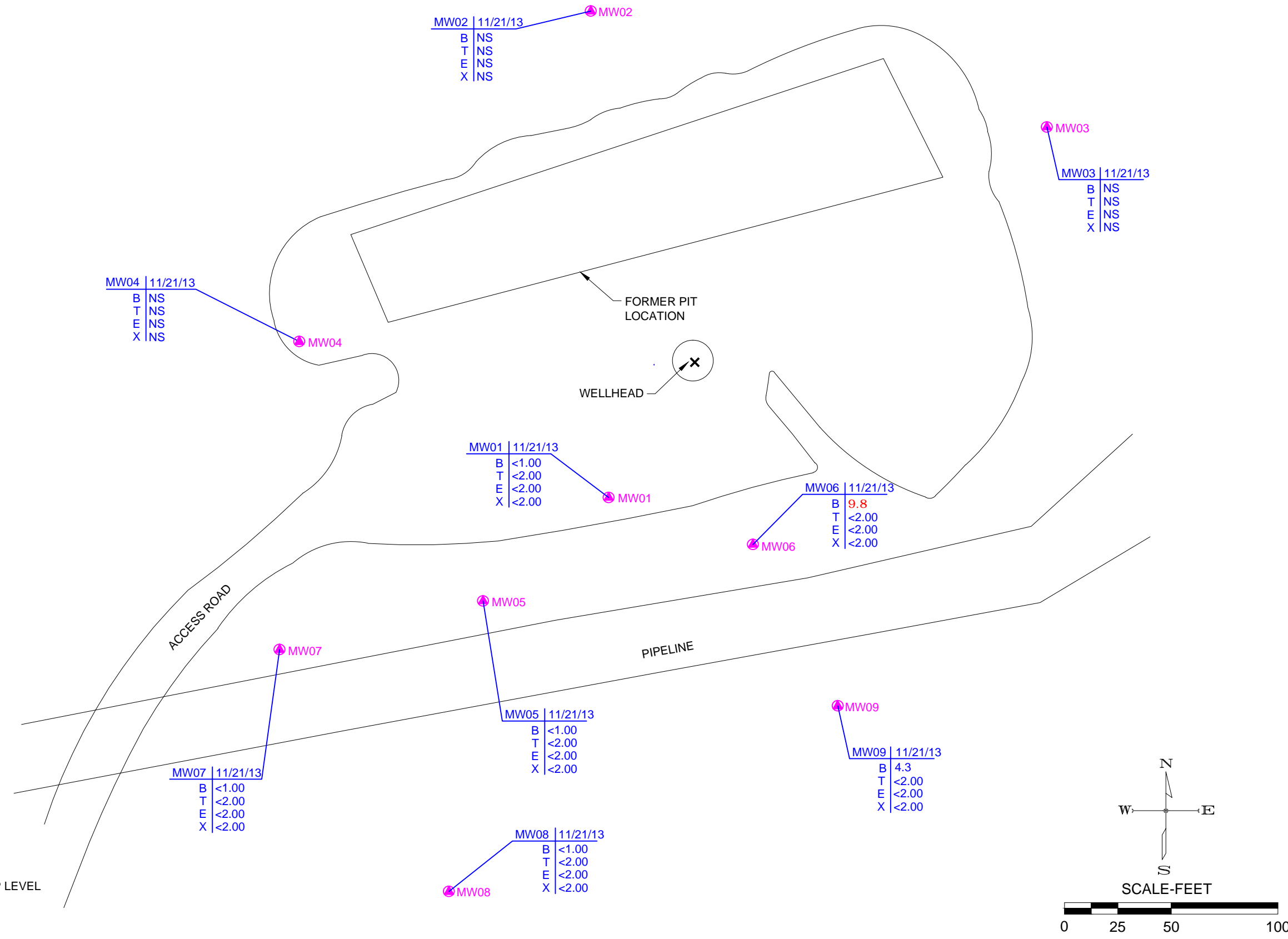


|             |            |
|-------------|------------|
| PROJECT NO: | 012-1539   |
| DRAWN BY:   | BRN        |
| DATE:       | 01.07.2014 |

POTENTIOMETRIC SURFACE MAP - NOVEMBER 2013  
 WPX RMV 216-21  
 WPX ENERGY ROCKY MOUNTAIN, LLC  
 GARFIELD COUNTY, COLORADO

**OLSSON ASSOCIATES**  
 760 Horizon Drive, Ste. 102  
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F:\Projects\012-1539\CNRM\Exhibits\2013\2013 Q4\Fig\_3\_121539\_04\_2013\_GWA.dwg Layout: GWA

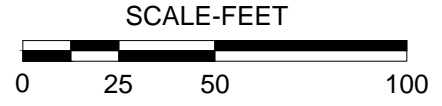
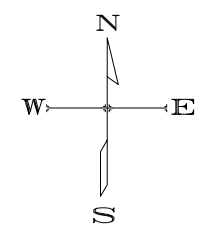


**LEGEND:**

MW01 ● MONITORING WELL/BOREHOLE

CHEMICAL DATA

- B = BENZENE (ug/l)
- T = TOLUENE (ug/l)
- E = ETHYLBENZENE (ug/l)
- X = XYLENES (ug/l)
- BOLD** = EXCEEDS COGCC GROUNDWATER CLEANUP LEVEL
- NS = NOT SAMPLED



|             |            |
|-------------|------------|
| PROJECT NO: | 012-1539   |
| DRAWN BY:   | BRN        |
| DATE:       | 01.07.2014 |

GROUNDWATER ANALYTICAL RESULTS - NOVEMBER 2013  
 WPX RMV 216-21  
 WPX ENERGY ROCKY MOUNTAIN, LLC  
 GARFIELD COUNTY, COLORADO

**OLSSON ASSOCIATES**  
 760 Horizon Drive, Ste. 102  
 Grand Junction, CO 81506  
 TEL 970.263.7800  
 FAX 970.263.7456

|        |   |
|--------|---|
| FIGURE | 3 |
|--------|---|

**Table 1**  
**RMV 216-21 Groundwater Monitoring**  
**2013 Water Quality Data Summary**

| SAMPLE SUMMARY       |                          |
|----------------------|--------------------------|
| Location Description | RMV 216-21 GW Monitoring |
| Sample Type          | Groundwater              |

| LABORATORY DATA SUMMARY                      |                                     |                                   |        |                |                |                |                |                |                |                |                |                |
|----------------------------------------------|-------------------------------------|-----------------------------------|--------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Sample ID                                    | CDPHE<br>Regulation 41<br>Standards | COGCC Table<br>910-1<br>Standards |        | RMV 216-21 MW1 | RMV 216-21 MW2 | RMV 216-21 MW3 | RMV 216-21 MW4 | RMV 216-21 MW5 | RMV 216-21 MW6 | RMV 216-21 MW7 | RMV 216-21 MW8 | RMV 216-21 MW9 |
| Depth to Water (feet)                        |                                     |                                   |        | 84.45          | 79.2           | 68.16          | 85.85          | 86             | 82.83          | 91.1           | 88.36          | 81.69          |
| Sample Date                                  |                                     |                                   |        | 11/21/2013     | 11/21/2013     | 11/21/2013     | 11/21/2013     | 11/21/2013     | 11/21/2013     | 11/21/2013     | 11/21/2013     | 11/21/2013     |
| Analytical Parameters                        |                                     |                                   |        |                |                |                |                |                |                |                |                |                |
| <b>BTEX</b>                                  |                                     |                                   |        |                |                |                |                |                |                |                |                |                |
| Benzene                                      | 5                                   | 5                                 | ug/l   | <1.0           | NT             | NT             | NT             | <1.0           | 9.8            | <1.0           | <1.0           | 4.3            |
| Toluene                                      | 560 to 1000                         | 560 to 1000                       | ug/l   | <2.0           | NT             | NT             | NT             | <2.0           | <2.0           | <2.0           | <2.0           | <2.0           |
| Ethylbenzene                                 | 700                                 | 700                               | ug/l   | <2.0           | NT             | NT             | NT             | <2.0           | <2.0           | <2.0           | <2.0           | <2.0           |
| Xylene (total)                               | 1400 to 10000                       | 1400 to 10000                     | ug/l   | <2.0           | NT             | NT             | NT             | <2.0           | <2.0           | <2.0           | <2.0           | <2.0           |
| Calcium                                      | NA                                  | NA                                | mg/l   | 225            | NT             | NT             | NT             | 243            | 233            | 239            | 218            | 255            |
| Iron                                         | 0.3                                 | NA                                | mg/l   | <0.070         | NT             | NT             | NT             | 0.158          | <0.070         | <0.070         | <0.070         | <0.070         |
| Magnesium                                    | NA                                  | NA                                | mg/l   | 196            | NT             | NT             | NT             | 219            | 244            | 201            | 233            | 242            |
| Manganese                                    | 0.05                                | NA                                | mg/l   | 0.438          | NT             | NT             | NT             | 0.112          | 0.189          | <0.005         | 0.0205         | 0.1290         |
| Potassium                                    | 23                                  | NA                                | mg/l   | 10.2           | NT             | NT             | NT             | 5.55           | 8.24           | 6              | 7.19           | 7.65           |
| Selenium                                     | 0.05                                | NA                                | mg/l   | <0.050         | NT             | NT             | NT             | <0.050         | <0.050         | <0.050         | <0.050         | 0.0501         |
| Sodium                                       | 390                                 | NA                                | mg/l   | 412            | NT             | NT             | NT             | 478            | 556            | 423            | 496            | 492            |
| <b>General Chemistry</b>                     |                                     |                                   |        |                |                |                |                |                |                |                |                |                |
| Alkalinity, Bicarbonate as CaCO <sub>3</sub> | NA                                  | NA                                | mg/l   | 569            | NT             | NT             | NT             | 524            | 584            | 553            | 528            | 644            |
| Alkalinity, Carbonate                        | NA                                  | NA                                | mg/l   | <5.0           | NT             | NT             | NT             | <5.0           | <5.0           | <5.0           | <5.0           | <5.0           |
| Alkalinity, Total as CaCO <sub>3</sub>       | NA                                  | NA                                | mg/l   | 569            | NT             | NT             | NT             | 524            | 584            | 553            | 528            | 644            |
| Chloride                                     | 250                                 | 1.25 x bkgd                       | mg/l   | 193            | NT             | NT             | NT             | 272            | 480            | 137            | 304            | 325            |
| Nitrogen, Nitrate                            | 10                                  | NA                                | mg/l   | 27.6           | NT             | NT             | NT             | 30.6           | 31.6           | 21.8           | 31.7           | 40.5           |
| Nitrogen Nitrite                             | 1.0                                 | NA                                | mg/l   | 0.14           | NT             | NT             | NT             | <0.020         | 4.2            | <0.020         | <0.020         | 2.2            |
| Solids, Total Dissolved                      | 10,000                              | NA                                | mg/l   | 3110           | NT             | NT             | NT             | 3380           | 3670           | 3130           | 3380           | 3620           |
| Sulfate                                      | 250                                 | 1.25 x bkgd                       | mg/l   | 1310           | NT             | NT             | NT             | 1390           | 1350           | 1390           | 1420           | 1420           |
| pH                                           | NA                                  | NA                                | su     | 7.29           | NT             | NT             | NT             | 7.26           | 7.19           | 7.27           | 7.32           | 7.13           |
| <b>Field Readings</b>                        |                                     |                                   |        |                |                |                |                |                |                |                |                |                |
| Temperature                                  | NA                                  | NA                                | deg. C | 13.70          | NT             | NT             | NT             | 14.00          | 14.00          | 13.90          | 14.00          | 14.00          |
| Specific Conductivity                        | NA                                  | NA                                | mS/cm  | 3.817          | NT             | NT             | NT             | 3.882          | 5.591          | 3.679          | 3.987          | 4.334          |
| Dissolved Oxygen                             | NA                                  | NA                                | mg/l   | 0.45           | NT             | NT             | NT             | 0.34           | 0.57           | 1.54           | 0.84           | 0.43           |
| pH                                           | NA                                  | NA                                | su     | 7.12           | NT             | NT             | NT             | 7.16           | 7.18           | 7.15           | 7.25           | 7.09           |
| Solids, Total Dissolved                      | NA                                  | NA                                | mg/l   | 2.4830         | NT             | NT             | NT             | 2.5285         | 3.4515         | 2.3855         | 2.5870         | 2.8080         |
| Turbidity                                    | NA                                  | NA                                | NTU    | NT             | NT             | NT             | NT             | NT             | NT             | NT             | NT             | NT             |

ug/l -micrograms per liter  
mg/l -milligrams per liter  
J - indicates an estimated value  
umhos/cm - micromhos per centimeter  
mS/cm - millisiemens per centimeter  
su - standard units  
NA - not applicable  
NTU - nephelometric turbidity units  
NT - not tested

a - Dilution required due to matrix interference  
b - Elevated detection limit due to matrix interference  
c - Elevated detection limit due to dilution required for possible matrix interference

**Technical Report for**

**WPX Energy Rocky Mountain, LLC**

**CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)**

**Accutest Job Number: D52877**

**Sampling Date: 11/21/13**


**Report to:**

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ATTN: Tim Dobransky**

**Total number of pages in report: 52**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.



**Scott Heideman  
Laboratory Director**

**Client Service contact: Renea Jackson 303-425-6021**

Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), TX (T104704511)

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Test results relate only to samples analyzed.

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3

4

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8



### Sample Summary

WPX Energy Rocky Mountain, LLC

Job No: D52877

CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

| Sample Number | Collected |          | Received | Matrix |                      | Client Sample ID |
|---------------|-----------|----------|----------|--------|----------------------|------------------|
|               | Date      | Time By  |          | Code   | Type                 |                  |
| D52877-1      | 11/21/13  | 09:15 JS | 11/22/13 | AQ     | Ground Water         | RMV 216-21 MW1   |
| D52877-1F     | 11/21/13  | 09:15 JS | 11/22/13 | AQ     | Groundwater Filtered | RMV 216-21 MW1   |
| D52877-2      | 11/21/13  | 09:40 JS | 11/22/13 | AQ     | Ground Water         | RMV 216-21 MW5   |
| D52877-2F     | 11/21/13  | 09:40 JS | 11/22/13 | AQ     | Groundwater Filtered | RMV 216-21 MW5   |
| D52877-3      | 11/21/13  | 10:05 JS | 11/22/13 | AQ     | Ground Water         | RMV 216-21 MW6   |
| D52877-3F     | 11/21/13  | 10:05 JS | 11/22/13 | AQ     | Groundwater Filtered | RMV 216-21 MW6   |
| D52877-4      | 11/21/13  | 09:40 JS | 11/22/13 | AQ     | Ground Water         | RMV 216-21 MW7   |
| D52877-4F     | 11/21/13  | 09:40 JS | 11/22/13 | AQ     | Groundwater Filtered | RMV 216-21 MW7   |
| D52877-5      | 11/21/13  | 08:55 JS | 11/22/13 | AQ     | Ground Water         | RMV 216-21 MW8   |
| D52877-5F     | 11/21/13  | 08:55 JS | 11/22/13 | AQ     | Groundwater Filtered | RMV 216-21 MW8   |
| D52877-6      | 11/21/13  | 09:00 JS | 11/22/13 | AQ     | Ground Water         | RMV 216-21 MW9   |
| D52877-6F     | 11/21/13  | 09:00 JS | 11/22/13 | AQ     | Groundwater Filtered | RMV 216-21 MW9   |
| D52877-7      | 11/21/13  | 00:00 JS | 11/22/13 | AQ     | Trip Blank Water     | TRIP BLANK       |



## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** WPX Energy Rocky Mountain, LLC

**Job No** D52877

**Site:** CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

**Report Date** 12/3/2013 1:06:54 PM

On 11/22/2013, 6 sample(s), 1 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 1.1 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D52877 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Volatiles by GC By Method SW846 8021B

|                  |                          |
|------------------|--------------------------|
| <b>Matrix</b> AQ | <b>Batch ID:</b> GTA1139 |
|------------------|--------------------------|

- All samples were analyzed within the recommended method holding time.
- Sample(s) D52652-36MS, D52652-36MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- D52877-6: The pH of the sample was >2 at time of analysis.
- D52877-3: The pH of the sample was >2 at time of analysis.

### Metals By Method SW846 6010C

|                  |                          |
|------------------|--------------------------|
| <b>Matrix</b> AQ | <b>Batch ID:</b> MP11797 |
|------------------|--------------------------|

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D52877-2FMS, D52877-2FMMSD, D52877-2FMSDL were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Sodium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- The serial dilution RPD(s) for Iron are outside control limits for sample MP11797-SD1. Probable cause due to sample homogeneity.
- MP11797-SD1 for Iron: Serial dilution indicates possible matrix interference.

## Wet Chemistry By Method EPA 300.0/SW846 9056

**Matrix** AQ **Batch ID:** GP11462

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D52877-3MS, D52877-3MSD were used as the QC samples for the Chloride, Nitrogen, Nitrate, Nitrogen, Nitrite, Sulfate, Chloride analysis.
- D52877-5 for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.
- D52877-4 for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.
- D52877-2 for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.

**Matrix** AQ **Batch ID:** R19570

- The data for EPA 300.0/SW846 9056 meets quality control requirements.
- D52877-1 for Nitrogen, Nitrate + Nitrite: Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

**Matrix** AQ **Batch ID:** R19571

- The data for EPA 300.0/SW846 9056 meets quality control requirements.
- D52877-2 for Nitrogen, Nitrate + Nitrite: Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

**Matrix** AQ **Batch ID:** R19572

- The data for EPA 300.0/SW846 9056 meets quality control requirements.
- D52877-4 for Nitrogen, Nitrate + Nitrite: Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

**Matrix** AQ **Batch ID:** R19573

- The data for EPA 300.0/SW846 9056 meets quality control requirements.
- D52877-5 for Nitrogen, Nitrate + Nitrite: Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

**Matrix** AQ **Batch ID:** R19574

- The data for EPA 300.0/SW846 9056 meets quality control requirements.
- D52877-6 for Nitrogen, Nitrate + Nitrite: Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

**Matrix** AQ **Batch ID:** R19575

- The data for EPA 300.0/SW846 9056 meets quality control requirements.
- D52877-3 for Nitrogen, Nitrate + Nitrite: Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

## Wet Chemistry By Method SM 2320B-2011

**Matrix** AQ **Batch ID:** GN22852

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D52760-1MS, D52760-1MSD, D52830-7DUP were used as the QC samples for the Alkalinity, Total as CaCO<sub>3</sub> analysis.

**Matrix** AQ **Batch ID:** GN22853

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

**Matrix** AQ **Batch ID:** GN22854

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

### Wet Chemistry By Method SM 2540C-2011

|                  |                          |
|------------------|--------------------------|
| <b>Matrix</b> AQ | <b>Batch ID:</b> GN22824 |
|------------------|--------------------------|

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D52877-1DUP, D52877-4DUP, D52877-5DUP were used as the QC samples for the Solids, Total Dissolved analysis.

### Wet Chemistry By Method SM 5310B-2011

|                  |                          |
|------------------|--------------------------|
| <b>Matrix</b> AQ | <b>Batch ID:</b> GP11467 |
|------------------|--------------------------|

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D52877-4DUP, D52877-4MS, D52877-4MSD were used as the QC samples for the Total Organic Carbon analysis.

### Wet Chemistry By Method SM4500HB+-2011/9040C

|                  |                          |
|------------------|--------------------------|
| <b>Matrix</b> AQ | <b>Batch ID:</b> GN22833 |
|------------------|--------------------------|

- The following samples were run outside of holding time for method SM4500HB+-2011/9040C: D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

## Summary of Hits

**Job Number:** D52877  
**Account:** WPX Energy Rocky Mountain, LLC  
**Project:** CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)  
**Collected:** 11/21/13



| Lab Sample ID | Client Sample ID | Result/<br>Qual | RL | MDL | Units | Method |
|---------------|------------------|-----------------|----|-----|-------|--------|
|---------------|------------------|-----------------|----|-----|-------|--------|

**D52877-1 RMV 216-21 MW1**

|                                          |      |       |  |  |      |                       |
|------------------------------------------|------|-------|--|--|------|-----------------------|
| Alkalinity, Bicarbonate as CaCO3         | 569  | 5.0   |  |  | mg/l | SM 2320B-2011         |
| Alkalinity, Total as CaCO3               | 569  | 5.0   |  |  | mg/l | SM 2320B-2011         |
| Chloride                                 | 193  | 50    |  |  | mg/l | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate                        | 27.6 | 1.0   |  |  | mg/l | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate + Nitrite <sup>a</sup> | 27.7 | 1.0   |  |  | mg/l | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrite                        | 0.14 | 0.020 |  |  | mg/l | EPA 300.0/SW846 9056  |
| Solids, Total Dissolved                  | 3110 | 10    |  |  | mg/l | SM 2540C-2011         |
| Sulfate                                  | 1310 | 50    |  |  | mg/l | EPA 300.0/SW846 9056  |
| Total Organic Carbon                     | 6.6  | 1.0   |  |  | mg/l | SM 5310B-2011         |
| pH                                       | 7.29 |       |  |  | su   | SM4500HB+ -2011/9040C |

**D52877-1F RMV 216-21 MW1**

|           |        |      |  |  |      |             |
|-----------|--------|------|--|--|------|-------------|
| Calcium   | 225000 | 400  |  |  | ug/l | SW846 6010C |
| Magnesium | 196000 | 200  |  |  | ug/l | SW846 6010C |
| Manganese | 438    | 5.0  |  |  | ug/l | SW846 6010C |
| Potassium | 10200  | 5000 |  |  | ug/l | SW846 6010C |
| Sodium    | 412000 | 2000 |  |  | ug/l | SW846 6010C |

**D52877-2 RMV 216-21 MW5**

|                                          |      |     |  |  |      |                       |
|------------------------------------------|------|-----|--|--|------|-----------------------|
| Alkalinity, Bicarbonate as CaCO3         | 524  | 5.0 |  |  | mg/l | SM 2320B-2011         |
| Alkalinity, Total as CaCO3               | 524  | 5.0 |  |  | mg/l | SM 2320B-2011         |
| Chloride                                 | 272  | 50  |  |  | mg/l | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate                        | 30.6 | 1.0 |  |  | mg/l | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate + Nitrite <sup>a</sup> | 30.6 | 1.0 |  |  | mg/l | EPA 300.0/SW846 9056  |
| Solids, Total Dissolved                  | 3380 | 10  |  |  | mg/l | SM 2540C-2011         |
| Sulfate                                  | 1390 | 50  |  |  | mg/l | EPA 300.0/SW846 9056  |
| Total Organic Carbon                     | 5.8  | 1.0 |  |  | mg/l | SM 5310B-2011         |
| pH                                       | 7.26 |     |  |  | su   | SM4500HB+ -2011/9040C |

**D52877-2F RMV 216-21 MW5**

|           |        |      |  |  |      |             |
|-----------|--------|------|--|--|------|-------------|
| Calcium   | 243000 | 400  |  |  | ug/l | SW846 6010C |
| Iron      | 158    | 70   |  |  | ug/l | SW846 6010C |
| Magnesium | 219000 | 200  |  |  | ug/l | SW846 6010C |
| Manganese | 112    | 5.0  |  |  | ug/l | SW846 6010C |
| Potassium | 5550   | 5000 |  |  | ug/l | SW846 6010C |
| Sodium    | 478000 | 2000 |  |  | ug/l | SW846 6010C |

**D52877-3 RMV 216-21 MW6**

|                      |     |     |      |  |      |             |
|----------------------|-----|-----|------|--|------|-------------|
| Benzene <sup>b</sup> | 9.8 | 1.0 | 0.20 |  | ug/l | SW846 8021B |
|----------------------|-----|-----|------|--|------|-------------|

## Summary of Hits

**Job Number:** D52877  
**Account:** WPX Energy Rocky Mountain, LLC  
**Project:** CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)  
**Collected:** 11/21/13



| Lab Sample ID | Client Sample ID | Result/<br>Qual                          | RL   | MDL  | Units | Method                |
|---------------|------------------|------------------------------------------|------|------|-------|-----------------------|
|               |                  | Alkalinity, Bicarbonate as CaCO3         | 584  | 5.0  | mg/l  | SM 2320B-2011         |
|               |                  | Alkalinity, Total as CaCO3               | 584  | 5.0  | mg/l  | SM 2320B-2011         |
|               |                  | Chloride                                 | 480  | 50   | mg/l  | EPA 300.0/SW846 9056  |
|               |                  | Nitrogen, Nitrate                        | 31.6 | 1.0  | mg/l  | EPA 300.0/SW846 9056  |
|               |                  | Nitrogen, Nitrate + Nitrite <sup>a</sup> | 35.8 | 1.4  | mg/l  | EPA 300.0/SW846 9056  |
|               |                  | Nitrogen, Nitrite                        | 4.2  | 0.40 | mg/l  | EPA 300.0/SW846 9056  |
|               |                  | Solids, Total Dissolved                  | 3670 | 10   | mg/l  | SM 2540C-2011         |
|               |                  | Sulfate                                  | 1350 | 50   | mg/l  | EPA 300.0/SW846 9056  |
|               |                  | Total Organic Carbon                     | 7.5  | 1.0  | mg/l  | SM 5310B-2011         |
|               |                  | pH                                       | 7.19 |      | su    | SM4500HB+ -2011/9040C |

### D52877-3F RMV 216-21 MW6

|           |        |      |      |             |
|-----------|--------|------|------|-------------|
| Calcium   | 233000 | 400  | ug/l | SW846 6010C |
| Magnesium | 244000 | 200  | ug/l | SW846 6010C |
| Manganese | 189    | 5.0  | ug/l | SW846 6010C |
| Potassium | 8240   | 5000 | ug/l | SW846 6010C |
| Sodium    | 556000 | 2000 | ug/l | SW846 6010C |

### D52877-4 RMV 216-21 MW7

|                                          |      |     |      |                       |
|------------------------------------------|------|-----|------|-----------------------|
| Alkalinity, Bicarbonate as CaCO3         | 553  | 5.0 | mg/l | SM 2320B-2011         |
| Alkalinity, Total as CaCO3               | 553  | 5.0 | mg/l | SM 2320B-2011         |
| Chloride                                 | 137  | 2.5 | mg/l | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate                        | 21.8 | 1.0 | mg/l | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate + Nitrite <sup>a</sup> | 21.8 | 1.0 | mg/l | EPA 300.0/SW846 9056  |
| Solids, Total Dissolved                  | 3130 | 10  | mg/l | SM 2540C-2011         |
| Sulfate                                  | 1390 | 50  | mg/l | EPA 300.0/SW846 9056  |
| Total Organic Carbon                     | 5.8  | 1.0 | mg/l | SM 5310B-2011         |
| pH                                       | 7.27 |     | su   | SM4500HB+ -2011/9040C |

### D52877-4F RMV 216-21 MW7

|           |        |      |      |             |
|-----------|--------|------|------|-------------|
| Calcium   | 239000 | 400  | ug/l | SW846 6010C |
| Magnesium | 201000 | 200  | ug/l | SW846 6010C |
| Potassium | 6000   | 5000 | ug/l | SW846 6010C |
| Sodium    | 423000 | 2000 | ug/l | SW846 6010C |

### D52877-5 RMV 216-21 MW8

|                                          |      |     |      |                      |
|------------------------------------------|------|-----|------|----------------------|
| Alkalinity, Bicarbonate as CaCO3         | 528  | 5.0 | mg/l | SM 2320B-2011        |
| Alkalinity, Total as CaCO3               | 528  | 5.0 | mg/l | SM 2320B-2011        |
| Chloride                                 | 304  | 50  | mg/l | EPA 300.0/SW846 9056 |
| Nitrogen, Nitrate                        | 31.7 | 1.0 | mg/l | EPA 300.0/SW846 9056 |
| Nitrogen, Nitrate + Nitrite <sup>a</sup> | 31.7 | 1.0 | mg/l | EPA 300.0/SW846 9056 |

## Summary of Hits

**Job Number:** D52877  
**Account:** WPX Energy Rocky Mountain, LLC  
**Project:** CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)  
**Collected:** 11/21/13

| Lab Sample ID | Client Sample ID | Result/<br>Qual | RL | MDL | Units | Method |
|---------------|------------------|-----------------|----|-----|-------|--------|
|---------------|------------------|-----------------|----|-----|-------|--------|

|                         |  |      |     |  |      |                       |
|-------------------------|--|------|-----|--|------|-----------------------|
| Solids, Total Dissolved |  | 3380 | 10  |  | mg/l | SM 2540C-2011         |
| Sulfate                 |  | 1420 | 50  |  | mg/l | EPA 300.0/SW846 9056  |
| Total Organic Carbon    |  | 6.1  | 1.0 |  | mg/l | SM 5310B-2011         |
| pH                      |  | 7.32 |     |  | su   | SM4500HB+ -2011/9040C |

### D52877-5F RMV 216-21 MW8

|           |  |        |      |  |      |             |
|-----------|--|--------|------|--|------|-------------|
| Calcium   |  | 218000 | 400  |  | ug/l | SW846 6010C |
| Magnesium |  | 233000 | 200  |  | ug/l | SW846 6010C |
| Manganese |  | 20.5   | 5.0  |  | ug/l | SW846 6010C |
| Potassium |  | 7190   | 5000 |  | ug/l | SW846 6010C |
| Sodium    |  | 496000 | 2000 |  | ug/l | SW846 6010C |

### D52877-6 RMV 216-21 MW9

|                                              |  |      |       |      |      |                       |
|----------------------------------------------|--|------|-------|------|------|-----------------------|
| Benzene <sup>b</sup>                         |  | 4.3  | 1.0   | 0.20 | ug/l | SW846 8021B           |
| Alkalinity, Bicarbonate as CaCO <sub>3</sub> |  | 644  | 5.0   |      | mg/l | SM 2320B-2011         |
| Alkalinity, Total as CaCO <sub>3</sub>       |  | 644  | 5.0   |      | mg/l | SM 2320B-2011         |
| Chloride                                     |  | 325  | 50    |      | mg/l | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate                            |  | 40.5 | 1.0   |      | mg/l | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate + Nitrite <sup>a</sup>     |  | 42.7 | 1.0   |      | mg/l | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrite                            |  | 2.2  | 0.020 |      | mg/l | EPA 300.0/SW846 9056  |
| Solids, Total Dissolved                      |  | 3620 | 10    |      | mg/l | SM 2540C-2011         |
| Sulfate                                      |  | 1420 | 50    |      | mg/l | EPA 300.0/SW846 9056  |
| Total Organic Carbon                         |  | 7.6  | 1.0   |      | mg/l | SM 5310B-2011         |
| pH                                           |  | 7.13 |       |      | su   | SM4500HB+ -2011/9040C |

### D52877-6F RMV 216-21 MW9

|           |  |        |      |  |      |             |
|-----------|--|--------|------|--|------|-------------|
| Calcium   |  | 255000 | 400  |  | ug/l | SW846 6010C |
| Magnesium |  | 242000 | 200  |  | ug/l | SW846 6010C |
| Manganese |  | 129    | 5.0  |  | ug/l | SW846 6010C |
| Potassium |  | 7650   | 5000 |  | ug/l | SW846 6010C |
| Selenium  |  | 50.1   | 50   |  | ug/l | SW846 6010C |
| Sodium    |  | 492000 | 2000 |  | ug/l | SW846 6010C |

### D52877-7 TRIP BLANK

No hits reported in this sample.

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

(b) The pH of the sample was > 2 at time of analysis.

Sample Results

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Report of Analysis

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## Report of Analysis

|                                                              |                                |
|--------------------------------------------------------------|--------------------------------|
| <b>Client Sample ID:</b> RMV 216-21 MW1                      | <b>Date Sampled:</b> 11/21/13  |
| <b>Lab Sample ID:</b> D52877-1                               | <b>Date Received:</b> 11/22/13 |
| <b>Matrix:</b> AQ - Ground Water                             | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8021B                                   |                                |
| <b>Project:</b> CORCCOGJ: RMV 216-21 GW Monitoring(012.1539) |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | TA20306.D | 1  | 12/02/13 | EV | n/a       | n/a        | GTA1139          |
| Run #2 |           |    |          |    |           |            |                  |

| Run #  | Purge Volume |
|--------|--------------|
| Run #1 | 5.0 ml       |
| Run #2 |              |

**Purgeable Aromatics**

| CAS No.   | Compound        | Result | RL  | MDL  | Units | Q |
|-----------|-----------------|--------|-----|------|-------|---|
| 71-43-2   | Benzene         | ND     | 1.0 | 0.20 | ug/l  |   |
| 108-88-3  | Toluene         | ND     | 2.0 | 1.0  | ug/l  |   |
| 100-41-4  | Ethylbenzene    | ND     | 2.0 | 1.0  | ug/l  |   |
| 1330-20-7 | Xylenes (total) | ND     | 2.0 | 2.0  | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 120-82-1 | 1,2,4-Trichlorobenzene | 94%    |        | 60-140% |

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

4.1  
4

## Report of Analysis

|                                                              |                                |
|--------------------------------------------------------------|--------------------------------|
| <b>Client Sample ID:</b> RMV 216-21 MW1                      | <b>Date Sampled:</b> 11/21/13  |
| <b>Lab Sample ID:</b> D52877-1                               | <b>Date Received:</b> 11/22/13 |
| <b>Matrix:</b> AQ - Ground Water                             | <b>Percent Solids:</b> n/a     |
| <b>Project:</b> CORCCOGJ: RMV 216-21 GW Monitoring(012.1539) |                                |

### General Chemistry

| Analyte                                  | Result | RL    | Units | DF  | Analyzed       | By | Method                |
|------------------------------------------|--------|-------|-------|-----|----------------|----|-----------------------|
| Alkalinity, Bicarbonate as CaC           | 569    | 5.0   | mg/l  | 1   | 11/26/13       | JD | SM 2320B-2011         |
| Alkalinity, Carbonate                    | < 5.0  | 5.0   | mg/l  | 1   | 11/26/13       | JD | SM 2320B-2011         |
| Alkalinity, Total as CaCO <sub>3</sub>   | 569    | 5.0   | mg/l  | 1   | 11/26/13       | JD | SM 2320B-2011         |
| Chloride                                 | 193    | 50    | mg/l  | 100 | 11/22/13 16:28 | SK | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate                        | 27.6   | 1.0   | mg/l  | 100 | 11/22/13 16:28 | SK | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate + Nitrite <sup>a</sup> | 27.7   | 1.0   | mg/l  | 1   | 11/22/13 16:28 | SK | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrite                        | 0.14   | 0.020 | mg/l  | 5   | 11/22/13 13:45 | SK | EPA 300.0/SW846 9056  |
| Solids, Total Dissolved                  | 3110   | 10    | mg/l  | 1   | 11/25/13       | AK | SM 2540C-2011         |
| Sulfate                                  | 1310   | 50    | mg/l  | 100 | 11/22/13 16:28 | SK | EPA 300.0/SW846 9056  |
| Total Organic Carbon                     | 6.6    | 1.0   | mg/l  | 1   | 11/25/13 15:16 | GH | SM 5310B-2011         |
| pH                                       | 7.29   |       | su    | 1   | 11/25/13 15:00 | KB | SM4500HB+ -2011/9040C |

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

4.1  
 4

## Report of Analysis

|                                                              |                                |
|--------------------------------------------------------------|--------------------------------|
| <b>Client Sample ID:</b> RMV 216-21 MW1                      | <b>Date Sampled:</b> 11/21/13  |
| <b>Lab Sample ID:</b> D52877-1F                              | <b>Date Received:</b> 11/22/13 |
| <b>Matrix:</b> AQ - Groundwater Filtered                     | <b>Percent Solids:</b> n/a     |
| <b>Project:</b> CORCCOGJ: RMV 216-21 GW Monitoring(012.1539) |                                |

### Dissolved Metals Analysis

| Analyte   | Result | RL   | Units | DF | Prep     | Analyzed By | Method                   | Prep Method              |
|-----------|--------|------|-------|----|----------|-------------|--------------------------|--------------------------|
| Calcium   | 225000 | 400  | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Iron      | < 70   | 70   | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Magnesium | 196000 | 200  | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Manganese | 438    | 5.0  | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Potassium | 10200  | 5000 | ug/l  | 5  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>2</sup> | SW846 3010A <sup>3</sup> |
| Selenium  | < 50   | 50   | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Sodium    | 412000 | 2000 | ug/l  | 5  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>2</sup> | SW846 3010A <sup>3</sup> |

- (1) Instrument QC Batch: MA4244
- (2) Instrument QC Batch: MA4249
- (3) Prep QC Batch: MP11797

RL = Reporting Limit

4.2  
4

## Report of Analysis

|                                                              |  |                                |
|--------------------------------------------------------------|--|--------------------------------|
| <b>Client Sample ID:</b> RMV 216-21 MW5                      |  | <b>Date Sampled:</b> 11/21/13  |
| <b>Lab Sample ID:</b> D52877-2                               |  | <b>Date Received:</b> 11/22/13 |
| <b>Matrix:</b> AQ - Ground Water                             |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8021B                                   |  |                                |
| <b>Project:</b> CORCCOGJ: RMV 216-21 GW Monitoring(012.1539) |  |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | TA20305.D | 1  | 12/02/13 | EV | n/a       | n/a        | GTA1139          |
| Run #2 |           |    |          |    |           |            |                  |

| Run #  | Purge Volume |
|--------|--------------|
| Run #1 | 5.0 ml       |
| Run #2 |              |

**Purgeable Aromatics**

| CAS No.   | Compound        | Result | RL  | MDL  | Units | Q |
|-----------|-----------------|--------|-----|------|-------|---|
| 71-43-2   | Benzene         | ND     | 1.0 | 0.20 | ug/l  |   |
| 108-88-3  | Toluene         | ND     | 2.0 | 1.0  | ug/l  |   |
| 100-41-4  | Ethylbenzene    | ND     | 2.0 | 1.0  | ug/l  |   |
| 1330-20-7 | Xylenes (total) | ND     | 2.0 | 2.0  | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 120-82-1 | 1,2,4-Trichlorobenzene | 89%    |        | 60-140% |

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

4.3  
4

## Report of Analysis

|                                                              |                                |
|--------------------------------------------------------------|--------------------------------|
| <b>Client Sample ID:</b> RMV 216-21 MW5                      | <b>Date Sampled:</b> 11/21/13  |
| <b>Lab Sample ID:</b> D52877-2                               | <b>Date Received:</b> 11/22/13 |
| <b>Matrix:</b> AQ - Ground Water                             | <b>Percent Solids:</b> n/a     |
| <b>Project:</b> CORCCOGJ: RMV 216-21 GW Monitoring(012.1539) |                                |

### General Chemistry

| Analyte                                  | Result  | RL    | Units | DF  | Analyzed       | By | Method                |
|------------------------------------------|---------|-------|-------|-----|----------------|----|-----------------------|
| Alkalinity, Bicarbonate as CaC           | 524     | 5.0   | mg/l  | 1   | 11/26/13       | JD | SM 2320B-2011         |
| Alkalinity, Carbonate                    | < 5.0   | 5.0   | mg/l  | 1   | 11/26/13       | JD | SM 2320B-2011         |
| Alkalinity, Total as CaCO3               | 524     | 5.0   | mg/l  | 1   | 11/26/13       | JD | SM 2320B-2011         |
| Chloride                                 | 272     | 50    | mg/l  | 100 | 11/22/13 16:39 | SK | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate                        | 30.6    | 1.0   | mg/l  | 100 | 11/22/13 16:39 | SK | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate + Nitrite <sup>a</sup> | 30.6    | 1.0   | mg/l  | 1   | 11/22/13 16:39 | SK | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrite <sup>b</sup>           | < 0.020 | 0.020 | mg/l  | 5   | 11/22/13 13:57 | SK | EPA 300.0/SW846 9056  |
| Solids, Total Dissolved                  | 3380    | 10    | mg/l  | 1   | 11/25/13       | AK | SM 2540C-2011         |
| Sulfate                                  | 1390    | 50    | mg/l  | 100 | 11/22/13 16:39 | SK | EPA 300.0/SW846 9056  |
| Total Organic Carbon                     | 5.8     | 1.0   | mg/l  | 1   | 11/25/13 15:29 | GH | SM 5310B-2011         |
| pH                                       | 7.26    |       | su    | 1   | 11/25/13 15:00 | KB | SM4500HB+ -2011/9040C |

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

(b) Elevated detection limit due to matrix interference.

RL = Reporting Limit

4.3  
4

## Report of Analysis

|                                                              |  |                                |
|--------------------------------------------------------------|--|--------------------------------|
| <b>Client Sample ID:</b> RMV 216-21 MW5                      |  | <b>Date Sampled:</b> 11/21/13  |
| <b>Lab Sample ID:</b> D52877-2F                              |  | <b>Date Received:</b> 11/22/13 |
| <b>Matrix:</b> AQ - Groundwater Filtered                     |  | <b>Percent Solids:</b> n/a     |
| <b>Project:</b> CORCCOGJ: RMV 216-21 GW Monitoring(012.1539) |  |                                |

### Dissolved Metals Analysis

| Analyte   | Result | RL   | Units | DF | Prep     | Analyzed By | Method                   | Prep Method              |
|-----------|--------|------|-------|----|----------|-------------|--------------------------|--------------------------|
| Calcium   | 243000 | 400  | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Iron      | 158    | 70   | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Magnesium | 219000 | 200  | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Manganese | 112    | 5.0  | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Potassium | 5550   | 5000 | ug/l  | 5  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>2</sup> | SW846 3010A <sup>3</sup> |
| Selenium  | < 50   | 50   | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Sodium    | 478000 | 2000 | ug/l  | 5  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>2</sup> | SW846 3010A <sup>3</sup> |

- (1) Instrument QC Batch: MA4244
- (2) Instrument QC Batch: MA4249
- (3) Prep QC Batch: MP11797

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RL = Reporting Limit

4.4  
4

## Report of Analysis

|                                                              |                                |
|--------------------------------------------------------------|--------------------------------|
| <b>Client Sample ID:</b> RMV 216-21 MW6                      | <b>Date Sampled:</b> 11/21/13  |
| <b>Lab Sample ID:</b> D52877-3                               | <b>Date Received:</b> 11/22/13 |
| <b>Matrix:</b> AQ - Ground Water                             | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8021B                                   |                                |
| <b>Project:</b> CORCCOGJ: RMV 216-21 GW Monitoring(012.1539) |                                |

| Run #               | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---------------------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 <sup>a</sup> | TA20304.D | 1  | 12/02/13 | EV | n/a       | n/a        | GTA1139          |
| Run #2              |           |    |          |    |           |            |                  |

| Run #  | Purge Volume |
|--------|--------------|
| Run #1 | 5.0 ml       |
| Run #2 |              |

**Purgeable Aromatics**

| CAS No.   | Compound        | Result | RL  | MDL  | Units | Q |
|-----------|-----------------|--------|-----|------|-------|---|
| 71-43-2   | Benzene         | 9.8    | 1.0 | 0.20 | ug/l  |   |
| 108-88-3  | Toluene         | ND     | 2.0 | 1.0  | ug/l  |   |
| 100-41-4  | Ethylbenzene    | ND     | 2.0 | 1.0  | ug/l  |   |
| 1330-20-7 | Xylenes (total) | ND     | 2.0 | 2.0  | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 120-82-1 | 1,2,4-Trichlorobenzene | 93%    |        | 60-140% |

(a) The pH of the sample was > 2 at time of analysis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

4.5  
4

## Report of Analysis

|                                                                                                                                                                               |                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| <b>Client Sample ID:</b> RMV 216-21 MW6<br><b>Lab Sample ID:</b> D52877-3<br><b>Matrix:</b> AQ - Ground Water<br><b>Project:</b> CORCCOGJ: RMV 216-21 GW Monitoring(012.1539) | <b>Date Sampled:</b> 11/21/13<br><b>Date Received:</b> 11/22/13<br><b>Percent Solids:</b> n/a |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|

### General Chemistry

| Analyte                                  | Result | RL   | Units | DF  | Analyzed       | By | Method                |
|------------------------------------------|--------|------|-------|-----|----------------|----|-----------------------|
| Alkalinity, Bicarbonate as CaC           | 584    | 5.0  | mg/l  | 1   | 11/26/13       | JD | SM 2320B-2011         |
| Alkalinity, Carbonate                    | < 5.0  | 5.0  | mg/l  | 1   | 11/26/13       | JD | SM 2320B-2011         |
| Alkalinity, Total as CaCO <sub>3</sub>   | 584    | 5.0  | mg/l  | 1   | 11/26/13       | JD | SM 2320B-2011         |
| Chloride                                 | 480    | 50   | mg/l  | 100 | 11/22/13 16:51 | SK | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate                        | 31.6   | 1.0  | mg/l  | 100 | 11/22/13 16:51 | SK | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate + Nitrite <sup>a</sup> | 35.8   | 1.4  | mg/l  | 1   | 11/22/13 16:51 | SK | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrite                        | 4.2    | 0.40 | mg/l  | 100 | 11/22/13 16:51 | SK | EPA 300.0/SW846 9056  |
| Solids, Total Dissolved                  | 3670   | 10   | mg/l  | 1   | 11/25/13       | AK | SM 2540C-2011         |
| Sulfate                                  | 1350   | 50   | mg/l  | 100 | 11/22/13 16:51 | SK | EPA 300.0/SW846 9056  |
| Total Organic Carbon                     | 7.5    | 1.0  | mg/l  | 1   | 11/25/13 15:40 | GH | SM 5310B-2011         |
| pH                                       | 7.19   |      | su    | 1   | 11/25/13 15:00 | KB | SM4500HB+ -2011/9040C |

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

4.5  
4

## Report of Analysis

|                                                              |  |                                |
|--------------------------------------------------------------|--|--------------------------------|
| <b>Client Sample ID:</b> RMV 216-21 MW6                      |  | <b>Date Sampled:</b> 11/21/13  |
| <b>Lab Sample ID:</b> D52877-3F                              |  | <b>Date Received:</b> 11/22/13 |
| <b>Matrix:</b> AQ - Groundwater Filtered                     |  | <b>Percent Solids:</b> n/a     |
| <b>Project:</b> CORCCOGJ: RMV 216-21 GW Monitoring(012.1539) |  |                                |

### Dissolved Metals Analysis

| Analyte   | Result | RL   | Units | DF | Prep     | Analyzed By | Method                   | Prep Method              |
|-----------|--------|------|-------|----|----------|-------------|--------------------------|--------------------------|
| Calcium   | 233000 | 400  | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Iron      | < 70   | 70   | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Magnesium | 244000 | 200  | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Manganese | 189    | 5.0  | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Potassium | 8240   | 5000 | ug/l  | 5  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>2</sup> | SW846 3010A <sup>3</sup> |
| Selenium  | < 50   | 50   | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Sodium    | 556000 | 2000 | ug/l  | 5  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>2</sup> | SW846 3010A <sup>3</sup> |

- (1) Instrument QC Batch: MA4244
- (2) Instrument QC Batch: MA4249
- (3) Prep QC Batch: MP11797

---

RL = Reporting Limit

4.6  
4

## Report of Analysis

|                                                              |  |                                |
|--------------------------------------------------------------|--|--------------------------------|
| <b>Client Sample ID:</b> RMV 216-21 MW7                      |  | <b>Date Sampled:</b> 11/21/13  |
| <b>Lab Sample ID:</b> D52877-4                               |  | <b>Date Received:</b> 11/22/13 |
| <b>Matrix:</b> AQ - Ground Water                             |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8021B                                   |  |                                |
| <b>Project:</b> CORCCOGJ: RMV 216-21 GW Monitoring(012.1539) |  |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | TA20307.D | 1  | 12/02/13 | EV | n/a       | n/a        | GTA1139          |
| Run #2 |           |    |          |    |           |            |                  |

| Run #  | Purge Volume |
|--------|--------------|
| Run #1 | 5.0 ml       |
| Run #2 |              |

**Purgeable Aromatics**

| CAS No.   | Compound        | Result | RL  | MDL  | Units | Q |
|-----------|-----------------|--------|-----|------|-------|---|
| 71-43-2   | Benzene         | ND     | 1.0 | 0.20 | ug/l  |   |
| 108-88-3  | Toluene         | ND     | 2.0 | 1.0  | ug/l  |   |
| 100-41-4  | Ethylbenzene    | ND     | 2.0 | 1.0  | ug/l  |   |
| 1330-20-7 | Xylenes (total) | ND     | 2.0 | 2.0  | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 120-82-1 | 1,2,4-Trichlorobenzene | 93%    |        | 60-140% |

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

4.7  
4

## Report of Analysis

|                                                              |                                |
|--------------------------------------------------------------|--------------------------------|
| <b>Client Sample ID:</b> RMV 216-21 MW7                      | <b>Date Sampled:</b> 11/21/13  |
| <b>Lab Sample ID:</b> D52877-4                               | <b>Date Received:</b> 11/22/13 |
| <b>Matrix:</b> AQ - Ground Water                             | <b>Percent Solids:</b> n/a     |
| <b>Project:</b> CORCCOGJ: RMV 216-21 GW Monitoring(012.1539) |                                |

## General Chemistry

| Analyte                                  | Result  | RL    | Units | DF  | Analyzed       | By | Method                |
|------------------------------------------|---------|-------|-------|-----|----------------|----|-----------------------|
| Alkalinity, Bicarbonate as CaC           | 553     | 5.0   | mg/l  | 1   | 11/26/13       | JD | SM 2320B-2011         |
| Alkalinity, Carbonate                    | < 5.0   | 5.0   | mg/l  | 1   | 11/26/13       | JD | SM 2320B-2011         |
| Alkalinity, Total as CaCO <sub>3</sub>   | 553     | 5.0   | mg/l  | 1   | 11/26/13       | JD | SM 2320B-2011         |
| Chloride                                 | 137     | 2.5   | mg/l  | 5   | 11/22/13 14:20 | SK | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate                        | 21.8    | 1.0   | mg/l  | 100 | 11/22/13 17:26 | SK | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate + Nitrite <sup>a</sup> | 21.8    | 1.0   | mg/l  | 1   | 11/22/13 17:26 | SK | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrite <sup>b</sup>           | < 0.020 | 0.020 | mg/l  | 5   | 11/22/13 14:20 | SK | EPA 300.0/SW846 9056  |
| Solids, Total Dissolved                  | 3130    | 10    | mg/l  | 1   | 11/25/13       | AK | SM 2540C-2011         |
| Sulfate                                  | 1390    | 50    | mg/l  | 100 | 11/22/13 17:26 | SK | EPA 300.0/SW846 9056  |
| Total Organic Carbon                     | 5.8     | 1.0   | mg/l  | 1   | 11/25/13 15:51 | GH | SM 5310B-2011         |
| pH                                       | 7.27    |       | su    | 1   | 11/25/13 15:00 | KB | SM4500HB+ -2011/9040C |

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

(b) Elevated detection limit due to matrix interference.

RL = Reporting Limit

## Report of Analysis

|                                                              |                                |
|--------------------------------------------------------------|--------------------------------|
| <b>Client Sample ID:</b> RMV 216-21 MW7                      | <b>Date Sampled:</b> 11/21/13  |
| <b>Lab Sample ID:</b> D52877-4F                              | <b>Date Received:</b> 11/22/13 |
| <b>Matrix:</b> AQ - Groundwater Filtered                     | <b>Percent Solids:</b> n/a     |
| <b>Project:</b> CORCCOGJ: RMV 216-21 GW Monitoring(012.1539) |                                |

### Dissolved Metals Analysis

| Analyte   | Result | RL   | Units | DF | Prep     | Analyzed By | Method                   | Prep Method              |
|-----------|--------|------|-------|----|----------|-------------|--------------------------|--------------------------|
| Calcium   | 239000 | 400  | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Iron      | < 70   | 70   | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Magnesium | 201000 | 200  | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Manganese | < 5.0  | 5.0  | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Potassium | 6000   | 5000 | ug/l  | 5  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>2</sup> | SW846 3010A <sup>3</sup> |
| Selenium  | < 50   | 50   | ug/l  | 1  | 11/25/13 | 11/25/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Sodium    | 423000 | 2000 | ug/l  | 5  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>2</sup> | SW846 3010A <sup>3</sup> |

- (1) Instrument QC Batch: MA4244
- (2) Instrument QC Batch: MA4249
- (3) Prep QC Batch: MP11797

RL = Reporting Limit

4.8  
4

## Report of Analysis

|                                                              |  |                                |
|--------------------------------------------------------------|--|--------------------------------|
| <b>Client Sample ID:</b> RMV 216-21 MW8                      |  | <b>Date Sampled:</b> 11/21/13  |
| <b>Lab Sample ID:</b> D52877-5                               |  | <b>Date Received:</b> 11/22/13 |
| <b>Matrix:</b> AQ - Ground Water                             |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8021B                                   |  |                                |
| <b>Project:</b> CORCCOGJ: RMV 216-21 GW Monitoring(012.1539) |  |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | TA20308.D | 1  | 12/02/13 | EV | n/a       | n/a        | GTA1139          |
| Run #2 |           |    |          |    |           |            |                  |

| Run #  | Purge Volume |
|--------|--------------|
| Run #1 | 5.0 ml       |
| Run #2 |              |

**Purgeable Aromatics**

| CAS No.   | Compound        | Result | RL  | MDL  | Units | Q |
|-----------|-----------------|--------|-----|------|-------|---|
| 71-43-2   | Benzene         | ND     | 1.0 | 0.20 | ug/l  |   |
| 108-88-3  | Toluene         | ND     | 2.0 | 1.0  | ug/l  |   |
| 100-41-4  | Ethylbenzene    | ND     | 2.0 | 1.0  | ug/l  |   |
| 1330-20-7 | Xylenes (total) | ND     | 2.0 | 2.0  | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 120-82-1 | 1,2,4-Trichlorobenzene | 90%    |        | 60-140% |

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

4.9  
4

## Report of Analysis

|                                                              |                                |
|--------------------------------------------------------------|--------------------------------|
| <b>Client Sample ID:</b> RMV 216-21 MW8                      | <b>Date Sampled:</b> 11/21/13  |
| <b>Lab Sample ID:</b> D52877-5                               | <b>Date Received:</b> 11/22/13 |
| <b>Matrix:</b> AQ - Ground Water                             | <b>Percent Solids:</b> n/a     |
| <b>Project:</b> CORCCOGJ: RMV 216-21 GW Monitoring(012.1539) |                                |

### General Chemistry

| Analyte                                  | Result  | RL    | Units | DF  | Analyzed       | By | Method                |
|------------------------------------------|---------|-------|-------|-----|----------------|----|-----------------------|
| Alkalinity, Bicarbonate as CaC           | 528     | 5.0   | mg/l  | 1   | 11/26/13       | JD | SM 2320B-2011         |
| Alkalinity, Carbonate                    | < 5.0   | 5.0   | mg/l  | 1   | 11/26/13       | JD | SM 2320B-2011         |
| Alkalinity, Total as CaCO <sub>3</sub>   | 528     | 5.0   | mg/l  | 1   | 11/26/13       | JD | SM 2320B-2011         |
| Chloride                                 | 304     | 50    | mg/l  | 100 | 11/22/13 17:37 | SK | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate                        | 31.7    | 1.0   | mg/l  | 100 | 11/22/13 17:37 | SK | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate + Nitrite <sup>a</sup> | 31.7    | 1.0   | mg/l  | 1   | 11/22/13 17:37 | SK | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrite <sup>b</sup>           | < 0.020 | 0.020 | mg/l  | 5   | 11/22/13 14:31 | SK | EPA 300.0/SW846 9056  |
| Solids, Total Dissolved                  | 3380    | 10    | mg/l  | 1   | 11/25/13       | AK | SM 2540C-2011         |
| Sulfate                                  | 1420    | 50    | mg/l  | 100 | 11/22/13 17:37 | SK | EPA 300.0/SW846 9056  |
| Total Organic Carbon                     | 6.1     | 1.0   | mg/l  | 1   | 11/25/13 17:02 | GH | SM 5310B-2011         |
| pH                                       | 7.32    |       | su    | 1   | 11/25/13 15:00 | KB | SM4500HB+ -2011/9040C |

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

(b) Elevated detection limit due to matrix interference.

RL = Reporting Limit

## Report of Analysis

|                                                              |                                |
|--------------------------------------------------------------|--------------------------------|
| <b>Client Sample ID:</b> RMV 216-21 MW8                      | <b>Date Sampled:</b> 11/21/13  |
| <b>Lab Sample ID:</b> D52877-5F                              | <b>Date Received:</b> 11/22/13 |
| <b>Matrix:</b> AQ - Groundwater Filtered                     | <b>Percent Solids:</b> n/a     |
| <b>Project:</b> CORCCOGJ: RMV 216-21 GW Monitoring(012.1539) |                                |

### Dissolved Metals Analysis

| Analyte   | Result | RL   | Units | DF | Prep     | Analyzed By | Method                   | Prep Method              |
|-----------|--------|------|-------|----|----------|-------------|--------------------------|--------------------------|
| Calcium   | 218000 | 400  | ug/l  | 1  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Iron      | < 70   | 70   | ug/l  | 1  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Magnesium | 233000 | 200  | ug/l  | 1  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Manganese | 20.5   | 5.0  | ug/l  | 1  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Potassium | 7190   | 5000 | ug/l  | 5  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>2</sup> | SW846 3010A <sup>3</sup> |
| Selenium  | < 50   | 50   | ug/l  | 1  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Sodium    | 496000 | 2000 | ug/l  | 5  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>2</sup> | SW846 3010A <sup>3</sup> |

- (1) Instrument QC Batch: MA4244
- (2) Instrument QC Batch: MA4249
- (3) Prep QC Batch: MP11797

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RL = Reporting Limit

4.10  
4

## Report of Analysis

|                                                              |  |                                |
|--------------------------------------------------------------|--|--------------------------------|
| <b>Client Sample ID:</b> RMV 216-21 MW9                      |  | <b>Date Sampled:</b> 11/21/13  |
| <b>Lab Sample ID:</b> D52877-6                               |  | <b>Date Received:</b> 11/22/13 |
| <b>Matrix:</b> AQ - Ground Water                             |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8021B                                   |  |                                |
| <b>Project:</b> CORCCOGJ: RMV 216-21 GW Monitoring(012.1539) |  |                                |

| Run #               | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---------------------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 <sup>a</sup> | TA20309.D | 1  | 12/02/13 | EV | n/a       | n/a        | GTA1139          |
| Run #2              |           |    |          |    |           |            |                  |

| Run #  | Purge Volume |
|--------|--------------|
| Run #1 | 5.0 ml       |
| Run #2 |              |

**Purgeable Aromatics**

| CAS No.   | Compound        | Result | RL  | MDL  | Units | Q |
|-----------|-----------------|--------|-----|------|-------|---|
| 71-43-2   | Benzene         | 4.3    | 1.0 | 0.20 | ug/l  |   |
| 108-88-3  | Toluene         | ND     | 2.0 | 1.0  | ug/l  |   |
| 100-41-4  | Ethylbenzene    | ND     | 2.0 | 1.0  | ug/l  |   |
| 1330-20-7 | Xylenes (total) | ND     | 2.0 | 2.0  | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 120-82-1 | 1,2,4-Trichlorobenzene | 90%    |        | 60-140% |

(a) The pH of the sample was > 2 at time of analysis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

4.11  
4

## Report of Analysis

|                                                              |                                |
|--------------------------------------------------------------|--------------------------------|
| <b>Client Sample ID:</b> RMV 216-21 MW9                      | <b>Date Sampled:</b> 11/21/13  |
| <b>Lab Sample ID:</b> D52877-6                               | <b>Date Received:</b> 11/22/13 |
| <b>Matrix:</b> AQ - Ground Water                             | <b>Percent Solids:</b> n/a     |
| <b>Project:</b> CORCCOGJ: RMV 216-21 GW Monitoring(012.1539) |                                |

### General Chemistry

| Analyte                                  | Result | RL    | Units | DF  | Analyzed       | By | Method                |
|------------------------------------------|--------|-------|-------|-----|----------------|----|-----------------------|
| Alkalinity, Bicarbonate as CaC           | 644    | 5.0   | mg/l  | 1   | 11/26/13       | JD | SM 2320B-2011         |
| Alkalinity, Carbonate                    | < 5.0  | 5.0   | mg/l  | 1   | 11/26/13       | JD | SM 2320B-2011         |
| Alkalinity, Total as CaCO <sub>3</sub>   | 644    | 5.0   | mg/l  | 1   | 11/26/13       | JD | SM 2320B-2011         |
| Chloride                                 | 325    | 50    | mg/l  | 100 | 11/22/13 18:35 | SK | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate                        | 40.5   | 1.0   | mg/l  | 100 | 11/22/13 18:35 | SK | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrate + Nitrite <sup>a</sup> | 42.7   | 1.0   | mg/l  | 1   | 11/22/13 18:35 | SK | EPA 300.0/SW846 9056  |
| Nitrogen, Nitrite                        | 2.2    | 0.020 | mg/l  | 5   | 11/22/13 15:06 | SK | EPA 300.0/SW846 9056  |
| Solids, Total Dissolved                  | 3620   | 10    | mg/l  | 1   | 11/25/13       | AK | SM 2540C-2011         |
| Sulfate                                  | 1420   | 50    | mg/l  | 100 | 11/22/13 18:35 | SK | EPA 300.0/SW846 9056  |
| Total Organic Carbon                     | 7.6    | 1.0   | mg/l  | 1   | 11/25/13 17:13 | GH | SM 5310B-2011         |
| pH                                       | 7.13   |       | su    | 1   | 11/25/13 15:00 | KB | SM4500HB+ -2011/9040C |

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

4.11  
4

## Report of Analysis

|                                                              |  |                                |
|--------------------------------------------------------------|--|--------------------------------|
| <b>Client Sample ID:</b> RMV 216-21 MW9                      |  | <b>Date Sampled:</b> 11/21/13  |
| <b>Lab Sample ID:</b> D52877-6F                              |  | <b>Date Received:</b> 11/22/13 |
| <b>Matrix:</b> AQ - Groundwater Filtered                     |  | <b>Percent Solids:</b> n/a     |
| <b>Project:</b> CORCCOGJ: RMV 216-21 GW Monitoring(012.1539) |  |                                |

### Dissolved Metals Analysis

| Analyte   | Result | RL   | Units | DF | Prep     | Analyzed By | Method                   | Prep Method              |
|-----------|--------|------|-------|----|----------|-------------|--------------------------|--------------------------|
| Calcium   | 255000 | 400  | ug/l  | 1  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Iron      | < 70   | 70   | ug/l  | 1  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Magnesium | 242000 | 200  | ug/l  | 1  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Manganese | 129    | 5.0  | ug/l  | 1  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Potassium | 7650   | 5000 | ug/l  | 5  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>2</sup> | SW846 3010A <sup>3</sup> |
| Selenium  | 50.1   | 50   | ug/l  | 1  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>1</sup> | SW846 3010A <sup>3</sup> |
| Sodium    | 492000 | 2000 | ug/l  | 5  | 11/25/13 | 11/26/13 JM | SW846 6010C <sup>2</sup> | SW846 3010A <sup>3</sup> |

- (1) Instrument QC Batch: MA4244
- (2) Instrument QC Batch: MA4249
- (3) Prep QC Batch: MP11797

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RL = Reporting Limit

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4

## Report of Analysis

|                                                              |  |                                |
|--------------------------------------------------------------|--|--------------------------------|
| <b>Client Sample ID:</b> TRIP BLANK                          |  | <b>Date Sampled:</b> 11/21/13  |
| <b>Lab Sample ID:</b> D52877-7                               |  | <b>Date Received:</b> 11/22/13 |
| <b>Matrix:</b> AQ - Trip Blank Water                         |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8021B                                   |  |                                |
| <b>Project:</b> CORCCOGJ: RMV 216-21 GW Monitoring(012.1539) |  |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | TA20310.D | 1  | 12/02/13 | EV | n/a       | n/a        | GTA1139          |
| Run #2 |           |    |          |    |           |            |                  |

| Run #  | Purge Volume |
|--------|--------------|
| Run #1 | 5.0 ml       |
| Run #2 |              |

**Purgeable Aromatics**

| CAS No.   | Compound        | Result | RL  | MDL  | Units | Q |
|-----------|-----------------|--------|-----|------|-------|---|
| 71-43-2   | Benzene         | ND     | 1.0 | 0.20 | ug/l  |   |
| 108-88-3  | Toluene         | ND     | 2.0 | 1.0  | ug/l  |   |
| 100-41-4  | Ethylbenzene    | ND     | 2.0 | 1.0  | ug/l  |   |
| 1330-20-7 | Xylenes (total) | ND     | 2.0 | 2.0  | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 120-82-1 | 1,2,4-Trichlorobenzene | 92%    |        | 60-140% |

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

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4

## Misc. Forms

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5

## Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody





# Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D52877

Client: OLSSON ASSOCIATES

Immediate Client Services Action Required: No

Date / Time Received: 11/22/2013 1:00:00 PM

No. Coolers: 1

Client Service Action Required at Login: No

Project: RWV 216-21 GW MONITORING

Airbill #'s: hdco

| <u>Cooler Security</u>    | <u>Y</u>                            | <u>or</u> | <u>N</u>                 |                       | <u>Y</u>                            | <u>or</u> | <u>N</u>                 |
|---------------------------|-------------------------------------|-----------|--------------------------|-----------------------|-------------------------------------|-----------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> |           | <input type="checkbox"/> | 3. COC Present:       | <input checked="" type="checkbox"/> |           | <input type="checkbox"/> |
| 2. Custody Seals Intact:  | <input checked="" type="checkbox"/> |           | <input type="checkbox"/> | 4. SmpI Dates/Time OK | <input checked="" type="checkbox"/> |           | <input type="checkbox"/> |

| <u>Cooler Temperature</u>    | <u>Y</u>                            | <u>or</u> | <u>N</u>                 |
|------------------------------|-------------------------------------|-----------|--------------------------|
| 1. Temp criteria achieved:   | <input checked="" type="checkbox"/> |           | <input type="checkbox"/> |
| 2. Cooler temp verification: |                                     |           | Infrared gun             |
| 3. Cooler media:             |                                     |           | Ice (bag)                |

| <u>Quality Control Preservation</u> | <u>Y</u>                            | <u>or</u> | <u>N</u>                 | <u>N/A</u>                          |
|-------------------------------------|-------------------------------------|-----------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler:     | <input type="checkbox"/>            |           | <input type="checkbox"/> |                                     |
| 2. Trip Blank listed on COC:        | <input type="checkbox"/>            |           | <input type="checkbox"/> |                                     |
| 3. Samples preserved properly:      | <input checked="" type="checkbox"/> |           | <input type="checkbox"/> |                                     |
| 4. VOCs headspace free:             | <input type="checkbox"/>            |           | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

| <u>Sample Integrity - Documentation</u> | <u>Y</u>                            | <u>or</u> | <u>N</u>                 |
|-----------------------------------------|-------------------------------------|-----------|--------------------------|
| 1. Sample labels present on bottles:    | <input checked="" type="checkbox"/> |           | <input type="checkbox"/> |
| 2. Container labeling complete:         | <input checked="" type="checkbox"/> |           | <input type="checkbox"/> |
| 3. Sample container label / COC agree:  | <input checked="" type="checkbox"/> |           | <input type="checkbox"/> |

| <u>Sample Integrity - Condition</u> | <u>Y</u>                            | <u>or</u> | <u>N</u>                 |
|-------------------------------------|-------------------------------------|-----------|--------------------------|
| 1. Sample recvd within HT:          | <input checked="" type="checkbox"/> |           | <input type="checkbox"/> |
| 2. All containers accounted for:    | <input checked="" type="checkbox"/> |           | <input type="checkbox"/> |
| 3. Condition of sample:             |                                     |           | Intact                   |

| <u>Sample Integrity - Instructions</u>    | <u>Y</u>                            | <u>or</u> | <u>N</u>                            | <u>N/A</u>                          |
|-------------------------------------------|-------------------------------------|-----------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear:           | <input checked="" type="checkbox"/> |           | <input type="checkbox"/>            |                                     |
| 2. Bottles received for unspecified tests | <input type="checkbox"/>            |           | <input checked="" type="checkbox"/> |                                     |
| 3. Sufficient volume rec'd for analysis:  | <input checked="" type="checkbox"/> |           | <input type="checkbox"/>            |                                     |
| 4. Compositing instructions clear:        | <input type="checkbox"/>            |           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear:          | <input type="checkbox"/>            |           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

Comments

Accutest Laboratories  
V:(303) 425-6021

4036 Youngfield Street  
F: (303) 425-6854

Wheat Ridge, CO  
www.accutest.com

5.1  
5

## GC Volatiles

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## QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

**Job Number:** D52877  
**Account:** WILLCOP WPX Energy Rocky Mountain, LLC  
**Project:** CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| GTA1139-MB | TA20299.D | 1  | 12/02/13 | EV | n/a       | n/a        | GTA1139          |

The QC reported here applies to the following samples:

Method: SW846 8021B

D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6, D52877-7

| CAS No.   | Compound        | Result | RL  | MDL  | Units | Q |
|-----------|-----------------|--------|-----|------|-------|---|
| 71-43-2   | Benzene         | ND     | 1.0 | 0.20 | ug/l  |   |
| 100-41-4  | Ethylbenzene    | ND     | 2.0 | 1.0  | ug/l  |   |
| 108-88-3  | Toluene         | ND     | 2.0 | 1.0  | ug/l  |   |
| 1330-20-7 | Xylenes (total) | ND     | 2.0 | 2.0  | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Limits      |
|----------|------------------------|-------------|
| 120-82-1 | 1,2,4-Trichlorobenzene | 90% 60-140% |

# Blank Spike Summary

**Job Number:** D52877  
**Account:** WILLCOP WPX Energy Rocky Mountain, LLC  
**Project:** CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| GTA1139-BS | TA20300.D | 1  | 12/02/13 | EV | n/a       | n/a        | GTA1139          |

The QC reported here applies to the following samples:

Method: SW846 8021B

D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6, D52877-7

| CAS No.   | Compound        | Spike ug/l | BSP ug/l | BSP % | Limits |
|-----------|-----------------|------------|----------|-------|--------|
| 71-43-2   | Benzene         | 27.2       | 26.5     | 97    | 70-130 |
| 100-41-4  | Ethylbenzene    | 45.6       | 44.7     | 98    | 70-130 |
| 108-88-3  | Toluene         | 212        | 204      | 96    | 70-130 |
| 1330-20-7 | Xylenes (total) | 216        | 226      | 105   | 70-130 |

| CAS No.  | Surrogate Recoveries   | BSP | Limits  |
|----------|------------------------|-----|---------|
| 120-82-1 | 1,2,4-Trichlorobenzene | 96% | 60-140% |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** D52877  
**Account:** WILLCOP WPX Energy Rocky Mountain, LLC  
**Project:** CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

| Sample       | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|-----------|----|----------|----|-----------|------------|------------------|
| D52652-36MS  | TA20302.D | 1  | 12/02/13 | EV | n/a       | n/a        | GTA1139          |
| D52652-36MSD | TA20303.D | 1  | 12/02/13 | EV | n/a       | n/a        | GTA1139          |
| D52652-36    | TA20301.D | 1  | 12/02/13 | EV | n/a       | n/a        | GTA1139          |

The QC reported here applies to the following samples:

Method: SW846 8021B

D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6, D52877-7

| CAS No.   | Compound        | D52652-36<br>ug/l | Spike<br>Q<br>ug/l | MS<br>ug/l | MS<br>% | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|-----------|-----------------|-------------------|--------------------|------------|---------|-------------|----------|-----|-------------------|
| 71-43-2   | Benzene         | ND                | 27.2               | 26.0       | 96      | 25.4        | 93       | 2   | 55-133/30         |
| 100-41-4  | Ethylbenzene    | ND                | 45.6               | 43.8       | 96      | 42.9        | 94       | 2   | 63-130/30         |
| 108-88-3  | Toluene         | ND                | 212                | 200        | 95      | 195         | 92       | 3   | 70-130/30         |
| 1330-20-7 | Xylenes (total) | ND                | 216                | 221        | 102     | 218         | 101      | 1   | 64-130/30         |

| CAS No.  | Surrogate Recoveries   | MS   | MSD | D52652-36 | Limits  |
|----------|------------------------|------|-----|-----------|---------|
| 120-82-1 | 1,2,4-Trichlorobenzene | 102% | 94% | 89%       | 60-140% |

\* = Outside of Control Limits.

## Metals Analysis

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## QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: D52877  
Account: WILLCOP - WPX Energy Rocky Mountain, LLC  
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP11797  
Matrix Type: AQUEOUS

Methods: SW846 6010C  
Units: ug/l

Prep Date: 11/25/13

| Metal      | RL   | IDL | MDL | MB<br>raw | final |
|------------|------|-----|-----|-----------|-------|
| Aluminum   | 100  | 8.6 | 41  |           |       |
| Antimony   | 30   | 2.1 | 19  |           |       |
| Arsenic    | 25   | 3.8 | 5.6 |           |       |
| Barium     | 10   | .2  | 1.4 |           |       |
| Beryllium  | 10   | .8  | 1.2 |           |       |
| Boron      | 50   | .8  | 6.6 |           |       |
| Cadmium    | 10   | .2  | .36 |           |       |
| Calcium    | 400  | 2.2 | 41  | 7.9       | <400  |
| Chromium   | 10   | .3  | .4  |           |       |
| Cobalt     | 5.0  | .4  | .57 |           |       |
| Copper     | 10   | .8  | 1.9 |           |       |
| Iron       | 70   | 1.5 | 9.5 | 15.4      | <70   |
| Lead       | 50   | 2.1 | 21  |           |       |
| Lithium    | 5.0  | .4  | 2.7 |           |       |
| Magnesium  | 200  | 6.8 | 19  | 8.4       | <200  |
| Manganese  | 5.0  | .01 | .46 | 1.3       | <5.0  |
| Molybdenum | 10   | .4  | .84 |           |       |
| Nickel     | 30   | .5  | .87 |           |       |
| Phosphorus | 100  | 15  | 20  |           |       |
| Potassium  | 1000 | 130 | 270 | -68       | <1000 |
| Selenium   | 50   | 7.1 | 11  | 1.4       | <50   |
| Silicon    | 50   | 4.7 | 5.2 |           |       |
| Silver     | 30   | .3  | .6  |           |       |
| Sodium     | 400  | 4.9 | 170 | 8.4       | <400  |
| Strontium  | 5.0  | .01 | .12 |           |       |
| Thallium   | 10   | 1.8 | 4   |           |       |
| Tin        | 50   | 13  | 16  |           |       |
| Titanium   | 10   | .1  | 2.1 |           |       |
| Uranium    | 50   | 2.9 | 5.5 |           |       |
| Vanadium   | 10   | .4  | .4  |           |       |
| Zinc       | 30   | .4  | 3.2 |           |       |

Associated samples MP11797: D52877-1F, D52877-2F, D52877-3F, D52877-4F, D52877-5F, D52877-6F

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits

7.1.1  
7

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: D52877  
Account: WILLCOP - WPX Energy Rocky Mountain, LLC  
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP11797  
Matrix Type: AQUEOUS

Methods: SW846 6010C  
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

7.1.1  
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D52877  
 Account: WILLCOP - WPX Energy Rocky Mountain, LLC  
 Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP11797  
 Matrix Type: AQUEOUS

Methods: SW846 6010C  
 Units: ug/l

Prep Date: 11/25/13

| Metal      | D52877-2F<br>Original MS |        | SpikeLot<br>ICPAL2 % Rec |          | QC<br>Limits |
|------------|--------------------------|--------|--------------------------|----------|--------------|
| Aluminum   |                          |        |                          |          |              |
| Antimony   |                          |        |                          |          |              |
| Arsenic    | anr                      |        |                          |          |              |
| Barium     | anr                      |        |                          |          |              |
| Beryllium  |                          |        |                          |          |              |
| Boron      |                          |        |                          |          |              |
| Cadmium    | anr                      |        |                          |          |              |
| Calcium    | 220000                   | 262000 | 25000                    | 76.0     | 75-125       |
| Chromium   | anr                      |        |                          |          |              |
| Cobalt     |                          |        |                          |          |              |
| Copper     | anr                      |        |                          |          |              |
| Iron       | 158                      | 5270   | 5000                     | 102.2    | 75-125       |
| Lead       | anr                      |        |                          |          |              |
| Lithium    |                          |        |                          |          |              |
| Magnesium  | 231000                   | 247000 | 25000                    | 112.0    | 75-125       |
| Manganese  | 112                      | 587    | 500                      | 95.0     | 75-125       |
| Molybdenum |                          |        |                          |          |              |
| Nickel     |                          |        |                          |          |              |
| Phosphorus |                          |        |                          |          |              |
| Potassium  | 5550                     | 35500  | 25000                    | 114.8    | 75-125       |
| Selenium   | 42.7                     | 1170   | 1000                     | 112.7    | 75-125       |
| Silicon    |                          |        |                          |          |              |
| Silver     | anr                      |        |                          |          |              |
| Sodium     | 478000                   | 532000 | 25000                    | 212.0(a) | 75-125       |
| Strontium  |                          |        |                          |          |              |
| Thallium   |                          |        |                          |          |              |
| Tin        | anr                      |        |                          |          |              |
| Titanium   |                          |        |                          |          |              |
| Uranium    |                          |        |                          |          |              |
| Vanadium   |                          |        |                          |          |              |
| Zinc       |                          |        |                          |          |              |

Associated samples MP11797: D52877-1F, D52877-2F, D52877-3F, D52877-4F, D52877-5F, D52877-6F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits

7.12  
 7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D52877

Account: WILLCOP - WPX Energy Rocky Mountain, LLC  
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP11797  
Matrix Type: AQUEOUS

Methods: SW846 6010C  
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D52877  
 Account: WILLCOP - WPX Energy Rocky Mountain, LLC  
 Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP11797  
 Matrix Type: AQUEOUS

Methods: SW846 6010C  
 Units: ug/l

Prep Date: 11/25/13

| Metal      | D52877-2F<br>Original MSD |        | SpikeLot<br>ICPAL2 % Rec |          | MSD<br>RPD | QC<br>Limit |
|------------|---------------------------|--------|--------------------------|----------|------------|-------------|
| Aluminum   |                           |        |                          |          |            |             |
| Antimony   |                           |        |                          |          |            |             |
| Arsenic    | anr                       |        |                          |          |            |             |
| Barium     | anr                       |        |                          |          |            |             |
| Beryllium  |                           |        |                          |          |            |             |
| Boron      |                           |        |                          |          |            |             |
| Cadmium    | anr                       |        |                          |          |            |             |
| Calcium    | 220000                    | 259000 | 25000                    | 64.0 (a) | 1.2        | 20          |
| Chromium   | anr                       |        |                          |          |            |             |
| Cobalt     |                           |        |                          |          |            |             |
| Copper     | anr                       |        |                          |          |            |             |
| Iron       | 158                       | 5220   | 5000                     | 101.2    | 1.0        | 20          |
| Lead       | anr                       |        |                          |          |            |             |
| Lithium    |                           |        |                          |          |            |             |
| Magnesium  | 231000                    | 248000 | 25000                    | 116.0    | 0.4        | 20          |
| Manganese  | 112                       | 585    | 500                      | 94.6     | 0.3        | 20          |
| Molybdenum |                           |        |                          |          |            |             |
| Nickel     |                           |        |                          |          |            |             |
| Phosphorus |                           |        |                          |          |            |             |
| Potassium  | 5550                      | 34000  | 25000                    | 108.8    | 19.1       | 20          |
| Selenium   | 42.7                      | 1180   | 1000                     | 113.7    | 0.9        | 20          |
| Silicon    |                           |        |                          |          |            |             |
| Silver     | anr                       |        |                          |          |            |             |
| Sodium     | 478000                    | 506000 | 25000                    | 108.0    | 1.8        | 20          |
| Strontium  |                           |        |                          |          |            |             |
| Thallium   |                           |        |                          |          |            |             |
| Tin        | anr                       |        |                          |          |            |             |
| Titanium   |                           |        |                          |          |            |             |
| Uranium    |                           |        |                          |          |            |             |
| Vanadium   |                           |        |                          |          |            |             |
| Zinc       |                           |        |                          |          |            |             |

Associated samples MP11797: D52877-1F, D52877-2F, D52877-3F, D52877-4F, D52877-5F, D52877-6F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits

7.1.2  
 7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D52877

Account: WILLCOP - WPX Energy Rocky Mountain, LLC  
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP11797  
Matrix Type: AQUEOUS

Methods: SW846 6010C  
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D52877  
 Account: WILLCOP - WPX Energy Rocky Mountain, LLC  
 Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP11797  
 Matrix Type: AQUEOUS

Methods: SW846 6010C  
 Units: ug/l

Prep Date: 11/25/13

| Metal      | BSP Result | Spikelot ICPALL2 | % Rec | QC Limits |
|------------|------------|------------------|-------|-----------|
| Aluminum   |            |                  |       |           |
| Antimony   |            |                  |       |           |
| Arsenic    | anr        |                  |       |           |
| Barium     | anr        |                  |       |           |
| Beryllium  |            |                  |       |           |
| Boron      |            |                  |       |           |
| Cadmium    | anr        |                  |       |           |
| Calcium    | 26800      | 25000            | 107.2 | 80-120    |
| Chromium   | anr        |                  |       |           |
| Cobalt     |            |                  |       |           |
| Copper     | anr        |                  |       |           |
| Iron       | 5310       | 5000             | 106.2 | 80-120    |
| Lead       | anr        |                  |       |           |
| Lithium    |            |                  |       |           |
| Magnesium  | 25600      | 25000            | 102.4 | 80-120    |
| Manganese  | 497        | 500              | 99.4  | 80-120    |
| Molybdenum |            |                  |       |           |
| Nickel     |            |                  |       |           |
| Phosphorus |            |                  |       |           |
| Potassium  | 26700      | 25000            | 106.8 | 80-120    |
| Selenium   | 1060       | 1000             | 106.0 | 80-120    |
| Silicon    |            |                  |       |           |
| Silver     | anr        |                  |       |           |
| Sodium     | 26100      | 25000            | 104.4 | 80-120    |
| Strontium  |            |                  |       |           |
| Thallium   |            |                  |       |           |
| Tin        | anr        |                  |       |           |
| Titanium   |            |                  |       |           |
| Uranium    |            |                  |       |           |
| Vanadium   |            |                  |       |           |
| Zinc       |            |                  |       |           |

Associated samples MP11797: D52877-1F, D52877-2F, D52877-3F, D52877-4F, D52877-5F, D52877-6F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D52877

Account: WILLCOP - WPX Energy Rocky Mountain, LLC  
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP11797  
Matrix Type: AQUEOUS

Methods: SW846 6010C  
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

7.1.3

7

SERIAL DILUTION RESULTS SUMMARY

Login Number: D52877  
 Account: WILLCOP - WPX Energy Rocky Mountain, LLC  
 Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP11797  
 Matrix Type: AQUEOUS

Methods: SW846 6010C  
 Units: ug/l

Prep Date: 11/25/13

| Metal      | D52877-2F<br>Original SDL 1:5 |        | %DIF     | QC<br>Limits |
|------------|-------------------------------|--------|----------|--------------|
| Aluminum   |                               |        |          |              |
| Antimony   |                               |        |          |              |
| Arsenic    | anr                           |        |          |              |
| Barium     | anr                           |        |          |              |
| Beryllium  |                               |        |          |              |
| Boron      |                               |        |          |              |
| Cadmium    | anr                           |        |          |              |
| Calcium    | 220000                        | 250000 | 2.6      | 0-10         |
| Chromium   | anr                           |        |          |              |
| Cobalt     |                               |        |          |              |
| Copper     | anr                           |        |          |              |
| Iron       | 159                           | 97.0   | 38.6*(a) | 0-10         |
| Lead       | anr                           |        |          |              |
| Lithium    |                               |        |          |              |
| Magnesium  | 231000                        | 226000 | 3.3      | 0-10         |
| Manganese  | 112                           | 114    | 1.3      | 0-10         |
| Molybdenum |                               |        |          |              |
| Nickel     |                               |        |          |              |
| Phosphorus |                               |        |          |              |
| Potassium  | 5550                          | 6000   | 8.2      | 0-10         |
| Selenium   | 42.7                          | 43.0   | 0.7      | 0-10         |
| Silicon    |                               |        |          |              |
| Silver     | anr                           |        |          |              |
| Sodium     | 478000                        | 464000 | 3.0      | 0-10         |
| Strontium  |                               |        |          |              |
| Thallium   |                               |        |          |              |
| Tin        | anr                           |        |          |              |
| Titanium   |                               |        |          |              |
| Uranium    |                               |        |          |              |
| Vanadium   |                               |        |          |              |
| Zinc       |                               |        |          |              |

Associated samples MP11797: D52877-1F, D52877-2F, D52877-3F, D52877-4F, D52877-5F, D52877-6F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits

7.1.4  
 7

SERIAL DILUTION RESULTS SUMMARY

Login Number: D52877  
Account: WILLCOP - WPX Energy Rocky Mountain, LLC  
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP11797  
Matrix Type: AQUEOUS

Methods: SW846 6010C  
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested  
(a) Serial dilution indicates possible matrix interference.

7.1.4

7

## General Chemistry

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D52877  
Account: WILLCOP - WPX Energy Rocky Mountain, LLC  
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

| Analyte                        | Batch ID        | RL     | MB Result | Units | Spike Amount | BSP Result | BSP %Recov | QC Limits   |
|--------------------------------|-----------------|--------|-----------|-------|--------------|------------|------------|-------------|
| Alkalinity, Bicarbonate as CaC | GN22853         | 5.0    | 0.0       | mg/l  | 100          | 97.1       | 97.1       | 90-110%     |
| Alkalinity, Carbonate          | GN22854         | 5.0    | 0.0       | mg/l  | 100          | 97.1       | 97.1       | 80-120%     |
| Alkalinity, Total as CaCO3     | GN22852         | 5.0    | 0.0       | mg/l  | 100          | 97.1       | 97.1       | 90-110%     |
| Bromide                        | GP11462/GN22819 | 0.050  | 0.0       | mg/l  | 20           | 19.8       | 99.0       | 90-110%     |
| Chloride                       | GP11462/GN22819 | 0.50   | 0.0       | mg/l  | 20           | 19.2       | 96.0       | 90-110%     |
| Fluoride                       | GP11462/GN22819 | 0.10   | 0.0       | mg/l  | 10           | 9.50       | 95.0       | 90-110%     |
| Nitrogen, Nitrate              | GP11462/GN22819 | 0.010  | 0.0       | mg/l  | 4.52         | 4.24       | 93.8       | 90-110%     |
| Nitrogen, Nitrite              | GP11462/GN22819 | 0.0040 | 0.0       | mg/l  | 6.09         | 6.04       | 99.2       | 90-110%     |
| Solids, Total Dissolved        | GN22824         | 10     | 0.0       | mg/l  | 400          | 398        | 99.5       | 90-110%     |
| Sulfate                        | GP11462/GN22819 | 0.50   | 0.0       | mg/l  | 30           | 29.0       | 96.7       | 90-110%     |
| Total Organic Carbon           | GP11467/GN22827 | 1.0    | 0.0       | mg/l  | 8.82         | 8.83       | 100.1      | 90-110%     |
| pH                             | GN22833         |        |           | su    | 8.00         | 8.01       | 100.0      | 99.3-100.7% |

Associated Samples:

Batch GN22824: D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6  
 Batch GN22833: D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6  
 Batch GN22852: D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6  
 Batch GN22853: D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6  
 Batch GN22854: D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6  
 Batch GP11462: D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6  
 Batch GP11467: D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6  
 (\*) Outside of QC limits



DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D52877  
Account: WILLCOP - WPX Energy Rocky Mountain, LLC  
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

| Analyte                    | Batch ID        | QC Sample | Units | Original Result | DUP Result | RPD | QC Limits |
|----------------------------|-----------------|-----------|-------|-----------------|------------|-----|-----------|
| Alkalinity, Total as CaCO3 | GN22852         | D52830-7  | mg/l  | 407             | 410        | 0.8 | 0-20%     |
| Solids, Total Dissolved    | GN22824         | D52877-4  | mg/l  | 3130            | 3110       | 0.6 | 0-20%     |
| Solids, Total Dissolved    | GN22824         | D52877-1  | mg/l  | 3110            | 3090       | 0.6 | 0-20%     |
| Solids, Total Dissolved    | GN22824         | D52877-5  | mg/l  | 3380            | 3380       | 0.0 | 0-20%     |
| Total Organic Carbon       | GP11467/GN22827 | D52877-4  | mg/l  | 5.8             | 5.7        | 1.7 | 0-20%     |

Associated Samples:

Batch GN22824: D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6

Batch GN22852: D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6

Batch GP11467: D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6

(\*) Outside of QC limits

8.2

8

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D52877  
Account: WILLCOPI - WPX Energy Rocky Mountain, LLC  
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

| Analyte                    | Batch ID        | QC Sample | Units | Original Result | Spike Amount | MS Result | %Rec  | QC Limits |
|----------------------------|-----------------|-----------|-------|-----------------|--------------|-----------|-------|-----------|
| Alkalinity, Total as CaCO3 | GN22852         | D52760-1  | mg/l  | 52.6            | 100          | 142       | 89.6  | 80-120%   |
| Bromide                    | GP11462/GN22819 | D52877-3  | mg/l  | 0.0             | 250          | 252       | 100.8 | 80-120%   |
| Chloride                   | GP11462/GN22819 | D52877-3  | mg/l  | 480             | 1000         | 1480      | 100.0 | 80-120%   |
| Fluoride                   | GP11462/GN22819 | D52877-3  | mg/l  | 16.0            | 250          | 255       | 95.6  | 80-120%   |
| Nitrogen, Nitrate          | GP11462/GN22819 | D52877-3  | mg/l  | 31.6            | 56.5         | 86.3      | 96.8  | 80-120%   |
| Nitrogen, Nitrite          | GP11462/GN22819 | D52877-3  | mg/l  | 4.2             | 30.5         | 33.9      | 97.5  | 80-120%   |
| Sulfate                    | GP11462/GN22819 | D52877-3  | mg/l  | 1350            | 1000         | 2320      | 97.0  | 80-120%   |
| Total Organic Carbon       | GP11467/GN22827 | D52877-4  | mg/l  | 5.8             | 10           | 16.1      | 103.0 | 80-120%   |

Associated Samples:

Batch GN22852: D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6

Batch GP11462: D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6

Batch GP11467: D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits



MATRIX SPIKE DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D52877  
Account: WILLCOP - WPX Energy Rocky Mountain, LLC  
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

| Analyte                    | Batch ID        | QC Sample | Units | Original Result | Spike Amount | MSD Result | RPD | QC Limit |
|----------------------------|-----------------|-----------|-------|-----------------|--------------|------------|-----|----------|
| Alkalinity, Total as CaCO3 | GN22852         | D52760-1  | mg/l  | 52.6            | 100          | 145        | 3.5 | 20%      |
| Bromide                    | GP11462/GN22819 | D52877-3  | mg/l  | 0.0             | 250          | 250        | 0.8 | 20%      |
| Chloride                   | GP11462/GN22819 | D52877-3  | mg/l  | 480             | 1000         | 1470       | 0.7 | 20%      |
| Fluoride                   | GP11462/GN22819 | D52877-3  | mg/l  | 16.0            | 250          | 250        | 2.0 | 20%      |
| Nitrogen, Nitrate          | GP11462/GN22819 | D52877-3  | mg/l  | 31.6            | 56.5         | 85.9       | 0.5 | 20%      |
| Nitrogen, Nitrite          | GP11462/GN22819 | D52877-3  | mg/l  | 4.2             | 30.5         | 33.8       | 0.3 | 20%      |
| Sulfate                    | GP11462/GN22819 | D52877-3  | mg/l  | 1350            | 1000         | 2320       | 0.0 | 20%      |
| Total Organic Carbon       | GP11467/GN22827 | D52877-4  | mg/l  | 5.8             | 10           | 15.7       | 2.5 | 20%      |

Associated Samples:

Batch GN22852: D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6

Batch GP11462: D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6

Batch GP11467: D52877-1, D52877-2, D52877-3, D52877-4, D52877-5, D52877-6

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

8.4

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