

| SAMPLE INFORMATION |   |                  |               |               |                   |                    | PARAMETER<br>(UNITS) | TDS **<br>(mg/L)   | CHLORIDE<br>(mg/L) | SULFATE<br>(mg/L) | BROMIDE<br>(mg/L) | SPECIFIC<br>CONDUCTANCE<br>(umhos/c) |
|--------------------|---|------------------|---------------|---------------|-------------------|--------------------|----------------------|--------------------|--------------------|-------------------|-------------------|--------------------------------------|
| RMI                | SAMPLE<br>LOCATION                                | LATITUDE         | LONGITUDE     | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID#         | CRITERIA<br>(BASIS)  | 500 Avg<br>750 Max | 250<br>(PWS)       | 250<br>(PWS)      |                   |                                      |
| 1.1                | PA Fork<br>Dunkard<br>Creek                       | 39° 43'<br>44.6" | 80° 16' 42.8" | 1552-075      | 9/10/2009         | 06681              |                      | 206                | 5.98               | 32.5              |                   | 336                                  |
|                    |   |                  |               | 1552-111      | 9/15/2009         | 06807              |                      | 254                | 14.9               | 42.7              |                   | 424                                  |
|                    |   |                  |               | 1552-159      | 9/21/2009         | 33355              |                      | 282                | 15.9               | 42.4              |                   | 438                                  |
|                    |   |                  |               | 1552-200      | 9/29/2009         | 34473              |                      | 234                | 14.1               | 45.1              |                   | 395                                  |
|                    |   |                  |               | 1552-228      | 10/6/2009         | 35248              |                      | 230                | 13.2               | 37                |                   | 395                                  |
|                    |   |                  |               | 1552-260      | 10/21/2009        | 37169              |                      | 164                | 7.92               | 34                |                   | 279                                  |
|                    |   |                  |               | 1552-296      | 11/4/2009         | 39186              |                      | 162                | 7.16               | 31.1              |                   | 258                                  |
|                    |   |                  |               | 1552-317      | 11/18/2009        | 40449              |                      | 206                | 9.2                | 36.5              |                   | 325                                  |
|                    |   |                  |               | 1552-332      | 12/2/2009         | 41519              |                      | 194                | 9.27               | 34.2              |                   | 304                                  |
|                    |   |                  |               | 1552-349      | 12/16/2009        | 43385              |                      | 144                | 4.85               | 30.2              |                   | 218                                  |
|                    |   |                  |               | 1552-366      | 1/6/2010          | 00349              |                      | 150                | 5.23               | 34.4              |                   | 250                                  |
|                    |   |                  |               | 1552-383      | 1/20/2010         | 01538              |                      | 120                | 4.2                | 28.5              |                   | 171                                  |
|                    |   |                  |               | 0552-922      | 8/11/2010         | 25779              |                      | 212                | 9.55               | 33                | <0.2              | 362                                  |
|                    |   |                  |               | 0552-936      | 8/25/2010         | 27336              |                      | 198                | 9.88               | 30.18             | <0.2              | 388                                  |
|                    |   |                  |               | 0552-949      | 9/8/2010          | 28689              |                      | 252                | 18.23              | 30.22             | <0.2              | 424                                  |
|                    |   |                  |               | 0552-963      | 9/22/2010         | 29661              |                      | 260                | 14                 | 32.9              | <0.2              | 451                                  |
| 0552-977           | 10/6/2010   | 31139            |               | 218           | 9.78              | 38.28              | <0.2                 | 350                |                    |                   |                   |                                      |
| 0552-991           | 10/20/2010  | 32724            |               | 338           | 15.3              | 47.6               | <0.2                 | 439                |                    |                   |                   |                                      |
| 0.6                | WV Fork<br>Dunkard<br>Creek 50' US<br>Outfall 003 | 39° 42' 48"      | 80° 17' 17"   | 1552          | 9/15/2009         | Field Data<br>Only |                      |                    |                    |                   |                   | 5000-10,000                          |
|                    |   |                  |               |               | 9/21/2009         |                    |                      | 2406               | 410                | 1016              | 2.5               | 3,740                                |
|                    |   |                  |               | 1552-202      | 9/29/2009         | 34474              |                      | 2,128              | 336                | 868               | 2.1               | 3,290                                |
|                    |   |                  |               | 1552-230      | 10/6/2009         | 35249,             |                      | 1,088              | 167                | 425               | 1                 | 1,770                                |
|                    |   |                  |               | 1552-264      | 10/21/2009        | 37173              |                      | 406                | 48.9               | 127               | 0.3               | 655                                  |
|                    |   |                  |               | 1552-297      | 11/4/2009         | 39187              |                      | 362                | 46.3               | 140               | 0.3               | 595                                  |
|                    |   |                  |               | 1552-318      | 11/18/2009        | 40450              |                      | 1,852              | 317                | 755               | 2                 | 2,900                                |
|                    |   |                  |               | 1552-333      | 12/2/2009         | 41520              |                      | 886                | 134                | 360               | 0.8               | 1,420                                |
|                    |   |                  |               | 1552-350      | 12/16/2009        | 43387              |                      | 348                | 40.4               | 115               | 0.2               | 551                                  |
|                    |   |                  |               | 1552-367      | 1/6/2010          | 00350              |                      | 492                | 84.8               | 214               | 0.6               | 908                                  |
|                    |   |                  |               | 1552-384      | 1/20/2010         | 01539              |                      | 234                | 24.5               | 74                |                   | 350                                  |
|                    |   |                  |               | 0552-923      | 8/11/2010         | 25793              |                      | 252                | 17.8               | 55.1              | <0.2              |                                      |
|                    |   |                  |               | 0552-937      | 8/25/2010         | 27337              |                      | 318                | 22.05              | 61.06             | <0.2              | 520                                  |
|                    |   |                  |               | 0552-950      | 9/8/2010          | 28690              |                      | 352                | 20.75              | 67.27             | <0.2              | 547                                  |
|                    |   |                  |               | 0552-964      | 9/22/2010         | 29662              |                      | 360                | 28.6               | 68.2              | <0.2              | 567                                  |
| 0552-978           | 10/6/2010   | 31140            |               | 396           | 28.25             | 122.71             | <0.2                 | 608                |                    |                   |                   |                                      |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |   |                  |               |               |                   |                    | PARAMETER<br>(UNITS) | TDS **<br>(mg/L)   | CHLORIDE<br>(mg/L) | SULFATE<br>(mg/L) | BROMIDE<br>(mg/L) | SPECIFIC<br>CONDUCTANCE<br>(umhos/c) |    |    |
|--------------------|---|------------------|---------------|---------------|-------------------|--------------------|----------------------|--------------------|--------------------|-------------------|-------------------|--------------------------------------|----|----|
| RMI                | SAMPLE<br>LOCATION  | LATITUDE         | LONGITUDE     | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID#         | CRITERIA<br>(BASIS)  | 500 Avg<br>750 Max | 250<br>(PWS)       | 250<br>(PWS)      |                   |                                      |    |    |
|                    |   |                  |               | 0552-992      | 10/20/2010        | 32725              |                      | 386                | 28.1               | 105               | <.2               | 598                                  |    |    |
| 0.5                | Blacksville #2<br>discharge<br>from Beaver<br>Pond or Pond<br>Itself Outfall<br>003                       | 39° 42' 52"      | 80° 17' 15"   | 0552-925      | 8/11/2010         | 25794              |                      | 7822               | 1729               | 3373              | 11.6              | 10390                                |    |    |
|                    |   |                  |               | 0552-939      | 8/25/2010         | ND                 |                      |                    |                    |                   |                   |                                      | ND |    |
|                    |   |                  |               | 0552-952      | 9/8/2010          | ND                 |                      |                    |                    |                   |                   |                                      |    | ND |
|                    |   |                  |               | 0552-966      | 9/22/2010         | ND                 |                      |                    |                    |                   |                   |                                      |    | ND |
|                    |   |                  |               | 0552-979      | 10/6/2010         | ND                 |                      |                    |                    |                   |                   |                                      |    | ND |
|                    |   |                  |               | 0552-994      | 10/20/2010        | ND                 |                      |                    |                    |                   |                   |                                      |    | ND |
| 0.4                | Blacksville #2<br>Mine Outfall<br>005<br>Discharge to<br>WV Fork<br>2000' US jct<br>PA Fork @<br>Shamrock | 39° 43'<br>07.6" | 80° 16' 38.8" | 1552          | 9/15/2009         | Field Data<br>Only |                      |                    |                    |                   |                   | 24,600                               |    |    |
|                    |   |                  |               | 1552-148      | 9/17/2009         | 33133              |                      | 20528              | 4450               | 8821              | 30.1              | 26,700                               |    |    |
|                    |   |                  |               | 1552-167      | 9/21/2009         | 33363              |                      | 21,764             | 4,780              | 6,643             | 32.3              | 27,200                               |    |    |
|                    |   |                  |               | 1552-204      | 9/29/2009         | 34475              |                      | 9,652              | 2,129              | 3,796             | 11.2              | 13,190                               |    |    |
|                    |   |                  |               | 1552-232      | 10/6/2009         | 35250              |                      | 14,482             | 3,230              | 6,006             | 19.9              | 19,010                               |    |    |
|                    |   |                  |               | 1552-266      | 10/21/2009        | 37174              |                      | 5,620              | 1,259              | 2,241             | 7.8               | 8,140                                |    |    |
|                    |   |                  |               | 1552-298      | 11/4/2009         | 39188              |                      | 5,236              | 1,161              | 2,027             | 7.2               | 7,570                                |    |    |
|                    |   |                  |               | 1552-319      | 11/18/2009        | 40504              |                      | 6,458              | 1,361              | 2,509             | 9.6               | 9,110                                |    |    |
|                    |   |                  |               | 1552-334      | 12/2/2009         | 41545              |                      | 7,186              | 1,566              | 2,829             | 10.1              | 10,080                               |    |    |
|                    |   |                  |               | 1552-351      | 12/16/2009        | 43377              |                      | 1,654              | 340.0              | 642.0             | 2.2               | 2,510                                |    |    |
|                    |   |                  |               | 1552-368      | 1/6/2010          | 00351              |                      | 848                | 157                | 342               | 1                 | 1,335                                |    |    |
|                    |   |                  |               | 1552-385      | 1/20/2010         | 01515              |                      | 434                | 60.9               | 158.0             | 0.4               | 660                                  |    |    |
|                    |   |                  |               | 0552-938      | 8/25/2010         | ND                 |                      |                    |                    |                   |                   |                                      | ND |    |
|                    |   |                  |               | 0552-950      | 9/8/2010          | ND                 |                      |                    |                    |                   |                   |                                      | ND |    |
|                    |   |                  |               | 0552-965      | 9/22/2010         | ND                 |                      |                    |                    |                   |                   |                                      | ND |    |
| 0552-980           | 10/6/2010   | ND               |               |               |                   |                    |                      |                    | ND                 |                   |                   |                                      |    |    |
| 0552-993           | 10/20/2010  | ND               |               |               |                   |                    |                      |                    | ND                 |                   |                   |                                      |    |    |
|                    |   |                  |               | 1552-090      | 9/10/2009         | 06684              |                      | 18,856             | 4,255              | 7,867             | 27.4              | 24,500                               |    |    |
|                    |   |                  |               | 1552-117      | 9/15/2009         | 06808              |                      | 14,782             | 1,588              | 3,177             | 20.4              | 19,760                               |    |    |
|                    |   |                  |               | 1552-151      | 9/17/2009         | 33136              |                      | 12404              | 2689               | 5429              | 17.6              | 17,000                               |    |    |
|                    |   |                  |               | 1552-163      | 9/21/2009         | 33359              |                      | 4,582              | 860                | 1,825             | 5.7               | 6,710                                |    |    |
|                    |   |                  |               | 1552-206      | 9/29/2009         | 34478              |                      | 2,312              | 383                | 967               | 2.4               | 3,610                                |    |    |
|                    |   |                  |               | 1552-234      | 10/6/2009         | 35253              |                      | 1,240              | 195                | 486               | 1.2               | 1,966                                |    |    |
|                    |   |                  |               | 1552-268      | 10/21/2009        | 37185              |                      | 442                | 57.2               | 143               | 0.3               | 711                                  |    |    |
|                    |   |                  |               | 1552-299      | 11/4/2009         | 39189              |                      | 380                | 49                 | 120               | 0.3               | 640                                  |    |    |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |                       |                 |                  |            |                |         | PARAMETER        | TDS **             | CHLORIDE  | SULFATE   | BROMIDE | SPECIFIC CONDUCTANCE |
|--------------------|-----------------------|-----------------|------------------|------------|----------------|---------|------------------|--------------------|-----------|-----------|---------|----------------------|
|                    |                       |                 |                  |            |                |         | (UNITS)          | (mg/L)             | (mg/L)    | (mg/L)    | (mg/L)  | (umhos/c)            |
| RMI                | SAMPLE LOCATION       | LATITUDE        | LONGITUDE        | SAMPLE ID# | DATE COLLECTED | LAB ID# | CRITERIA (BASIS) | 500 Avg<br>750 Max | 250 (PWS) | 250 (PWS) |         |                      |
| 0.2                | WV Fork Dunkard Creek | 39° 43' 18.3"   | 80° 16' 25.1"    | 1552-320   | 11/18/2009     | 40505   |                  | 1,868              | 325       | 765       | 1.9     | 2,900                |
|                    |                       |                 |                  | 1552-335   | 12/2/2009      | 41546   |                  | 980                | 147       | 389       | 0.8     | 1,540                |
|                    |                       |                 |                  | 1552-352   | 12/16/2009     | 43378   |                  | 360.0              | 42.3      | 119       | 0.2     | 574                  |
|                    |                       |                 |                  | 1552-369   | 1/6/2010       | 00352   |                  | 548                | 85        | 213       | 0.6     | 900                  |
|                    |                       |                 |                  | 1552-386   | 1/20/2010      | 01540   |                  | 234.0              | 24.5      | 74.2      |         | 350                  |
|                    |                       |                 |                  | 0552-926   | 8/11/2010      | 25803   |                  | 362                | 30.8      | 83.3      | <.02    | 570                  |
|                    |                       |                 |                  | 0552-940   | 8/25/2010      | 27366   |                  | 364                | 31.03     | 78.68     | <.02    | 592                  |
|                    |                       |                 |                  | 0552-953   | 9/8/2010       | 28664   |                  | 486                | 49.6      | 121       | 0.3     | 769                  |
|                    |                       |                 |                  | 0552-967   | 9/22/2010      | 29663   |                  | 436                | 45.1      | 101       | 0.2     | 713                  |
|                    |                       |                 |                  | 0552-981   | 10/6/2010      | 31137   |                  | 552                | 63.6      | 192       | 0.4     | 877                  |
|                    |                       |                 |                  | 0552-995   | 10/20/2010     | 32726   |                  | 538                | 127       | 182       | 0.3     | 852                  |
| 41                 | Dunkard Creek @ Brave | 39° 43' 39.0"   | 080° 15' 21.9"   | 1552-085   | 9/10/2009      | 06683   |                  | 3938               | 840       | 1622      | 5.2     | 6290                 |
|                    |                       |                 |                  | 1552-123   | 9/15/2009      | 06809   |                  | 4392               | 948       | 1799      | 5.8     | 6550                 |
|                    |                       |                 |                  | 1552-171   | 9/21/2009      | 33367   |                  | 5304               | 1097      | 2058      | 7.4     | 7740                 |
|                    |                       |                 |                  | 1552-208   | 9/29/2009      | 34479   |                  | 2622               | 477       | 1073      | 3.1     | 4110                 |
|                    |                       |                 |                  | 1552-236   | 10/6/2009      | 35254   |                  | 1350               | 227       | 527       | 1.5     | 2200                 |
|                    |                       |                 |                  | 1552-270   | 10/21/2009     | 37184   |                  | 350                | 42.7      | 109       | 0.3     | 599                  |
|                    |                       |                 |                  | 1552-300   | 11/4/2009      | 39190   |                  | 292                | 31        | 78.7      |         | 467                  |
|                    |                       |                 |                  | 1552-321   | 11/18/2009     | 40444   |                  | 846                | 132       | 299       | 0.8     | 1332                 |
|                    |                       |                 |                  | 1552-336   | 12/2/2009      | 41539   |                  | 850                | 125       | 333       | 0.6     | 1360                 |
|                    |                       |                 |                  | 1552-353   | 12/16/2009     | 43373   |                  | 248                | 24.2      | 75.6      |         | 417                  |
|                    |                       |                 |                  | 1552-370   | 1/6/2010       | 00343   |                  | 322                | 41.8      | 108       | 0.2     | 543                  |
|                    |                       |                 |                  | 1552-387   | 1/20/2010      | 01516   |                  | 284                | 35.8      | 89.5      | 0.2     | 440                  |
|                    |                       |                 |                  | 0552-927   | 8/11/2010      | 25804   |                  | 256                | 24.2      | 59.6      | <.2     | 350                  |
|                    |                       |                 |                  | 0552-941   | 8/25/2010      | 27367   |                  | 372                | 39.62     | 81.13     | <.2     | 614                  |
|                    |                       |                 |                  | 0552-954   | 9/8/2010       | 28665   |                  | 392                | 40.27     | 79.93     | 0.3     | 614                  |
| 0552-968           | 9/22/2010             | 29664           |                  | 390        | 41.3           | 88.9    | 0.2              | 650                |           |           |         |                      |
| 0552-982           | 10/6/2010             | 31138           |                  | 336        | 30.5           | 85.92   | 0.2              | 557                |           |           |         |                      |
|                    |                       |                 |                  | 0552-996   | 10/20/2010     | 32727   |                  | 420                | 42.5      | 109       | 0.2     | 649                  |
| 39.2               | Miracle Run @ Mouth   | N 39° 43' 05.0" | W 080° 14' 28.8" | 1552-142   | 9/17/2009      | 33127   |                  | 2816               | 195       | 1555      | 1.2     | 3940                 |
|                    |                       |                 |                  | 1552-175   | 9/21/2009      | 33371   |                  | 3472               | 239       | 1854      | 1.5     | 4610                 |
|                    |                       |                 |                  | 1552-208   | 9/29/2009      | 34479   |                  | 1816               | 132       | 994       | 0.7     | 2660                 |
|                    |                       |                 |                  | 1552-238   | 10/6/2009      | 35251   |                  | 1892               | 135       | 1011      | 0.8     | 2690                 |
|                    |                       |                 |                  | 1552-272   | 10/21/2009     | 37172   |                  | 790                | 49.9      | 359       | 0.3     | 1160                 |
|                    |                       |                 |                  | 1552-301   | 11/4/2009      | 39191   |                  | 1230               | 79.6      | 598       | 0.5     | 1767                 |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |  |                  |               |               |                   |                    | PARAMETER<br>(UNITS) | TDS **<br>(mg/L)   | CHLORIDE<br>(mg/L) | SULFATE<br>(mg/L) | BROMIDE<br>(mg/L) | SPECIFIC<br>CONDUCTANCE<br>(umhos/c) |
|--------------------|--|------------------|---------------|---------------|-------------------|--------------------|----------------------|--------------------|--------------------|-------------------|-------------------|--------------------------------------|
| RMI                | SAMPLE<br>LOCATION                                     | LATITUDE         | LONGITUDE     | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID#         | CRITERIA<br>(BASIS)  | 500 Avg<br>750 Max | 250<br>(PWS)       | 250<br>(PWS)      |                   |                                      |
|                    |  |                  |               | 1552-322      | 11/18/2009        | 40445              |                      | 1838               | 139                | 975               | 0.8               | 2650                                 |
|                    |  |                  |               | 1552-337      | 12/2/2009         | 41540              |                      | 1010               | 67.1               | 489               | 0.4               | 1479                                 |
|                    |  |                  |               | 1552-354      | 12/16/2009        | 43374              |                      | 460                | 29.2               | 206               |                   | 735                                  |
|                    |  |                  |               | 1552-371      | 1/6/2010          | 00344              |                      | 460                | 30                 | 209               |                   | 728                                  |
| 37.5               | Dunkard<br>Creek @<br>Blacksville                      | 39° 43'<br>15.7" | 80° 13' 20.6" | 1552          | 9/17/2009         | Field Data<br>Only |                      |                    |                    |                   |                   | 4030                                 |
|                    |  |                  |               | 1552          | 9/21/2009         | Field Data<br>Only |                      |                    |                    |                   |                   | 4760                                 |
|                    |  |                  |               | 1552-214      | 9/29/2009         | 34471              |                      | 2400               | 383                | 1066              | 2.5               | 3610                                 |
|                    |  |                  |               | 1552-240      | 10/6/2009         | 35252              |                      | 1632               | 219                | 743               | 1.4               | 2490                                 |
|                    |  |                  |               | 1552-274      | 10/21/2009        | 37171              |                      | 528                | 56.1               | 198               | 0.3               | 811                                  |
|                    |  |                  |               | 1552-302      | 11/4/2009         | 39207              |                      | 444                | 39                 | 180               | 0.2               | 712                                  |
|                    |  |                  |               | 1552-323      | 11/18/2009        | 40446              |                      | 1080               | 115                | 476               | 0.6               | 1612                                 |
|                    |  |                  |               | 1552-338      | 12/2/2009         | 41541              |                      | 862                | 99.4               | 361               | 0.6               | 1354                                 |
|                    |  |                  |               | 1552-355      | 12/16/2009        | 43375              |                      | 268                | 21.9               | 93.5              |                   | 474                                  |
|                    |  |                  |               | 1552-372      | 1/6/2010          | 00345              |                      | 344                | 37.3               | 129               | 0.2               | 569                                  |
|                    |  |                  |               | 0552-928      | 8/11/2010         | 25782              |                      | 1106               | 73.4               | 581               | 0.5               | 1674                                 |
|                    |  |                  |               | 0552-942      | 8/25/2010         | 27380              |                      | 964                | 66.4               | 459               | 0.4               | 1466                                 |
|                    |  |                  |               | 0552-955      | 9/8/2010          | 28666              |                      | 894                | 69.8               | 417               | 0.4               | 1339                                 |
|                    |  |                  |               | 0552-969      | 9/22/2010         | 29696              |                      | 1486               | 101                | 787               | 0.6               | 2157                                 |
| 0552-983           | 10/6/2010  | 31161            |               | 1070          | 75.4              | 558                | 0.4                  | 1651               |                    |                   |                   |                                      |
| 0552-997           | 10/20/2010   | 32721            |               | 1266          | 94.1              | 695                | 0.5                  | 1960               |                    |                   |                   |                                      |
| 30.3               | Dunkard<br>Creek @<br>Route 7<br>bridge in<br>Pentress | 39° 42' 43"      | 80° 9' 43"    | 1552-214      | 9/29/2009         | 34471              |                      | 2234               | 381                | 975               | 2.6               | 3390                                 |
|                    |  |                  |               | 1552-242      | 10/6/2009         | 35245              |                      | 1772               | 282                | 789               | 1.9               | 2780                                 |
|                    |  |                  |               | 1552-276      | 10/21/2009        | 37148              |                      | 524                | 59.8               | 186               | 0.4               | 813                                  |
|                    |  |                  |               | 1552-303      | 11/4/2009         | 39208              |                      | 404                | 39.9               | 148               | 0.2               | 664                                  |
|                    |  |                  |               | 1552-324      | 11/18/2009        | 40451              |                      | 692                | 77                 | 272               | 0.5               | 1084                                 |
|                    |  |                  |               | 1552-339      | 12/2/2009         | 41516              |                      | 992                | 107                | 445               | 0.7               | 1530                                 |
|                    |  |                  |               | 1552-356      | 12/16/2009        | 43391              |                      | 314                | 32.2               | 105               | 0.2               | 507                                  |
|                    |  |                  |               | 1552-373      | 1/6/2010          | 00346              |                      | 342                | 37.5               | 114               | 0.2               | 543                                  |
|                    |  |                  |               | 0552-929      | 8/11/2010         | 25783              |                      | 694                | 72.3               | 315               | 0.5               | 1100                                 |
|                    |  |                  |               | 0552-943      | 8/25/2010         | 27381              |                      | 1242               | 112                | 595               | 0.7               | 1848                                 |
|                    |  |                  |               | 0552-956      | 9/8/2010          | 28667              |                      | 1096               | 114                | 528               | 0.9               | 1634                                 |
|                    |  |                  |               | 0552-970      | 9/22/2010         | 29697              |                      | 744                | 105                | 261               | 0.8               | 1136                                 |
| 0552-984           | 10/6/2010  | 31162            |               | 1188          | 91.6              | 556                | 0.6                  | 1671               |                    |                   |                   |                                      |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |   |                  |               |               |                   |            | PARAMETER<br>(UNITS) | TDS **<br>(mg/L)   | CHLORIDE<br>(mg/L) | SULFATE<br>(mg/L) | BROMIDE<br>(mg/L) | SPECIFIC<br>CONDUCTANCE<br>(umhos/c) |
|--------------------|---|------------------|---------------|---------------|-------------------|------------|----------------------|--------------------|--------------------|-------------------|-------------------|--------------------------------------|
| RMI                | SAMPLE<br>LOCATION                        | LATITUDE         | LONGITUDE     | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID# | CRITERIA<br>(BASIS)  | 500 Avg<br>750 Max | 250<br>(PWS)       | 250<br>(PWS)      |                   |                                      |
|                    |   |                  |               | 0552-998      | 10/20/2010        | 32722      |                      | 1228               | 125                | 563               | <0.2              | 1784                                 |
| 22.8               | Dunkard<br>Creek @<br>Mason Dixon<br>Park | 39° 42'<br>55.7" | 80° 06' 40.8" | 1552-129      | 9/15/2009         | 06810      |                      | 1518               | 248                | 647               | 1.6               | 2330                                 |
|                    |   |                  |               | 1552-179      | 9/21/2009         | 33375      |                      | 1726               | 241                | 776               | 1.6               | 2600                                 |
|                    |   |                  |               | 1552-216      | 9/29/2009         | 34472      |                      | 1752               | 276                | 738               | 1.9               | 2680                                 |
|                    |   |                  |               | 1552-244      | 10/6/2009         | 35246      |                      | 1722               | 300                | 740               | 2                 | 2750                                 |
|                    |   |                  |               | 1552-278      | 10/21/2009        | 37149      |                      | 520                | 52.3               | 197               | 0.3               | 814                                  |
|                    |   |                  |               | 1552-304      | 11/4/2009         | 39209      |                      | 386                | 34                 | 135               |                   | 622                                  |
|                    |   |                  |               | 1552-325      | 11/18/2009        | 40452      |                      | 548                | 50                 | 203               | 0.3               | 847                                  |
|                    |   |                  |               | 1552-340      | 12/2/2009         | 41517      |                      | 992                | 107                | 445               | 0.7               | 1530                                 |
|                    |   |                  |               | 1552-357      | 12/16/2009        | 43392      |                      | 316                | 30.4               | 102               |                   | 500                                  |
|                    |   |                  |               | 1552-374      | 1/6/2010          | 00347      |                      | 290                | 29.2               | 94.1              |                   | 474                                  |
|                    |   |                  |               | 0552-930      | 8/11/2010         | 25835      |                      | 594                | 65.1               | 248               | 0.4               | 951                                  |
|                    |   |                  |               | 0552-944      | 8/25/2010         | 27389      |                      | 788                | 73.4               | 354               | 0.5               | 1193                                 |
|                    |   |                  |               | 0552-957      | 9/8/2010          | 28699      |                      | 392                | 40.27              | 79.93             | 0.3               | 1511                                 |
|                    |   |                  |               | 0552-971      | 9/22/2010         | 29725      |                      | 660                | 88.6               | 248               | 0.6               | 1069                                 |
|                    |   |                  |               | 0552-985      | 10/6/2010         | 31135      |                      | 752                | 84.7               | 338               | 0.6               | 1222                                 |
| 0552-999           | 10/20/2010                                | 32715            |               | 864           | 76.8              | 377        | 0.5                  | 1284               |                    |                   |                   |                                      |
|                    |   |                  |               | CMU*          | 9/17/2009         | NA         |                      | 550                | 231                | 310               | 0.800             |                                      |
|                    |   |                  |               | CMU*          | 9/22/2009         | NA         |                      | 1045               | 213                | 440               | 0.680             |                                      |
|                    |   |                  |               | CMU*          | 9/29/2009         | NA         |                      | 1394               | 0                  | 1047              | 1.10              |                                      |
|                    |   |                  |               | CMU*          | 10/6/2009         | NA         |                      | 1631               | -----              | 863               | 0.885             |                                      |
|                    |   |                  |               | CMU*          | 10/13/2009        | NA         |                      | 336                | 336                | 216               | <0.40             |                                      |
|                    |   |                  |               | CMU*          | 10/20/2009        | NA         |                      | 334                | 67                 | 249               | 0.117             |                                      |
|                    |   |                  |               | CMU*          | 10/27/2009        | NA         |                      | 347                | 61                 | 152               | 0.123             |                                      |
|                    |   |                  |               | CMU*          | 11/3/2009         | NA         |                      | 288                | 38                 | 138               | 0.161             |                                      |
|                    |   |                  |               | CMU*          | 11/10/2009        | NA         |                      | 280                | 49                 | 149               | 0.066             |                                      |
|                    |   |                  |               | CMU*          | 11/17/2009        | NA         |                      | 454                | 59                 | 211               | 0.070             |                                      |
|                    |   |                  |               | CMU*          | 11/24/2009        | NA         |                      | 342                | 107                | 413               | 0.954             |                                      |
|                    |   |                  |               | CMU*          | 12/1/2009         | NA         |                      | 762                | 107                | 413               | 0.954             |                                      |
|                    |   |                  |               | CMU*          | 12/8/2009         | NA         |                      | 248                | 63                 | 188               | 0.150             |                                      |
|                    |   |                  |               | CMU*          | 12/15/2009        | NA         |                      | 278                | 20                 | 79                | 0.040             |                                      |
|                    |   |                  |               | CMU*          | 1/5/2010          | NA         |                      | ----               | ----               | ----              | ----              |                                      |
|                    |   |                  |               | CMU*          | 1/12/2010         | NA         |                      | 452                | 116                | 159               | 0.313             |                                      |
|                    |   |                  |               | CMU*          | 1/19/2010         | NA         |                      | 198                | 52                 | 80                | 0.055             |                                      |
|                    |   |                  |               | CMU*          | 2/3/2010          | NA         |                      | 436                | 150                | 125               | 0.028             |                                      |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |                    |          |           |               |                   |            | PARAMETER<br>(UNITS) | TDS **<br>(mg/L)   | CHLORIDE<br>(mg/L) | SULFATE<br>(mg/L) | BROMIDE<br>(mg/L) | SPECIFIC<br>CONDUCTANCE<br>(umhos/c) |
|--------------------|--------------------|----------|-----------|---------------|-------------------|------------|----------------------|--------------------|--------------------|-------------------|-------------------|--------------------------------------|
| RMI                | SAMPLE<br>LOCATION | LATITUDE | LONGITUDE | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID# | CRITERIA<br>(BASIS)  | 500 Avg<br>750 Max | 250<br>(PWS)       | 250<br>(PWS)      |                   |                                      |
| 15                 | East Dunkard       |          |           | CMU*          | 2/23/2010         | NA         |                      | 730                | 250                | 168               | 0.332             |                                      |
|                    |                    |          |           | CMU*          | 3/9/2010          | NA         |                      | 284                | 30                 | 77                | 0.060             |                                      |
|                    |                    |          |           | CMU*          | 3/23/2010         | NA         |                      | 588                | 30                 | 77                | 0.060             |                                      |
|                    |                    |          |           | CMU*          | 4/6/2010          | NA         |                      | 630                | 69                 | 182               | 0.193             |                                      |
|                    |                    |          |           | CMU*          | 4/20/2010         | NA         |                      | 656                | 77                 | 203               | 0.376             |                                      |
|                    |                    |          |           | CMU*          | 5/4/2010          | NA         |                      | 546                | 47                 | 83                | 0.482             |                                      |
|                    |                    |          |           | CMU*          | 5/18/2010         | NA         |                      | 512                | 79                 | 107               | <0.01             |                                      |
|                    |                    |          |           | CMU*          | 5/25/2010         | NA         |                      | 368                | 65                 | 193               | 0.242             |                                      |
|                    |                    |          |           | CMU*          | 6/1/2010          | NA         |                      | 552                | 79                 | 250               | 0.305             |                                      |
|                    |                    |          |           | CMU*          | 6/8/2010          | NA         |                      | 676                | 79                 | 101               | 0.025             |                                      |
|                    |                    |          |           | CMU*          | 6/15/2010         | NA         |                      | 582                | 102                | 373               | 0.443             |                                      |
|                    |                    |          |           | CMU*          | 6/29/2010         | NA         |                      | 588                | 128                | 365               | 0.523             |                                      |
|                    |                    |          |           | CMU*          | 7/5/2010          | NA         |                      | 638                | 121                | 341               | 0.429             |                                      |
|                    |                    |          |           | CMU*          | 7/13/2010         | NA         |                      | 714                | 81                 | 281               | 0.490             |                                      |
|                    |                    |          |           | CMU*          | 7/22/2010         | NA         |                      | 400                | 58                 | 200               | 0.420             |                                      |
|                    |                    |          |           | CMU*          | 7/27/2010         | NA         |                      | 390                | 33                 | 133               | 0.203             |                                      |
|                    |                    |          |           | CMU*          | 8/5/2010          | NA         |                      | 354                | 110                | 132               | 0.268             |                                      |
|                    |                    |          |           | CMU*          | 8/10/2010         | NA         |                      | 658                | 138                | 499               | 0.745             |                                      |
|                    |                    |          |           | CMU*          | 8/17/2010         | NA         |                      | 472                | 63                 | 233               | 0.302             |                                      |
|                    |                    |          |           | CMU*          | 8/24/2010         | NA         |                      | 492                | 57                 | 206               | 0.450             |                                      |
|                    |                    |          |           | CMU*          | 8/31/2010         | NA         |                      | 478                | 68                 | 251               | 0.518             |                                      |
|                    |                    |          |           | CMU*          | 9/7/2010          | NA         |                      | 546                | 64                 | 226               | 0.271             |                                      |
|                    |                    |          |           | CMU*          | 9/14/2010         | NA         |                      | 580                | 70                 | 242               | 0.284             |                                      |
|                    |                    |          |           | CMU*          | 9/21/2010         | NA         |                      | 838                | 88                 | 453               | 0.373             |                                      |
|                    |                    |          |           | CMU*          | 9/29/2010         | NA         |                      | 1348               | 252                | 1036              | 1.292             |                                      |
|                    |                    |          |           | CMU*          | 10/7/2010         | NA         |                      | 744                | 73                 | 368               | 0.254             |                                      |
|                    |                    |          |           | CMU*          | 10/11/2010        | NA         |                      | 624                | 77                 | 295               | 0.234             |                                      |
|                    |                    |          |           | CMU*          | 10/19/2010        | NA         |                      | 760                | 109                | 502               | 0.294             |                                      |
|                    |                    |          |           | CMU*          | 10/26/2010        | NA         |                      | 710                | 79                 | 415               | 0.262             |                                      |
|                    |                    |          |           | CMU*          | 11/3/2010         | NA         |                      | 290                | 78                 | 240               | 0.218             |                                      |
| CMU*               | 12/14/2010         | NA       |           | 224           | 45                | 97         | 0.136                |                    |                    |                   |                   |                                      |
| CMU*               | 1/19/2011          | NA       |           | 704           | 36                | 154        | 0.182                |                    |                    |                   |                   |                                      |
| CMU*               | 2/16/2011          | NA       |           | 645           | 29                | 95         | 0.129                |                    |                    |                   |                   |                                      |
| CMU*               | 3/16/2011          | NA       |           | 368           | 102               | 255        | 0.172                |                    |                    |                   |                   |                                      |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |   |                  |               |               |                   |            |                      |                    |                    |                   |                   |                                      |
|--------------------|---|------------------|---------------|---------------|-------------------|------------|----------------------|--------------------|--------------------|-------------------|-------------------|--------------------------------------|
|                    |   |                  |               |               |                   |            | PARAMETER<br>(UNITS) | TDS **<br>(mg/L)   | CHLORIDE<br>(mg/L) | SULFATE<br>(mg/L) | BROMIDE<br>(mg/L) | SPECIFIC<br>CONDUCTANCE<br>(umhos/c) |
| RMI                | SAMPLE<br>LOCATION                                    | LATITUDE         | LONGITUDE     | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID# | CRITERIA<br>(BASIS)  | 500 Avg<br>750 Max | 250<br>(PWS)       | 250<br>(PWS)      |                   |                                      |
| 13                 | Dunkard<br>Creek DC5                                  |                  |               | 7485-701      | 10/21/2008        | 38485      |                      | 1182               | 153                | 570               |                   |                                      |
| 10.9               | Dunkard<br>Creek @ end<br>of Bald Hill<br>Church Road | 39° 45'<br>20.0" | 80° 00' 43.4" | 1552-100      | 9/10/2009         | 06686      |                      | 1008               | 152                | 406               | 0.9               | 1575                                 |
|                    |   |                  |               | 1552-135      | 9/15/2009         | 06811      |                      | 1186               | 192                | 473               | 1.2               | 1870                                 |
|                    |   |                  |               | 1552-183      | 9/21/2009         | 33379      |                      | 1162               | 189                | 447               | 1.3               | 1774                                 |
|                    |   |                  |               | 1552-218      | 9/29/2009         | 34467      |                      | 1316               | 196                | 556               | 1.3               | 2022                                 |
|                    |   |                  |               | 1552-246      | 10/6/2009         | 35243      |                      | 1504               | 240                | 637               | 1.7               | 2340                                 |
|                    |   |                  |               | 1552-280      | 10/21/2009        | 37164      |                      | 472                | 45                 | 172               | 0.3               | 750                                  |
|                    |   |                  |               | 1552-305      | 11/4/2009         | 39193      |                      | 344                | 29                 | 115               |                   | 583                                  |
|                    |   |                  |               | 1552-326      | 11/18/2009        | 40453      |                      | 444                | 36                 | 151               | 0.2               | 702                                  |
|                    |   |                  |               | 1552-341      | 12/2/2009         | 41518      |                      | 700                | 70                 | 259               | 0.5               | 1057                                 |
|                    |   |                  |               | 1552-358      | 12/16/2009        | 43393      |                      | 250                | 19                 | 68                |                   | 401                                  |
|                    |   |                  |               | 1552-375      | 1/6/2010          | 00348      |                      | 302                | 29                 | 92                |                   | 482                                  |
|                    |   |                  |               | 0552-931      | 8/11/2010         | 25836      |                      | 672                | 43                 | 136               | 0.2               |                                      |
|                    |   |                  |               | 0552-945      | 8/25/2010         | 27390      |                      | 522                | 55                 | 187               | 0.3               | 820                                  |
|                    |   |                  |               | 0552-958      | 9/8/2010          | 28700      |                      | 548                | 48                 | 188               | 0.2               | 844                                  |
|                    |   |                  |               | 0552-972      | 9/22/2010         | 29726      |                      | 710                | 65                 | 292               | 0.4               | 1115                                 |
|                    |   |                  |               | 0552-986      | 10/6/2010         | 31136      |                      | 824                | 82                 | 356               | 0.6               | 1246                                 |
| 0552-001           | 10/20/2010  | 32716            |               | 666           | 61                | 274        | 0.3                  | 1047               |                    |                   |                   |                                      |
| 0552-030           | 7/19/2012   | 22234            |               | 496           | 34                | 176        | 0.256                | 550                |                    |                   |                   |                                      |
| 10.8               | SHANNOPIN<br>MINE<br>DISCHARGE                        | 39° 45' 20.3"    | 80° 00' 35.0" | 1552-141      | 9/15/2009         | 32737      |                      | 12782              | 252                | 8285              | 1.6               | 13660                                |
|                    |   |                  |               | 1552-187      | 9/21/2009         | 34468      |                      | 12734              | 258                | 7878              | 1.9               | 13460                                |
|                    |   |                  |               | 1552-220      | 9/29/2009         | 34468      |                      | 13024              | 270                | 8006              | 1.8               | 14020                                |
|                    |   |                  |               | 1552-248      | 10/6/2009         | 35244      |                      | 11098              | 157                | 6914              | 1.2               | 11800                                |
|                    |   |                  |               | 1552-282      | 10/21/2009        | 37165      |                      | 12194              | 318                | 7533              | 2                 | 13320                                |
|                    |   |                  |               | 1552-306      | 11/4/2009         | 39194      |                      | 12722              | 263                | 7969              | 1.8               | 13810                                |
|                    |   |                  |               | 1552-327      | 11/18/2009        | 40447      |                      | 10532              | 297                | 6507              | 2.1               | 12410                                |
|                    |   |                  |               | 1552-342      | 12/2/2009         | 41543      |                      | 13362              | 149                | 6711              | 1.1               | 11660                                |
|                    |   |                  |               | 1552-376      | 1/6/2010          | 00353      |                      | 636                | 27                 | 321               |                   | 894                                  |
|                    |   |                  |               | 1552-388      | 1/20/2010         | 01541      |                      | 11468              | 313                | 7396              | 2.2               | 13700                                |
|                    |   |                  |               | 7485-704      | 10/21/2008        | 38488      |                      | 13290              | 343                | 8865              |                   |                                      |
|                    |   |                  |               | 0552-932      | 8/11/2010         | 25861      |                      | 11040              | 243                | 7419              | 8.3               |                                      |
|                    |   |                  |               | 0552-946      | 8/25/2010         | 27387      |                      | 10792              | 235                | 7010              | 1.6               | 11500                                |
|                    |   |                  |               | 0552-959      | 9/8/2010          | 28651      |                      | 10634              | 243                | 6989              | 1.6               | 10910                                |
|                    |   |                  |               | 0552-973      | 9/22/2010         | 29656      |                      | 10068              | 202                | 6676              | 1.3               | 10750                                |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.



| SAMPLE INFORMATION |  |                  |                   |               |                   |            | PARAMETER<br>(UNITS) | TDS **<br>(mg/L)   | CHLORIDE<br>(mg/L) | SULFATE<br>(mg/L) | BROMIDE<br>(mg/L) | SPECIFIC<br>CONDUCTANCE<br>(umhos/c) |
|--------------------|--|------------------|-------------------|---------------|-------------------|------------|----------------------|--------------------|--------------------|-------------------|-------------------|--------------------------------------|
| RMI                | SAMPLE<br>LOCATION                     | LATITUDE         | LONGITUDE         | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID# | CRITERIA<br>(BASIS)  | 500 Avg<br>750 Max | 250<br>(PWS)       | 250<br>(PWS)      |                   |                                      |
|                    |  |                  |                   | 0552-987      | 10/6/2010         | 31132      |                      | 12358              | 200                | 8128              | 1.4               | 12308                                |
|                    |  |                  |                   | 0552-002      | 10/20/2010        | 32760      |                      | 12264              | 211                | 7966              | 1.4               | 12100                                |
|                    |  |                  |                   | 0552-031      | 7/19/2012         | 22235      |                      | 6784               | 563                | 3611              | 2.137             | 8130                                 |
| 9.8                | Dunkard<br>Creek DC5B                  |                  |                   | 7485-702      | 10/21/2008        | 38486      |                      | 1038               | 128                | 498               |                   |                                      |
| 9.5                | Dunkard<br>Creek DC6                   |                  |                   | 7485-703      | 10/21/2008        | 38487      |                      | 9552               | 257                | 6171              |                   |                                      |
| 6.7                | Dunkard<br>Creek @<br>LR2008<br>Bridge | N 39° 44'<br>52" | W 079° 58'<br>46" | 1552-192      | 9/21/2009         | 33347      |                      | 9410               | 190                | 5832              | 1.4               | 10500                                |
|                    |  |                  |                   | 1552-222      | 9/29/2009         | 34469      |                      | 5470               | 202                | 3151              | 1.4               | 6510                                 |
|                    |  |                  |                   | 1552-250      | 10/6/2009         | 35242      |                      | 6828               | 222                | 4185              | 1.6               | 8010                                 |
|                    |  |                  |                   | 1552-284      | 10/21/2009        | 37162      |                      | 3640               | 129                | 2156              | 0.8               | 4670                                 |
|                    |  |                  |                   | 1552-307      | 11/4/2009         | 39195      |                      | 3344               | 96                 | 2010              | 0.6               | 4270                                 |
|                    |  |                  |                   | 1552-328      | 11/18/2009        | 40448      |                      | 5728               | 134                | 3511              | 1                 | 6760                                 |
|                    |  |                  |                   | 1552-343      | 12/2/2009         | 41544      |                      | 2860               | 105                | 1650              | 0.6               | 3670                                 |
|                    |  |                  |                   | 1552-360      | 12/16/2009        | 43388      |                      | 288                | 21                 | 83                |                   | 438                                  |
|                    |  |                  |                   | 1552-377      | 1/6/2010          | 00354      |                      | 338                | 32                 | 115               |                   | 532                                  |
|                    |  |                  |                   | 0552-034      | 7/19/2012         | 22691      |                      | 236                | 9                  | 118               | 0.041             | 5950                                 |
| 4.6                | USGS<br>Shannopin<br>Gauge             | 39° 45' 33"      | 79° 58' 15"       | NA            | 9/10/2009         | Gage Data  |                      |                    |                    |                   |                   | broken                               |
|                    |  |                  |                   | NA            | 9/15/2009         | Gage Data  |                      |                    |                    |                   |                   | broken                               |
|                    |  |                  |                   | NA            | 9/17/2009         | Gage Data  |                      |                    |                    |                   |                   | broken                               |
|                    |  |                  |                   | NA            | 9/21/2009         | Gage Data  |                      |                    |                    |                   |                   | broken                               |
|                    |  |                  |                   | NA            | 9/29/2009         | Gage Data  |                      |                    |                    |                   |                   | 5140                                 |
|                    |  |                  |                   | NA            | 10/6/2009         | Gage Data  |                      |                    |                    |                   |                   | 8170                                 |
|                    |  |                  |                   | NA            | 10/21/2009        | Gage Data  |                      |                    |                    |                   |                   | 3990                                 |
|                    |  |                  |                   | NA            | 11/4/2009         | Gage Data  |                      |                    |                    |                   |                   | 4370                                 |
|                    |  |                  |                   | NA            | 11/18/2009        | Gage Data  |                      |                    |                    |                   |                   | 6100                                 |
|                    |  |                  |                   | NA            | 12/2/2009         | Gage Data  |                      |                    |                    |                   |                   | 6440                                 |
|                    |  |                  |                   | NA            | 12/16/2009        | Gage Data  |                      |                    |                    |                   |                   | 1100                                 |
|                    |  |                  |                   | NA            | 1/6/2010          | Gage Data  |                      |                    |                    |                   |                   | 499                                  |
|                    |  |                  |                   | 0552-933      | 8/11/2010         | 35862      |                      | 2300               | 78                 | 1479              | 0.5               |                                      |
|                    |  |                  |                   | 0552-947      | 8/25/2010         | 27388      |                      | 2124               | 78                 | 1306              | 0.5               | 2900                                 |
|                    |  |                  |                   | 0552-960      | 9/8/2010          | 28652      |                      | 3884               | 114                | 2540              | 0.7               | 4810                                 |
| 0552-974           | 9/22/2010                              | 29657            |                   | 3008          | 113               | 1736       | 0.7                  | 3760               |                    |                   |                   |                                      |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.



| SAMPLE INFORMATION |  |                   |                    |               |                   |            |                      |                    |                    |                   |                   |                                      |
|--------------------|--|-------------------|--------------------|---------------|-------------------|------------|----------------------|--------------------|--------------------|-------------------|-------------------|--------------------------------------|
|                    |  |                   |                    |               |                   |            | PARAMETER<br>(UNITS) | TDS **<br>(mg/L)   | CHLORIDE<br>(mg/L) | SULFATE<br>(mg/L) | BROMIDE<br>(mg/L) | SPECIFIC<br>CONDUCTANCE<br>(umhos/c) |
| RMI                | SAMPLE<br>LOCATION                                       | LATITUDE          | LONGITUDE          | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID# | CRITERIA<br>(BASIS)  | 500 Avg<br>750 Max | 250<br>(PWS)       | 250<br>(PWS)      |                   |                                      |
|                    |  |                   |                    | 0552-988      | 10/6/2010         | 31133      |                      | 1942               | 88                 | 1129              | 0.6               | 2620                                 |
|                    |  |                   |                    | 0552-003      | 10/20/2010        | 32761      |                      | 2588               | 45                 | 1749              | 0.2               | 3110                                 |
| 4                  | Dunkard<br>Creek DC7                                     |                   |                    | 7485-705      | 10/21/2008        | 38489      |                      | 9238               | 240                | 6398              |                   |                                      |
| 3.46               | Algae<br>Sampling<br>Point                               | N 39°45'<br>47.3" | W 079°56'<br>54.8" | 0577-012      | 11/18/2009        | 40484      |                      | 776                | 22                 | 450               | <0.2              | 3810                                 |
| 2.95               | Dunkard<br>Creek DC8A                                    |                   |                    | 7485-706      | 10/21/2008        | 38490      |                      | 8752               | 222                | 5878              |                   |                                      |
| 1                  | Dunkard<br>Creek DC8A                                    |                   |                    | 7485-707      | 10/21/2008        | 38491      |                      | 560                | 18                 | 319               |                   |                                      |
| 0.1                | RMI 0.5<br>Mouth of<br>Dunkard<br>Creek Under<br>88 Brdg | N 39° 45'<br>51"  | W 079° 56'<br>17"  | 1552-196      | 9/21/2009         | 33339      |                      | 400                | 12                 | 185               |                   | 519                                  |
|                    |  |                   |                    | 1552-224      | 9/29/2009         | 34476      |                      | 568                | 17                 | 309               |                   | 826                                  |
|                    |  |                   |                    | 1552-252      | 10/6/2009         | 35241      |                      | 382                | 14                 | 211               |                   | 641                                  |
|                    |  |                   |                    | 1552-286      | 10/21/2009        | 37163      |                      | 428                | 16                 | 234               |                   | 642                                  |
|                    |  |                   |                    | 1552-308      | 11/4/2009         | 39235      |                      | 142                | 6                  | 64                |                   | 236                                  |
|                    |  |                   |                    | 1552-329      | 11/18/2009        | 40520      |                      | 446                | 13                 | 252               |                   | 655                                  |
|                    |  |                   |                    | 1552-344      | 12/2/2009         | 41547      |                      | 230                | 7                  | 123               |                   | 379                                  |
|                    |  |                   |                    | 1552-361      | 12/16/2009        | 43389      |                      | 278                | 18                 | 88                |                   | 431                                  |
|                    |  |                   |                    | 0593-020      | 10/15/2008        | 37432      |                      | 594                | 19.3               | NA                |                   | 1434                                 |
|                    |  |                   |                    | 0593-029      | 10/22/2008        | 39040      |                      | 1866               | 49.6               | 1135              |                   | 2681                                 |
|                    |  |                   |                    | 0552-879      | 11/17/2008        | 42551      |                      |                    |                    |                   |                   | 1500                                 |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |   |                  |               |               |                   |                    |               |               |                             |                                |                              |                    |
|--------------------|---|------------------|---------------|---------------|-------------------|--------------------|---------------|---------------|-----------------------------|--------------------------------|------------------------------|--------------------|
|                    |   |                  |               |               |                   |                    | FLOW<br>(cfs) | FLOW<br>(MGD) | AVG<br>Velocity<br>(ft/sec) | AVG<br>VELOCITY<br>(miles/day) | TEMPERATURE<br>FIELD<br>(°C) | pH FIELD<br>(s.u.) |
| RMI                | SAMPLE<br>LOCATION                                | LATITUDE         | LONGITUDE     | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID#         |               |               |                             |                                |                              |                    |
| 1.1                | PA Fork<br>Dunkard<br>Creek                       | 39° 43'<br>44.6" | 80° 16' 42.8" | 1552-075      | 9/10/2009         | 06681              |               |               |                             |                                | 18.1                         | 7.9                |
|                    |   |                  |               | 1552-111      | 9/15/2009         | 06807              |               |               |                             |                                | 19.2                         | 7.6                |
|                    |   |                  |               | 1552-159      | 9/21/2009         | 33355              | 0.32          | 0.21          | 0.01                        | 0.18                           | 18.7                         | 8.1                |
|                    |   |                  |               | 1552-200      | 9/29/2009         | 34473              | 1.9           | 1.2           | 0.05                        | 0.9                            | 14.4                         | 7.9                |
|                    |   |                  |               | 1552-228      | 10/6/2009         | 35248              | 1.4           | 0.9           | 0.04                        | 0.66                           | 11                           | 7.4                |
|                    |   |                  |               | 1552-260      | 10/21/2009        | 37169              | 6.2           | 4             | 0.15                        | 2.5                            | 9.9                          |                    |
|                    |   |                  |               | 1552-296      | 11/4/2009         | 39186              | 7.45          | 4.8           | 0.162                       | 2.65                           | 7.6                          | 8.1                |
|                    |   |                  |               | 1552-317      | 11/18/2009        | 40449              | 2.85          | 1.8           | 0.237                       | 3.88                           | 10.5                         | 7.8                |
|                    |   |                  |               | 1552-332      | 12/2/2009         | 41519              | 6.34          | 4.1           | 0.144                       | 2.36                           | 7.4                          | 7.9                |
|                    |   |                  |               | 1552-349      | 12/16/2009        | 43385              | 25.6          | 16.5          | 0.438                       | 7.16                           | 5.1                          | 7.5                |
|                    |   |                  |               | 1552-366      | 1/6/2010          | 00349              |               |               |                             |                                | 2.8                          | 7.3                |
|                    |   |                  |               | 1552-383      | 1/20/2010         | 01538              | 97.88         | 63.3          | 1.605                       | 26.25                          | 6.1                          | 7.9                |
|                    |   |                  |               | 0552-922      | 8/11/2010         | 25779              | 0.83          | 0.536         | 0.023                       |                                | 24.1                         | 7.5                |
|                    |   |                  |               | 0552-936      | 8/25/2010         | 27336              | 0.83          | 0.533         | 0.049                       |                                | 21                           | 7.6                |
|                    |   |                  |               | 0552-949      | 9/8/2010          | 28689              | 0.5           | 0.3           | 0.029                       |                                | 18.9                         | 7                  |
|                    |   |                  |               | 0552-963      | 9/22/2010         | 29661              | 0.22          | 0.13          | 0.012                       |                                | 17.2                         | 7.4                |
| 0552-977           | 10/6/2010   | 31139            | 2.83          | 1.83          | 0.116             |                    | 10.9          | 7.5           |                             |                                |                              |                    |
| 0552-991           | 10/20/2010  | 32724            | 0.71          | 0.458         | 0.215             |                    | 8.7           | 7.9           |                             |                                |                              |                    |
| 0.6                | WV Fork<br>Dunkard<br>Creek 50' US<br>Outfall 003 | 39° 42' 48"      | 80° 17' 17"   | 1552          | 9/15/2009         | Field Data<br>Only |               |               |                             |                                |                              |                    |
|                    |   |                  |               |               | 9/21/2009         |                    |               |               |                             |                                | 20                           |                    |
|                    |   |                  |               | 1552-202      | 9/29/2009         | 34474              | 5             | 3.2           | 0.3                         | 5                              | 14.1                         | 8.2                |
|                    |   |                  |               | 1552-230      | 10/6/2009         | 35249,             |               |               |                             |                                | 12.7                         | 7.5                |
|                    |   |                  |               | 1552-264      | 10/21/2009        | 37173              |               |               |                             |                                | 9.7                          |                    |
|                    |   |                  |               | 1552-297      | 11/4/2009         | 39187              |               |               |                             |                                | 7.6                          | 8.4                |
|                    |   |                  |               | 1552-318      | 11/18/2009        | 40450              |               |               |                             |                                | 10.1                         | 7.9                |
|                    |   |                  |               | 1552-333      | 12/2/2009         | 41520              |               |               |                             |                                | 6.0                          | 7.9                |
|                    |   |                  |               | 1552-350      | 12/16/2009        | 43387              |               |               |                             |                                | 3.5                          | 7.3                |
|                    |   |                  |               | 1552-367      | 1/6/2010          | 00350              |               |               |                             |                                | 1.2                          | 7.0                |
|                    |   |                  |               | 1552-384      | 1/20/2010         | 01539              |               |               |                             |                                | 6.0                          | 7.5                |
|                    |   |                  |               | 0552-923      | 8/11/2010         | 25793              |               |               |                             |                                |                              |                    |
|                    |   |                  |               | 0552-937      | 8/25/2010         | 27337              | 14.3          | 1.24          | na weir                     |                                | 22.3                         | 8                  |
|                    |   |                  |               | 0552-950      | 9/8/2010          | 28690              | 0.06          | 0.039         |                             |                                | 20.4                         | 7.6                |
| 0552-964           | 9/22/2010   | 29662            | 0.47          | 0.3           |                   |                    | 19.2          | 7.8           |                             |                                |                              |                    |
| 0552-978           | 10/6/2010   | 31140            | 1.3           | 0.84          |                   |                    | 11.6          | 7.6           |                             |                                |                              |                    |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |   |                  |               |               |                   |                    |               |               |                             |                                |                              |                    |
|--------------------|---|------------------|---------------|---------------|-------------------|--------------------|---------------|---------------|-----------------------------|--------------------------------|------------------------------|--------------------|
|                    |   |                  |               |               |                   |                    | FLOW<br>(cfs) | FLOW<br>(MGD) | AVG<br>Velocity<br>(ft/sec) | AVG<br>VELOCITY<br>(miles/day) | TEMPERATURE<br>FIELD<br>(°C) | pH FIELD<br>(s.u.) |
| RMI                | SAMPLE<br>LOCATION  | LATITUDE         | LONGITUDE     | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID#         |               |               |                             |                                |                              |                    |
|                    |   |                  |               | 0552-992      | 10/20/2010        | 32725              | 0.31          | 0.84          |                             |                                | 9.9                          | 8.2                |
| 0.5                | Blacksville #2<br>discharge<br>from Beaver<br>Pond or Pond<br>Itself Outfall<br>003                       | 39° 42' 52"      | 80° 17' 15"   | 0552-925      | 8/11/2010         | 25794              | NA            | NA            | NA                          |                                | 29.8                         | 9.1                |
|                    |   |                  |               | 0552-939      | 8/25/2010         | ND                 | ND            | ND            | ND                          |                                | No Discharge                 | ND                 |
|                    |   |                  |               | 0552-952      | 9/8/2010          | ND                 | ND            | ND            | ND                          |                                | No Discharge                 | ND                 |
|                    |   |                  |               | 0552-966      | 9/22/2010         | ND                 | ND            | ND            | ND                          |                                | No Discharge                 | ND                 |
|                    |   |                  |               | 0552-979      | 10/6/2010         | ND                 | ND            | ND            | ND                          |                                | No Discharge                 | ND                 |
|                    |   |                  |               | 0552-994      | 10/20/2010        | ND                 | ND            | ND            | ND                          |                                | No Discharge                 | ND                 |
| 0.4                | Blacksville #2<br>Mine Outfall<br>005<br>Discharge to<br>WV Fork<br>2000' US jct<br>PA Fork @<br>Shamrock | 39° 43'<br>07.6" | 80° 16' 38.8" | 1552          | 9/15/2009         | Field Data<br>Only |               |               |                             |                                |                              |                    |
|                    |   |                  |               | 1552-148      | 9/17/2009         | 33133              |               | 0.2500        |                             |                                | 21.9                         |                    |
|                    |   |                  |               | 1552-167      | 9/21/2009         | 33363              |               | 0.0250        |                             |                                | 22.2                         | 7.8                |
|                    |   |                  |               | 1552-204      | 9/29/2009         | 34475              |               | 0.0216        |                             |                                | 13.8                         | 7.9                |
|                    |   |                  |               | 1552-232      | 10/6/2009         | 35250              |               | 0.0050        |                             |                                | 13.2                         | 6.9                |
|                    |   |                  |               | 1552-266      | 10/21/2009        | 37174              |               | 0.0173        |                             |                                | 10.6                         |                    |
|                    |   |                  |               | 1552-298      | 11/4/2009         | 39188              |               | 0.017         |                             |                                | 8.1                          | 7.6                |
|                    |   |                  |               | 1552-319      | 11/18/2009        | 40504              |               | 0.006         |                             |                                | 9.8                          | 7.3                |
|                    |   |                  |               | 1552-334      | 12/2/2009         | 41545              |               | 0.006         |                             |                                | 6.6                          | 7.4                |
|                    |   |                  |               | 1552-351      | 12/16/2009        | 43377              |               | 0.052         |                             |                                | 2.3                          | 7.2                |
|                    |   |                  |               | 1552-368      | 1/6/2010          | 00351              |               | 0.032         |                             |                                | 1.9                          | 7.1                |
|                    |   |                  |               | 1552-385      | 1/20/2010         | 01515              |               | 0.13          |                             |                                | 5.2                          | 7.3                |
|                    |   |                  |               | 0552-938      | 8/25/2010         | ND                 | ND            | ND            | ND                          |                                | No Discharge                 | ND                 |
|                    |   |                  |               | 0552-950      | 9/8/2010          | ND                 | ND            | ND            | ND                          |                                | No Discharge                 | ND                 |
|                    |   |                  |               | 0552-965      | 9/22/2010         | ND                 | ND            | ND            | ND                          |                                | No Discharge                 | ND                 |
|                    |   |                  |               | 0552-980      | 10/6/2010         | ND                 | ND            | ND            | ND                          |                                | No Discharge                 | ND                 |
| 0552-993           | 10/20/2010  | ND               | ND            | ND            | ND                |                    | No Discharge  | ND            |                             |                                |                              |                    |
|                    |   |                  |               | 1552-090      | 9/10/2009         | 06684              |               |               |                             | 22.6                           | 8.5                          |                    |
|                    |   |                  |               | 1552-117      | 9/15/2009         | 06808              |               |               |                             | 20.6                           | 8.1                          |                    |
|                    |   |                  |               | 1552-151      | 9/17/2009         | 33136              |               |               |                             |                                |                              |                    |
|                    |   |                  |               | 1552-163      | 9/21/2009         | 33359              | 0.61          | 0.39          | 0.08                        | 1.3                            | 20.9                         | 8.3                |
|                    |   |                  |               | 1552-206      | 9/29/2009         | 34478              | 4.5           | 2.9           | 0.41                        | 6.7                            | 14.2                         | 8.3                |
|                    |   |                  |               | 1552-234      | 10/6/2009         | 35253              | 1.62          | 1             | 0.18                        | 2.9                            | 14.4                         | 7.4                |
|                    |   |                  |               | 1552-268      | 10/21/2009        | 37185              | 6.8           | 4.4           | 0.52                        | 8.5                            | 10.7                         |                    |
|                    |   |                  |               | 1552-299      | 11/4/2009         | 39189              | 10.87         | 7.0           | 0.604                       | 9.88                           | 7.4                          | 8.4                |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |                             |                    |                     |               |                   |            |               |               |                             |                                |                              |                    |
|--------------------|-----------------------------|--------------------|---------------------|---------------|-------------------|------------|---------------|---------------|-----------------------------|--------------------------------|------------------------------|--------------------|
|                    |                             |                    |                     |               |                   |            | FLOW<br>(cfs) | FLOW<br>(MGD) | AVG<br>Velocity<br>(ft/sec) | AVG<br>VELOCITY<br>(miles/day) | TEMPERATURE<br>FIELD<br>(°C) | pH FIELD<br>(s.u.) |
| RMI                | SAMPLE<br>LOCATION          | LATITUDE           | LONGITUDE           | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID# |               |               |                             |                                |                              |                    |
| 0.2                | WV Fork<br>Dunkard<br>Creek | 39° 43'<br>18.3"   | 80° 16' 25.1"       | 1552-320      | 11/18/2009        | 40505      | 3.42          | 2.2           | 0.611                       | 9.99                           | 10.2                         | 7.8                |
|                    |                             |                    |                     | 1552-335      | 12/2/2009         | 41546      | 5.81          | 3.8           | 0.528                       | 8.64                           | 5.3                          | 7.8                |
|                    |                             |                    |                     | 1552-352      | 12/16/2009        | 43378      | 24.18         | 15.6          | 0.863                       | 14.13                          | 2.6                          | 7.2                |
|                    |                             |                    |                     | 1552-369      | 1/6/2010          | 00352      |               |               |                             |                                | 0.4                          | 7.1                |
|                    |                             |                    |                     | 1552-386      | 1/20/2010         | 01540      | 79.15         | 51.2          | 1.779                       | 29.1                           | 5.1                          | 7.2                |
|                    |                             |                    |                     | 0552-926      | 8/11/2010         | 25803      | 0.3           | 0.201         | 0.1                         |                                | 26.7                         | 7.8                |
|                    |                             |                    |                     | 0552-940      | 8/25/2010         | 27366      | 0.62          | 0.402         | 0.194                       |                                | 22.8                         | 8.5                |
|                    |                             |                    |                     | 0552-953      | 9/8/2010          | 28664      | 0.04          | 0.025         | 0.026                       |                                | 19.2                         | 7.6                |
|                    |                             |                    |                     | 0552-967      | 9/22/2010         | 29663      | 0.14          | 0.92          | 0.057                       |                                | 19.6                         | 7.8                |
|                    |                             |                    |                     | 0552-981      | 10/6/2010         | 31137      | 2.16          | 1.4           | 0.36                        |                                | 11.5                         | 7.9                |
|                    |                             |                    |                     | 0552-995      | 10/20/2010        | 32726      | 8.2           | 0.59          | 0.38                        | 0.163                          | 9.1                          | 8.2                |
| 41                 | Dunkard<br>Creek @<br>Brave | 39° 43'<br>39.0"   | 080° 15'<br>21.9"   | 1552-085      | 9/10/2009         | 06683      |               |               |                             |                                | 21.9                         | 8.3                |
|                    |                             |                    |                     | 1552-123      | 9/15/2009         | 06809      |               |               |                             |                                | 23.5                         | 8.4                |
|                    |                             |                    |                     | 1552-171      | 9/21/2009         | 33367      |               |               |                             |                                |                              | 8.3                |
|                    |                             |                    |                     | 1552-208      | 9/29/2009         | 34479      |               |               |                             |                                | 15.4                         | 8.4                |
|                    |                             |                    |                     | 1552-236      | 10/6/2009         | 35254      |               |               |                             |                                | 15.9                         | 7.6                |
|                    |                             |                    |                     | 1552-270      | 10/21/2009        | 37184      |               |               |                             |                                | 11.5                         |                    |
|                    |                             |                    |                     | 1552-300      | 11/4/2009         | 39190      |               |               |                             |                                | 7.9                          | 8.1                |
|                    |                             |                    |                     | 1552-321      | 11/18/2009        | 40444      |               |               |                             |                                | 10.8                         | 7.7                |
|                    |                             |                    |                     | 1552-336      | 12/2/2009         | 41539      |               |               |                             |                                | 5.7                          | 7.8                |
|                    |                             |                    |                     | 1552-353      | 12/16/2009        | 43373      |               |               |                             |                                | 2.5                          | 7                  |
|                    |                             |                    |                     | 1552-370      | 1/6/2010          | 00343      |               |               |                             |                                | 0.3                          | 7.2                |
|                    |                             |                    |                     | 1552-387      | 1/20/2010         | 01516      |               |               |                             |                                | 4.4                          | 7.1                |
|                    |                             |                    |                     | 0552-927      | 8/11/2010         | 25804      |               |               |                             |                                | 5.1                          | 7.2                |
|                    |                             |                    |                     | 0552-941      | 8/25/2010         | 27367      |               |               |                             |                                | 24                           | 7.9                |
|                    |                             |                    |                     | 0552-954      | 9/8/2010          | 28665      |               |               |                             |                                | 22.1                         | 8.4                |
| 0552-968           | 9/22/2010                   | 29664              |                     |               |                   |            | 22.2          | 8.5           |                             |                                |                              |                    |
| 0552-982           | 10/6/2010                   | 31138              |                     |               |                   |            | 12.7          | 7.7           |                             |                                |                              |                    |
| 0552-996           | 10/20/2010                  | 32727              |                     |               |                   |            | 12.6          | 8.1           |                             |                                |                              |                    |
| 39.2               | Miracle Run<br>@ Mouth      | N 39° 43'<br>05.0" | W 080° 14'<br>28.8" | 1552-142      | 9/17/2009         | 33127      |               |               |                             |                                | 20.6                         |                    |
|                    |                             |                    |                     | 1552-175      | 9/21/2009         | 33371      | 0.98          | 0.63          | 0.1                         | 1.6                            | 20.8                         | 7.8                |
|                    |                             |                    |                     | 1552-208      | 9/29/2009         | 34479      | 4.3           | 2.8           | 0.3                         | 4.9                            | 14.3                         | 7.9                |
|                    |                             |                    |                     | 1552-238      | 10/6/2009         | 35251      | 1             | 0.68          | 0.3                         | 4.8                            | 15                           | 7.4                |
|                    |                             |                    |                     | 1552-272      | 10/21/2009        | 37172      | 7.6           | 4.9           | 1.4                         | 23                             | 12                           |                    |
|                    |                             |                    |                     | 1552-301      | 11/4/2009         | 39191      | 6.4           | 4.1           | 0.441                       | 7.22                           | 7.7                          | 8                  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |  |                  |               |               |                   |                    |               |               |                             |                                |                              |                    |
|--------------------|--|------------------|---------------|---------------|-------------------|--------------------|---------------|---------------|-----------------------------|--------------------------------|------------------------------|--------------------|
|                    |  |                  |               |               |                   |                    | FLOW<br>(cfs) | FLOW<br>(MGD) | AVG<br>Velocity<br>(ft/sec) | AVG<br>VELOCITY<br>(miles/day) | TEMPERATURE<br>FIELD<br>(°C) | pH FIELD<br>(s.u.) |
| RMI                | SAMPLE<br>LOCATION                                     | LATITUDE         | LONGITUDE     | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID#         |               |               |                             |                                |                              |                    |
|                    |  |                  |               | 1552-322      | 11/18/2009        | 40445              | 4.54          | 2.9           | 1.621                       | 26.53                          | 11.3                         | 7.7                |
|                    |  |                  |               | 1552-337      | 12/2/2009         | 41540              | 7.3           | 4.7           | 1.973                       | 32.23                          | 4.4                          | 7.6                |
|                    |  |                  |               | 1552-354      | 12/16/2009        | 43374              | 16.75         | 10.8          | 2.094                       | 34.25                          | 2.8                          | 7                  |
|                    |  |                  |               | 1552-371      | 1/6/2010          | 00344              |               |               |                             |                                | 0.4                          | 7.3                |
| 37.5               | Dunkard<br>Creek @<br>Blacksville                      | 39° 43'<br>15.7" | 80° 13' 20.6" | 1552          | 9/17/2009         | Field Data<br>Only |               |               |                             |                                | 21.4                         | 8.2                |
|                    |  |                  |               | 1552          | 9/21/2009         | Field Data<br>Only |               |               |                             |                                | 21.3                         | 8.7                |
|                    |  |                  |               | 1552-214      | 9/29/2009         | 34471              | 13.8          | 8.9           | 1.1                         | 17.4                           | 14.8                         | 8.1                |
|                    |  |                  |               | 1552-240      | 10/6/2009         | 35252              | 5.8           | 3.7           | 0.66                        | 10.8                           | 15                           | 7.7                |
|                    |  |                  |               | 1552-274      | 10/21/2009        | 37171              | 18.7          | 12.1          | 1.6                         | 25                             | 10.6                         |                    |
|                    |  |                  |               | 1552-302      | 11/4/2009         | 39207              | 24.58         | 15.9          | 1.489                       | 24.37                          | 7.7                          | 8.3                |
|                    |  |                  |               | 1552-323      | 11/18/2009        | 40446              | 11.48         | 7.4           | 0.897                       | 14.67                          | 11.5                         | 7.7                |
|                    |  |                  |               | 1552-338      | 12/2/2009         | 41541              | 22.05         | 14.3          | 1.336                       | 21.86                          | 5                            | 7.7                |
|                    |  |                  |               | 1552-355      | 12/16/2009        | 43375              | 86.23         | 55.7          | 1.658                       | 27.13                          | 3                            | 7.3                |
|                    |  |                  |               | 1552-372      | 1/6/2010          | 00345              |               |               |                             |                                | 0.4                          | 7.3                |
|                    |  |                  |               | 0552-928      | 8/11/2010         | 25782              | 3.72          | 2.4           | 0.451                       |                                | 27.2                         | 8                  |
|                    |  |                  |               | 0552-942      | 8/25/2010         | 27380              | 3.03          | 1.957         | 0.327                       |                                | 22.9                         | 8.4                |
|                    |  |                  |               | 0552-955      | 9/8/2010          | 28666              | 0.25          | 0.16          | 0.08                        |                                | 21                           | 8                  |
|                    |  |                  |               | 0552-969      | 9/22/2010         | 29696              | 1             | 0.64          | 0.068                       |                                | 20.2                         | 8                  |
| 0552-983           | 10/6/2010  | 31161            | 15.89         | 10.3          | 1.35              |                    | 11.7          | 7.7           |                             |                                |                              |                    |
| 0552-997           | 10/20/2010   | 32721            | 2.83          | 1.823         | 0.441             |                    | 10            | 7.8           |                             |                                |                              |                    |
| 30.3               | Dunkard<br>Creek @<br>Route 7<br>bridge in<br>Pentress | 39° 42' 43"      | 80° 9' 43"    | 1552-214      | 9/29/2009         | 34471              | 18.3          | 11.8          | 0.43                        | 7                              | 15.5                         | 8.3                |
|                    |  |                  |               | 1552-242      | 10/6/2009         | 35245              | 8.8           | 5.7           | 0.34                        | 5.6                            | 16.4                         | 8.5                |
|                    |  |                  |               | 1552-276      | 10/21/2009        | 37148              | 28.8          | 18.6          | 0.67                        | 10.9                           | 12.8                         |                    |
|                    |  |                  |               | 1552-303      | 11/4/2009         | 39208              | 33.13         | 21.4          | 0.631                       | 10.32                          | 8.6                          | 8.2                |
|                    |  |                  |               | 1552-324      | 11/18/2009        | 40451              | 12.85         | 8.3           | 0.378                       | 6.18                           | 11.5                         | 8                  |
|                    |  |                  |               | 1552-339      | 12/2/2009         | 41516              | 41.71         | 27            | 1.127                       | 18.44                          | 5.4                          | 7.7                |
|                    |  |                  |               | 1552-356      | 12/16/2009        | 43391              | 90.08         | 58.2          | 1.085                       | 17.75                          | 3.5                          | 7.1                |
|                    |  |                  |               | 1552-373      | 1/6/2010          | 00346              |               |               |                             |                                | 1                            | 7.1                |
|                    |  |                  |               | 0552-929      | 8/11/2010         | 25783              | 4.82          | 3.1           |                             |                                | 27.1                         | 8.6                |
|                    |  |                  |               | 0552-943      | 8/25/2010         | 27381              | 4.35          | 2.8           | 0.132                       |                                | 23.3                         | 8.3                |
|                    |  |                  |               | 0552-956      | 9/8/2010          | 28667              | 2.2           | 1.37          | 0.125                       |                                | 22.5                         | 7.9                |
|                    |  |                  |               | 0552-970      | 9/22/2010         | 29697              | 4.9           | 3.17          | 0.223                       |                                | 20.8                         | 8                  |
| 0552-984           | 10/6/2010  | 31162            | 22.3          | 14.4          | 0.46              |                    | 12.1          | 7.9           |                             |                                |                              |                    |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |   |                  |               |               |                   |            |               |               |                             |                                |                              |                    |
|--------------------|---|------------------|---------------|---------------|-------------------|------------|---------------|---------------|-----------------------------|--------------------------------|------------------------------|--------------------|
|                    |   |                  |               |               |                   |            | FLOW<br>(cfs) | FLOW<br>(MGD) | AVG<br>Velocity<br>(ft/sec) | AVG<br>VELOCITY<br>(miles/day) | TEMPERATURE<br>FIELD<br>(°C) | pH FIELD<br>(s.u.) |
| RMI                | SAMPLE<br>LOCATION                        | LATITUDE         | LONGITUDE     | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID# |               |               |                             |                                |                              |                    |
|                    |   |                  |               | 0552-998      | 10/20/2010        | 32722      | 6.3           | 4.071         | 0.315                       |                                | 11.3                         | 7.9                |
| 22.8               | Dunkard<br>Creek @<br>Mason Dixon<br>Park | 39° 42'<br>55.7" | 80° 06' 40.8" | 1552-129      | 9/15/2009         | 06810      |               |               |                             |                                | 23.7                         | 8.8                |
|                    |   |                  |               | 1552-179      | 9/21/2009         | 33375      | 2.9           | 1.9           | 0.15                        | 2.4                            | 23.3                         | 8.7                |
|                    |   |                  |               | 1552-216      | 9/29/2009         | 34472      | 28.4          | 18.4          | 0.72                        | 11.8                           | 15.2                         | 8.4                |
|                    |   |                  |               | 1552-244      | 10/6/2009         | 35246      | 10            | 6.5           | 0.35                        | 5.8                            | 16.9                         | 8.6                |
|                    |   |                  |               | 1552-278      | 10/21/2009        | 37149      | 35.3          | 22.8          | 0.95                        | 15.6                           | 15.1                         |                    |
|                    |   |                  |               | 1552-304      | 11/4/2009         | 39209      | 46.51         | 30.1          | 1.191                       | 19.48                          | 8.5                          | 8.5                |
|                    |   |                  |               | 1552-325      | 11/18/2009        | 40452      | 16.94         | 10.9          | 0.44                        | 7.2                            | 12.4                         | 7.9                |
|                    |   |                  |               | 1552-340      | 12/2/2009         | 41517      | 41.71         | 27            | 1.127                       | 18.44                          | 5.4                          | 7.7                |
|                    |   |                  |               | 1552-357      | 12/16/2009        | 43392      | 130.6         | 84.4          | 1.949                       | 31.89                          | 4                            | 6.9                |
|                    |   |                  |               | 1552-374      | 1/6/2010          | 00347      |               |               |                             |                                | 1.1                          | 7                  |
|                    |   |                  |               | 0552-930      | 8/11/2010         | 25835      | 6.74          | 4.36          |                             |                                | 27.8                         | 8.4                |
|                    |   |                  |               | 0552-944      | 8/25/2010         | 27389      | 7.5           | 4.85          | 0.246                       |                                | 22.6                         | 8.1                |
|                    |   |                  |               | 0552-957      | 9/8/2010          | 28699      | 5.3           | 3.4           | 0.19                        |                                | 24.5                         | 8                  |
|                    |   |                  |               | 0552-971      | 9/22/2010         | 29725      | 2.4           | 1.56          | 0.089                       |                                | 23.1                         | 8.1                |
|                    |   |                  |               | 0552-985      | 10/6/2010         | 31135      | 33            | 21.6          | 0.867                       |                                | 12                           | 8                  |
|                    |   |                  |               | 0552-999      | 10/20/2010        | 32715      | 9.59          | 6.198         | 0.274                       |                                | 11.9                         | 8.1                |
|                    |   |                  |               | CMU*          | 9/17/2009         | NA         |               |               |                             |                                |                              |                    |
|                    |   |                  |               | CMU*          | 9/22/2009         | NA         |               |               |                             |                                |                              |                    |
|                    |   |                  |               | CMU*          | 9/29/2009         | NA         |               |               |                             |                                |                              |                    |
|                    |   |                  |               | CMU*          | 10/6/2009         | NA         |               |               |                             |                                |                              | 8.17               |
|                    |   |                  |               | CMU*          | 10/13/2009        | NA         |               |               |                             |                                |                              | 7.2                |
|                    |   |                  |               | CMU*          | 10/20/2009        | NA         |               |               |                             |                                |                              | 6.65               |
|                    |   |                  |               | CMU*          | 10/27/2009        | NA         |               |               |                             |                                |                              | 6.62               |
|                    |   |                  |               | CMU*          | 11/3/2009         | NA         |               |               |                             |                                |                              | 6.85               |
|                    |   |                  |               | CMU*          | 11/10/2009        | NA         |               |               |                             |                                |                              |                    |
|                    |   |                  |               | CMU*          | 11/17/2009        | NA         |               |               |                             |                                |                              | 7.1                |
|                    |   |                  |               | CMU*          | 11/24/2009        | NA         |               |               |                             |                                |                              |                    |
|                    |   |                  |               | CMU*          | 12/1/2009         | NA         |               |               |                             |                                |                              | 7.15               |
|                    |   |                  |               | CMU*          | 12/8/2009         | NA         |               |               |                             |                                |                              |                    |
|                    |   |                  |               | CMU*          | 12/15/2009        | NA         |               |               |                             |                                |                              |                    |
|                    |   |                  |               | CMU*          | 1/5/2010          | NA         |               |               |                             |                                |                              |                    |
|                    |   |                  |               | CMU*          | 1/12/2010         | NA         |               |               |                             |                                |                              |                    |
|                    |   |                  |               | CMU*          | 1/19/2010         | NA         |               |               |                             |                                |                              | 6.74               |
|                    |   |                  |               | CMU*          | 2/3/2010          | NA         |               |               |                             |                                |                              |                    |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |                    |          |           |               |                   |            |               |               |                             |                                |                              |
|--------------------|--------------------|----------|-----------|---------------|-------------------|------------|---------------|---------------|-----------------------------|--------------------------------|------------------------------|
|                    |                    |          |           |               |                   |            | FLOW<br>(cfs) | FLOW<br>(MGD) | AVG<br>Velocity<br>(ft/sec) | AVG<br>VELOCITY<br>(miles/day) | TEMPERATURE<br>FIELD<br>(°C) |
| RMI                | SAMPLE<br>LOCATION | LATITUDE | LONGITUDE | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID# |               |               |                             |                                |                              |
| 15                 | East Dunkard       |          |           | CMU*          | 2/23/2010         | NA         |               |               |                             |                                |                              |
|                    |                    |          |           | CMU*          | 3/9/2010          | NA         |               |               |                             |                                | 7.14                         |
|                    |                    |          |           | CMU*          | 3/23/2010         | NA         |               |               |                             |                                | 7.16                         |
|                    |                    |          |           | CMU*          | 4/6/2010          | NA         |               |               |                             |                                | 7.95                         |
|                    |                    |          |           | CMU*          | 4/20/2010         | NA         |               |               |                             |                                | 8.02                         |
|                    |                    |          |           | CMU*          | 5/4/2010          | NA         |               |               |                             |                                | 7.6                          |
|                    |                    |          |           | CMU*          | 5/18/2010         | NA         |               |               |                             |                                | 7.27                         |
|                    |                    |          |           | CMU*          | 5/25/2010         | NA         |               |               |                             |                                | 7.88                         |
|                    |                    |          |           | CMU*          | 6/1/2010          | NA         |               |               |                             |                                | 7.86                         |
|                    |                    |          |           | CMU*          | 6/8/2010          | NA         |               |               |                             |                                | 7.18                         |
|                    |                    |          |           | CMU*          | 6/15/2010         | NA         |               |               |                             |                                | 7.93                         |
|                    |                    |          |           | CMU*          | 6/29/2010         | NA         |               |               |                             |                                | 7.89                         |
|                    |                    |          |           | CMU*          | 7/5/2010          | NA         |               |               |                             |                                | 8.08                         |
|                    |                    |          |           | CMU*          | 7/13/2010         | NA         |               |               |                             |                                | 7.96                         |
|                    |                    |          |           | CMU*          | 7/22/2010         | NA         |               |               |                             |                                | 8.09                         |
|                    |                    |          |           | CMU*          | 7/27/2010         | NA         |               |               |                             |                                | 7.86                         |
|                    |                    |          |           | CMU*          | 8/5/2010          | NA         |               |               |                             |                                | 8.19                         |
|                    |                    |          |           | CMU*          | 8/10/2010         | NA         |               |               |                             |                                | 7.59                         |
|                    |                    |          |           | CMU*          | 8/17/2010         | NA         |               |               |                             |                                | 7.96                         |
|                    |                    |          |           | CMU*          | 8/24/2010         | NA         |               |               |                             |                                | 7.91                         |
|                    |                    |          |           | CMU*          | 8/31/2010         | NA         |               |               |                             |                                | 8.05                         |
|                    |                    |          |           | CMU*          | 9/7/2010          | NA         |               |               |                             |                                | 7.57                         |
|                    |                    |          |           | CMU*          | 9/14/2010         | NA         |               |               |                             |                                | 8                            |
|                    |                    |          |           | CMU*          | 9/21/2010         | NA         |               |               |                             |                                | 8.44                         |
|                    |                    |          |           | CMU*          | 9/29/2010         | NA         |               |               |                             |                                | 7.33                         |
|                    |                    |          |           | CMU*          | 10/7/2010         | NA         |               |               |                             |                                | 7.74                         |
|                    |                    |          |           | CMU*          | 10/11/2010        | NA         |               |               |                             |                                | 7.93                         |
|                    |                    |          |           | CMU*          | 10/19/2010        | NA         |               |               |                             |                                | 8.02                         |
|                    |                    |          |           | CMU*          | 10/26/2010        | NA         |               |               |                             |                                | 7.33                         |
|                    |                    |          |           | CMU*          | 11/3/2010         | NA         |               |               |                             |                                | 8.42                         |
| CMU*               | 12/14/2010         | NA       |           |               |                   |            | 7.4           |               |                             |                                |                              |
| CMU*               | 1/19/2011          | NA       |           |               |                   |            | 7.55          |               |                             |                                |                              |
| CMU*               | 2/16/2011          | NA       |           |               |                   |            | 7.67          |               |                             |                                |                              |
| CMU*               | 3/16/2011          | NA       |           |               |                   |            | 7.53          |               |                             |                                |                              |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.



| SAMPLE INFORMATION |   |                  |               |               |                   |            |               |               |                             |                                |                              |                    |     |
|--------------------|---|------------------|---------------|---------------|-------------------|------------|---------------|---------------|-----------------------------|--------------------------------|------------------------------|--------------------|-----|
|                    |   |                  |               |               |                   |            | FLOW<br>(cfs) | FLOW<br>(MGD) | AVG<br>Velocity<br>(ft/sec) | AVG<br>VELOCITY<br>(miles/day) | TEMPERATURE<br>FIELD<br>(°C) | pH FIELD<br>(s.u.) |     |
| RMI                | SAMPLE<br>LOCATION                                    | LATITUDE         | LONGITUDE     | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID# |               |               |                             |                                |                              |                    |     |
| 13                 | Dunkard<br>Creek DC5                                  |                  |               | 7485-701      | 10/21/2008        | 38485      |               |               |                             |                                |                              | 8                  |     |
| 10.9               | Dunkard<br>Creek @ end<br>of Bald Hill<br>Church Road | 39° 45'<br>20.0" | 80° 00' 43.4" | 1552-100      | 9/10/2009         | 06686      |               |               |                             |                                | 22                           | 8.6                |     |
|                    |   |                  |               | 1552-135      | 9/15/2009         | 06811      |               |               |                             | 24.8                           | 8.5                          |                    |     |
|                    |   |                  |               | 1552-183      | 9/21/2009         | 33379      |               |               |                             | 23.3                           | 8.9                          |                    |     |
|                    |   |                  |               | 1552-218      | 9/29/2009         | 34467      |               |               |                             | 15.9                           | 8.2                          |                    |     |
|                    |   |                  |               | 1552-246      | 10/6/2009         | 35243      |               |               |                             | 16.5                           | 8.2                          |                    |     |
|                    |   |                  |               | 1552-280      | 10/21/2009        | 37164      |               |               |                             | 14                             |                              |                    |     |
|                    |   |                  |               | 1552-305      | 11/4/2009         | 39193      |               |               |                             | 9.3                            | 8.4                          |                    |     |
|                    |   |                  |               | 1552-326      | 11/18/2009        | 40453      |               |               |                             | 12.3                           | 8.1                          |                    |     |
|                    |   |                  |               | 1552-341      | 12/2/2009         | 41518      | 45.69         | 29.5          | 0.768                       | 12.56                          | 6.3                          | 7.7                |     |
|                    |   |                  |               | 1552-358      | 12/16/2009        | 43393      | 178.15        | 115.1         | 1.392                       | 22.77                          | 4                            | 7.1                |     |
|                    |   |                  |               | 1552-375      | 1/6/2010          | 00348      |               |               |                             | 1.4                            | 7.3                          |                    |     |
|                    |   |                  |               | 0552-931      | 8/11/2010         | 25836      | 8.2           | 5.3           |                             | 29                             | 8.5                          |                    |     |
|                    |   |                  |               | 0552-945      | 8/25/2010         | 27390      | 13.4          | 8.66          | 0.121                       | 23.4                           | 8.7                          |                    |     |
|                    |   |                  |               | 0552-958      | 9/8/2010          | 28700      | 6.9           | 4.5           | 0.26                        | 26.4                           | 8                            |                    |     |
|                    |   |                  |               | 0552-972      | 9/22/2010         | 29726      | 1.97          | 1.3           | 0.855                       | 21.5                           | 8.1                          |                    |     |
|                    |   |                  |               | 0552-986      | 10/6/2010         | 31136      | 43            | 27.8          | 0.562                       | 12.7                           | 8                            |                    |     |
| 0552-001           | 10/20/2010  | 32716            | 6.8           | 4.391         | 0.168             | 15.3       | 8.3           |               |                             |                                |                              |                    |     |
|                    |   |                  |               | 0552-030      | 7/19/2012         | 22234      |               |               |                             | 28.8                           | 7.21                         |                    |     |
| 10.8               | SHANNOPIN<br>MINE<br>DISCHARGE                        | 39° 45' 20.3     | 80° 00' 35.0" | 1552-141      | 9/15/2009         | 32737      |               |               |                             |                                | 23.5                         | 8.3                |     |
|                    |   |                  |               | 1552-187      | 9/21/2009         | 34468      |               |               |                             |                                | 22.6                         | 8.1                |     |
|                    |   |                  |               | 1552-220      | 9/29/2009         | 34468      |               |               |                             |                                | 18                           | 8                  |     |
|                    |   |                  |               | 1552-248      | 10/6/2009         | 35244      |               |               |                             |                                | 18.6                         | 7.8                |     |
|                    |   |                  |               | 1552-282      | 10/21/2009        | 37165      |               |               |                             |                                | 19.7                         |                    |     |
|                    |   |                  |               | 1552-306      | 11/4/2009         | 39194      |               |               |                             |                                | 16.4                         | 8.1                |     |
|                    |   |                  |               | 1552-327      | 11/18/2009        | 40447      |               |               |                             |                                | 16                           | 8.1                |     |
|                    |   |                  |               | 1552-342      | 12/2/2009         | 41543      |               |               |                             |                                | 15.6                         | 7.6                |     |
|                    |   |                  |               | 1552-376      | 1/6/2010          | 00353      |               |               |                             |                                | 3.4                          | 7                  |     |
|                    |   |                  |               | 1552-388      | 1/20/2010         | 01541      |               |               |                             |                                | 15.3                         | 8.3                |     |
|                    |   |                  |               | 7485-704      | 10/21/2008        | 38488      |               |               |                             |                                |                              |                    | 7.8 |
|                    |   |                  |               | 0552-932      | 8/11/2010         | 25861      |               |               |                             |                                | ~5                           | 19.8               | 7.7 |
|                    |   |                  |               | 0552-946      | 8/25/2010         | 27387      |               |               |                             |                                | est4-5                       | 20.4               | 7.2 |
|                    |   |                  |               | 0552-959      | 9/8/2010          | 28651      |               |               |                             |                                | est 5                        | 20.2               | 7.1 |
|                    |   |                  |               | 0552-973      | 9/22/2010         | 29656      | est 6-7MGD    |               |                             |                                |                              | 20.1               | 8.5 |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |  |                  |                     |               |                   |            |               |               |                             |                                |                              |                    |
|--------------------|--|------------------|---------------------|---------------|-------------------|------------|---------------|---------------|-----------------------------|--------------------------------|------------------------------|--------------------|
|                    |  |                  |                     |               |                   |            | FLOW<br>(cfs) | FLOW<br>(MGD) | AVG<br>Velocity<br>(ft/sec) | AVG<br>VELOCITY<br>(miles/day) | TEMPERATURE<br>FIELD<br>(°C) | pH FIELD<br>(s.u.) |
| RMI                | SAMPLE<br>LOCATION                     | LATITUDE         | LONGITUDE           | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID# |               |               |                             |                                |                              |                    |
|                    |  |                  |                     | 0552-987      | 10/6/2010         | 31132      | est 7-8MGD    |               |                             |                                | 18.6                         | 8.5                |
|                    |  |                  |                     | 0552-002      | 10/20/2010        | 32760      |               |               |                             |                                | 18.4                         | 8.2                |
|                    |  |                  |                     | 0552-031      | 7/19/2012         | 22235      |               |               |                             |                                | 21.1                         | 8.1                |
| 9.8                | Dunkard<br>Creek DC5B                  |                  |                     | 7485-702      | 10/21/2008        | 38486      |               |               |                             |                                |                              | 8.1                |
| 9.5                | Dunkard<br>Creek DC6                   |                  |                     | 7485-703      | 10/21/2008        | 38487      |               |               |                             |                                |                              | 8                  |
| 6.7                | Dunkard<br>Creek @<br>LR2008<br>Bridge | N 39° 44'<br>52" | W 079° 58'<br>46"   | 1552-192      | 9/21/2009         | 33347      | 31.9          | 20.6          | 1.46                        | 24                             | 22.9                         | 7.7                |
|                    |  |                  |                     | 1552-222      | 9/29/2009         | 34469      | 54.7          | 35.4          | 1.38                        | 22.6                           | 15.4                         | 8                  |
|                    |  |                  |                     | 1552-250      | 10/6/2009         | 35242      |               |               |                             |                                | 16.5                         | 7.6                |
|                    |  |                  |                     | 1552-284      | 10/21/2009        | 37162      |               |               |                             |                                | 15.2                         |                    |
|                    |  |                  |                     | 1552-307      | 11/4/2009         | 39195      | 82.78         | 53.5          | 1.224                       | 20.02                          | 9.7                          | 8.3                |
|                    |  |                  |                     | 1552-328      | 11/18/2009        | 40448      | 29.5          | 19.1          | 0.756                       | 12.37                          | 12.8                         | 7.7                |
|                    |  |                  |                     | 1552-343      | 12/2/2009         | 41544      | 63.63         | 41.1          | 1.178                       | 19.28                          | 8.6                          | 7.8                |
|                    |  |                  |                     | 1552-360      | 12/16/2009        | 43388      |               |               |                             |                                | 3.9                          | 7.3                |
|                    |  |                  |                     | 1552-377      | 1/6/2010          | 00354      |               |               |                             |                                | 1                            | 7.4                |
|                    |  |                  |                     | 0552-034      | 7/19/2012         | 22691      |               |               |                             | 25.5                           | 8.1                          |                    |
| 4.6                | USGS<br>Shannopin<br>Gauge             | 39° 45' 33"      | 79° 58' 15"         | NA            | 9/10/2009         | Gage Data  | 30            | 19.4          |                             |                                |                              |                    |
|                    |  |                  |                     | NA            | 9/15/2009         | Gage Data  | 16            | 10.3          |                             |                                |                              |                    |
|                    |  |                  |                     | NA            | 9/17/2009         | Gage Data  | 22            | 14.2          |                             |                                |                              |                    |
|                    |  |                  |                     | NA            | 9/21/2009         | Gage Data  | 22            | 14.2          |                             |                                |                              |                    |
|                    |  |                  |                     | NA            | 9/29/2009         | Gage Data  | 46            | 29.7          |                             |                                | 16.1                         | 7.3                |
|                    |  |                  |                     | NA            | 10/6/2009         | Gage Data  | 24            | 15.5          |                             |                                | 12.9                         | 7.5                |
|                    |  |                  |                     | NA            | 10/21/2009        | Gage Data  | 52            | 33.6          |                             |                                | 9.9                          | 7.3                |
|                    |  |                  |                     | NA            | 11/4/2009         | Gage Data  | 59            | 38.1          |                             |                                | 8.6                          | 7.4                |
|                    |  |                  |                     | NA            | 11/18/2009        | Gage Data  | 32            | 20.7          |                             |                                | 10.1                         | 8                  |
|                    |  |                  |                     | NA            | 12/2/2009         | Gage Data  | 48            | 31            |                             |                                | 6.1                          | 7.5                |
|                    |  |                  |                     | NA            | 12/16/2009        | Gage Data  | 111.8         |               |                             |                                | 2.8                          | 7.5                |
|                    |  |                  |                     | NA            | 1/6/2010          | Gage Data  | 146           |               |                             |                                | 0.1                          |                    |
|                    |  |                  |                     | 0552-933      | 8/11/2010         | 35862      | 24            | 15.5          |                             |                                | 29.1                         | 8.8                |
|                    |  |                  |                     | 0552-947      | 8/25/2010         | 27388      | 28            |               |                             |                                | 23                           | 8.4                |
|                    |  |                  |                     | 0552-960      | 9/8/2010          | 28652      |               |               |                             |                                | 23.3                         | 8.4                |
| 0552-974           | 9/22/2010                              | 29657            | no flow on<br>meter |               |                   |            | 22.5          | 7.8           |                             |                                |                              |                    |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |  |                   |                    |               |                   |            |                     |               |                             |                                |                              |                    |
|--------------------|--|-------------------|--------------------|---------------|-------------------|------------|---------------------|---------------|-----------------------------|--------------------------------|------------------------------|--------------------|
|                    |  |                   |                    |               |                   |            | FLOW<br>(cfs)       | FLOW<br>(MGD) | AVG<br>Velocity<br>(ft/sec) | AVG<br>VELOCITY<br>(miles/day) | TEMPERATURE<br>FIELD<br>(°C) | pH FIELD<br>(s.u.) |
| RMI                | SAMPLE<br>LOCATION                                       | LATITUDE          | LONGITUDE          | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID# |                     |               |                             |                                |                              |                    |
|                    |  |                   |                    | 0552-988      | 10/6/2010         | 31133      | no flow on<br>meter |               |                             |                                | 12.9                         | 7.9                |
|                    |  |                   |                    | 0552-003      | 10/20/2010        | 32761      | no flow on<br>meter |               |                             |                                | 13                           | 4.9                |
| 4                  | Dunkard<br>Creek DC7                                     |                   |                    | 7485-705      | 10/21/2008        | 38489      |                     |               |                             |                                |                              | 7.9                |
| 3.46               | Algae<br>Sampling<br>Point                               | N 39°45'<br>47.3" | W 079°56'<br>54.8" | 0577-012      | 11/18/2009        | 40484      |                     |               | -0.0328                     | -0.537                         | 10.29                        | 7.52               |
| 2.95               | Dunkard<br>Creek DC8A                                    |                   |                    | 7485-706      | 10/21/2008        | 38490      |                     |               |                             |                                |                              | 7.4                |
| 1                  | Dunkard<br>Creek DC8A                                    |                   |                    | 7485-707      | 10/21/2008        | 38491      |                     |               |                             |                                |                              | 7.7                |
| 0.1                | RMI 0.5<br>Mouth of<br>Dunkard<br>Creek Under<br>88 Brdg | N 39° 45'<br>51"  | W 079° 56'<br>17"  | 1552-196      | 9/21/2009         | 33339      |                     |               |                             |                                | 24.8                         | 7.7                |
|                    |  |                   |                    | 1552-224      | 9/29/2009         | 34476      |                     |               |                             |                                | 18                           | 7.9                |
|                    |  |                   |                    | 1552-252      | 10/6/2009         | 35241      |                     |               |                             |                                | 19.4                         | 7.6                |
|                    |  |                   |                    | 1552-286      | 10/21/2009        | 37163      |                     |               |                             |                                | 17.9                         |                    |
|                    |  |                   |                    | 1552-308      | 11/4/2009         | 39235      |                     |               |                             |                                | 11.3                         | 8.4                |
|                    |  |                   |                    | 1552-329      | 11/18/2009        | 40520      |                     |               |                             |                                | 12.9                         | 7.7                |
|                    |  |                   |                    | 1552-344      | 12/2/2009         | 41547      |                     |               |                             |                                | 9.3                          | 7.8                |
|                    |  |                   |                    | 1552-361      | 12/16/2009        | 43389      |                     |               |                             |                                | 3.7                          | 7.1                |
|                    |  |                   |                    | 0593-020      | 10/15/2008        | 37432      |                     |               |                             |                                | 18.87                        | 7.27               |
|                    |  |                   |                    | 0593-029      | 10/22/2008        | 39040      |                     |               |                             |                                | 11.6                         | 7.35               |
|                    |  |                   |                    | 0552-879      | 11/17/2008        | 42551      |                     |               |                             |                                | 9                            |                    |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |  |               |               |            |                |                 | DO     | P. Parvum  | OSMOTIC  | BOD 5  | TSS    | AMMONIA | NITRATE |  |
|--------------------|--|---------------|---------------|------------|----------------|-----------------|--------|------------|----------|--------|--------|---------|---------|--|
|                    |  |               |               |            |                |                 | FIELD  | Count      | PRESSURE | DAY    | (mg/L) | (mg/L)  | (mg/L)  |  |
| RMI                | SAMPLE LOCATION                          | LATITUDE      | LONGITUDE     | SAMPLE ID# | DATE COLLECTED | LAB ID#         | (mg/L) | (cells/mL) | (MOSM)   | (mg/L) | (mg/L) | (mg/L)  | (mg/L)  |  |
| 1.1                | PA Fork Dunkard Creek                    | 39° 43' 44.6" | 80° 16' 42.8" | 1552-075   | 9/10/2009      | 06681           | 7.78   | NA         |          |        |        |         |         |  |
|                    |  |               |               | 1552-111   | 9/15/2009      | 06807           | 6.48   | NA         | 4        |        |        |         |         |  |
|                    |  |               |               | 1552-159   | 9/21/2009      | 33355           | 6.78   | NA         | 5        | 1.7    | 5      | 0.02    |         |  |
|                    |  |               |               | 1552-200   | 9/29/2009      | 34473           | 8.88   | NA         | 5        |        |        |         |         |  |
|                    |  |               |               | 1552-228   | 10/6/2009      | 35248           | 9.65   | NA         | 4        |        |        |         |         |  |
|                    |  |               |               | 1552-260   | 10/21/2009     | 37169           | 10.23  | NA         | 1        |        |        |         |         |  |
|                    |  |               |               | 1552-296   | 11/4/2009      | 39186           | 10.51  | NA         | 5        |        |        |         |         |  |
|                    |  |               |               | 1552-317   | 11/18/2009     | 40449           |        | NA         | 5        |        |        |         |         |  |
|                    |  |               |               | 1552-332   | 12/2/2009      | 41519           |        | NA         | 1        |        |        |         |         |  |
|                    |  |               |               | 1552-349   | 12/16/2009     | 43385           |        | NA         | ~        |        |        | 0.03    |         |  |
|                    |  |               |               | 1552-366   | 1/6/2010       | 00349           |        | NA         | ~        |        |        | 0.02    |         |  |
|                    |  |               |               | 1552-383   | 1/20/2010      | 01538           |        | NA         | 3        |        |        |         |         |  |
|                    |  |               |               | 0552-922   | 8/11/2010      | 25779           |        | 0          | 6        | 1.4    |        | 0.05    | 0.04    |  |
|                    |  |               |               | 0552-936   | 8/25/2010      | 27336           |        | 0          | 4        | 1.9    |        | <.02    | <.04    |  |
|                    |  |               |               | 0552-949   | 9/8/2010       | 28689           |        | 0          | 1        | 1.6    |        | 0.05    | <.04    |  |
|                    |  |               |               | 0552-963   | 9/22/2010      | 29661           |        | 0          | 10       | 1.5    |        | 0.07    | <.04    |  |
|                    |  |               |               | 0552-977   | 10/6/2010      | 31139           |        | 0          | 6        | 1.1    |        | <.02    | <.04    |  |
| 0552-991           | 10/20/2010                               | 32724         |               | 0          | 10             | <0.2            |        | <.02       | <.04     |        |        |         |         |  |
| 0.6                | WV Fork Dunkard Creek 50' US Outfall 003 | 39° 42' 48"   | 80° 17' 17"   | 1552       | 9/15/2009      | Field Data Only |        | NA         |          |        |        |         |         |  |
|                    |  |               |               |            | 9/21/2009      |                 |        | NA         | 49       |        |        |         |         |  |
|                    |  |               |               | 1552-202   | 9/29/2009      | 34474           | 9.9    | NA         | 47       |        |        |         |         |  |
|                    |  |               |               | 1552-230   | 10/6/2009      | 35249,          | 10.7   | NA         | 25       |        |        |         |         |  |
|                    |  |               |               | 1552-264   | 10/21/2009     | 37173           | 11.04  | NA         | 6        |        |        | 0.03    |         |  |
|                    |  |               |               | 1552-297   | 11/4/2009      | 39187           | 12.07  | NA         | 8        |        |        | 0.27    |         |  |
|                    |  |               |               | 1552-318   | 11/18/2009     | 40450           |        | NA         | 42       |        |        |         |         |  |
|                    |  |               |               | 1552-333   | 12/2/2009      | 41520           |        | NA         | 17       |        |        |         |         |  |
|                    |  |               |               | 1552-350   | 12/16/2009     | 43387           |        | NA         | 5        |        |        | 0.09    |         |  |
|                    |  |               |               | 1552-367   | 1/6/2010       | 00350           |        | NA         | 12       |        |        | 0.05    |         |  |
|                    |  |               |               | 1552-384   | 1/20/2010      | 01539           |        | NA         | 6        |        |        | 0.03    |         |  |
|                    |  |               |               | 0552-923   | 8/11/2010      | 25793           |        | 0          | 8        | 3.3    |        | <.02    | <.04    |  |
|                    |  |               |               | 0552-937   | 8/25/2010      | 27337           |        | 0          | 6        | 3.4    |        | <.02    | <.04    |  |
|                    |  |               |               | 0552-950   | 9/8/2010       | 28690           |        | 0          | 6        | 2.8    |        | <.02    | <.04    |  |
|                    |  |               |               | 0552-964   | 9/22/2010      | 29662           |        | 0          | 12       | 7.5    |        | <.02    | <.04    |  |
| 0552-978           | 10/6/2010                                | 31140         |               | 0          | 10             | 1.3             |        | 0.06       | 0.22     |        |        |         |         |  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |  |               |               |            |                |                 |                 |                            |                         |                  |            |                         |                |  |  |
|--------------------|--|---------------|---------------|------------|----------------|-----------------|-----------------|----------------------------|-------------------------|------------------|------------|-------------------------|----------------|--|--|
|                    |  |               |               |            |                |                 | DO FIELD (mg/L) | P. Parvum Count (cells/mL) | OSMOTIC PRESSURE (MOSM) | BOD 5 DAY (mg/L) | TSS (mg/L) | AMMONIA NITROGEN (mg/L) | NITRATE (mg/L) |  |  |
| RMI                | SAMPLE LOCATION  | LATITUDE      | LONGITUDE     | SAMPLE ID# | DATE COLLECTED | LAB ID#         |                 |                            |                         |                  |            |                         |                |  |  |
|                    |  |               |               | 0552-992   | 10/20/2010     | 32725           |                 | 0                          | 9                       | 5.3              |            | <.02                    | <.04           |  |  |
| 0.5                | Blacksville #2 discharge from Beaver Pond or Pond Itself Outfall 003                 | 39° 42' 52"   | 80° 17' 15"   | 0552-925   | 8/11/2010      | 25794           |                 | 0                          | 163                     | 2.8              |            | 0.04                    | <.04           |  |  |
|                    |  |               |               | 0552-939   | 8/25/2010      | ND              |                 | ND                         |                         |                  |            |                         |                |  |  |
|                    |  |               |               | 0552-952   | 9/8/2010       | ND              |                 | ND                         |                         |                  |            |                         |                |  |  |
|                    |  |               |               | 0552-966   | 9/22/2010      | ND              |                 | ND                         |                         |                  |            |                         |                |  |  |
|                    |  |               |               | 0552-979   | 10/6/2010      | ND              |                 | ND                         |                         |                  |            |                         |                |  |  |
|                    |  |               |               | 0552-994   | 10/20/2010     | ND              |                 | ND                         |                         |                  |            |                         |                |  |  |
| 0.4                | Blacksville #2 Mine Outfall 005 Discharge to WV Fork 2000' US jct PA Fork @ Shamrock | 39° 43' 07.6" | 80° 16' 38.8" | 1552       | 9/15/2009      | Field Data Only |                 | NA                         |                         |                  |            |                         |                |  |  |
|                    |  |               |               | 1552-148   | 9/17/2009      | 33133           |                 | NA                         | 409                     |                  |            |                         |                |  |  |
|                    |  |               |               | 1552-167   | 9/21/2009      | 33363           | 7.64            | NA                         | 434                     | 4                | 64         | 3.4                     |                |  |  |
|                    |  |               |               | 1552-204   | 9/29/2009      | 34475           | 10.14           | NA                         | 194                     |                  |            |                         |                |  |  |
|                    |  |               |               | 1552-232   | 10/6/2009      | 35250           | 9.8             | NA                         | 296                     |                  |            | 0.61                    | 0.53           |  |  |
|                    |  |               |               | 1552-266   | 10/21/2009     | 37174           | 9.94            | NA                         | 117                     | 1.6              |            | 0.28                    |                |  |  |
|                    |  |               |               | 1552-298   | 11/4/2009      | 39188           | 10.7            | NA                         | 107                     | 1.5              |            | 0.2                     |                |  |  |
|                    |  |               |               | 1552-319   | 11/18/2009     | 40504           |                 | NA                         | 129                     | 0.9              |            | 0.28                    |                |  |  |
|                    |  |               |               | 1552-334   | 12/2/2009      | 41545           |                 | NA                         | 147                     | 1.2              |            | 0.31                    |                |  |  |
|                    |  |               |               | 1552-351   | 12/16/2009     | 43377           |                 | NA                         | 32                      | 1.0              |            | 0.15                    |                |  |  |
|                    |  |               |               | 1552-368   | 1/6/2010       | 00351           |                 | NA                         | 17                      | 0.8              |            | 0.07                    |                |  |  |
|                    |  |               |               | 1552-385   | 1/20/2010      | 01515           |                 | NA                         | 8                       | 0.7              |            | 0.03                    |                |  |  |
|                    |  |               |               | 0552-938   | 8/25/2010      | ND              |                 | ND                         |                         |                  |            |                         |                |  |  |
|                    |  |               |               | 0552-950   | 9/8/2010       | ND              |                 | ND                         |                         |                  |            |                         |                |  |  |
|                    |  |               |               | 0552-965   | 9/22/2010      | ND              |                 | ND                         |                         |                  |            |                         |                |  |  |
| 0552-980           | 10/6/2010  | ND            |               | ND         |                |                 |                 |                            |                         |                  |            |                         |                |  |  |
| 0552-993           | 10/20/2010   | ND            |               | ND         |                |                 |                 |                            |                         |                  |            |                         |                |  |  |
|                    |  |               |               | 1552-090   | 9/10/2009      | 06684           | 13.67           | NA                         |                         |                  |            |                         |                |  |  |
|                    |  |               |               | 1552-117   | 9/15/2009      | 06808           | 9.98            | NA                         | 298                     |                  |            |                         |                |  |  |
|                    |  |               |               | 1552-151   | 9/17/2009      | 33136           |                 | NA                         | 255                     |                  |            |                         |                |  |  |
|                    |  |               |               | 1552-163   | 9/21/2009      | 33359           | 10.55           | NA                         | 95                      | 10.9             | 22         | <.02                    |                |  |  |
|                    |  |               |               | 1552-206   | 9/29/2009      | 34478           | 9.7             | NA                         | 49                      |                  |            |                         |                |  |  |
|                    |  |               |               | 1552-234   | 10/6/2009      | 35253           | 10.08           | NA                         | 24                      |                  |            |                         |                |  |  |
|                    |  |               |               | 1552-268   | 10/21/2009     | 37185           | 10.52           | NA                         | 7                       |                  |            | 0.04                    |                |  |  |
|                    |  |               |               | 1552-299   | 11/4/2009      | 39189           | 12.12           | NA                         | 8                       |                  |            |                         |                |  |  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |                       |                 |                  |            |                |         |                 |                            |                         |                  |            |                         |                |
|--------------------|-----------------------|-----------------|------------------|------------|----------------|---------|-----------------|----------------------------|-------------------------|------------------|------------|-------------------------|----------------|
|                    |                       |                 |                  |            |                |         | DO FIELD (mg/L) | P. Parvum Count (cells/mL) | OSMOTIC PRESSURE (MOSM) | BOD 5 DAY (mg/L) | TSS (mg/L) | AMMONIA NITROGEN (mg/L) | NITRATE (mg/L) |
| RMI                | SAMPLE LOCATION       | LATITUDE        | LONGITUDE        | SAMPLE ID# | DATE COLLECTED | LAB ID# |                 |                            |                         |                  |            |                         |                |
| 0.2                | WV Fork Dunkard Creek | 39° 43' 18.3"   | 80° 16' 25.1"    | 1552-320   | 11/18/2009     | 40505   |                 | NA                         | 39                      |                  |            |                         |                |
|                    |                       |                 |                  | 1552-335   | 12/2/2009      | 41546   |                 | NA                         | 21                      |                  |            |                         |                |
|                    |                       |                 |                  | 1552-352   | 12/16/2009     | 43378   |                 | NA                         | 5                       |                  |            | 0.1                     |                |
|                    |                       |                 |                  | 1552-369   | 1/6/2010       | 00352   |                 | NA                         | 12                      |                  |            | 0.04                    |                |
|                    |                       |                 |                  | 1552-386   | 1/20/2010      | 01540   |                 | NA                         | 6                       |                  |            | 0.03                    |                |
|                    |                       |                 |                  | 0552-926   | 8/11/2010      | 25803   |                 | 0                          | 7                       | 2.8              |            | <.02                    | <.04           |
|                    |                       |                 |                  | 0552-940   | 8/25/2010      | 27366   |                 | 0                          | 9                       | 5.6              |            | <.02                    | <.04           |
|                    |                       |                 |                  | 0552-953   | 9/8/2010       | 28664   |                 | 0                          | 12                      | 2                |            | <.02                    | <.04           |
|                    |                       |                 |                  | 0552-967   | 9/22/2010      | 29663   |                 | 0                          | 8                       | 1.4              |            | 0.04                    | <.04           |
|                    |                       |                 |                  | 0552-981   | 10/6/2010      | 31137   |                 | 0                          | 13                      | 1.2              |            | 0.02                    | 0.3            |
| 0552-995           | 10/20/2010            | 32726           |                  | 0          | 15             | 5.4     |                 | <.02                       | <.04                    |                  |            |                         |                |
| 41                 | Dunkard Creek @ Brave | 39° 43' 39.0"   | 080° 15' 21.9"   | 1552-085   | 9/10/2009      | 06683   | 16.01           | NA                         |                         |                  |            |                         |                |
|                    |                       |                 |                  | 1552-123   | 9/15/2009      | 06809   | 16.95           | NA                         | 90                      |                  |            |                         |                |
|                    |                       |                 |                  | 1552-171   | 9/21/2009      | 33367   | 11.1            | NA                         | 110                     | 14.4             | 35         | 0.05                    |                |
|                    |                       |                 |                  | 1552-208   | 9/29/2009      | 34479   | 10.95           | NA                         | 55                      |                  |            |                         |                |
|                    |                       |                 |                  | 1552-236   | 10/6/2009      | 35254   | 12.06           | NA                         | 26                      |                  |            | 0.03                    |                |
|                    |                       |                 |                  | 1552-270   | 10/21/2009     | 37184   | 10.05           | NA                         | 6                       |                  |            | 0.06                    |                |
|                    |                       |                 |                  | 1552-300   | 11/4/2009      | 39190   | 10.47           | NA                         | 6                       |                  |            |                         |                |
|                    |                       |                 |                  | 1552-321   | 11/18/2009     | 40444   |                 | NA                         | 17                      |                  |            | 0.05                    |                |
|                    |                       |                 |                  | 1552-336   | 12/2/2009      | 41539   |                 | NA                         | 21                      |                  |            |                         |                |
|                    |                       |                 |                  | 1552-353   | 12/16/2009     | 43373   |                 | NA                         |                         |                  |            | 0.05                    |                |
|                    |                       |                 |                  | 1552-370   | 1/6/2010       | 00343   |                 | NA                         | 4                       |                  |            | 0.05                    |                |
|                    |                       |                 |                  | 1552-387   | 1/20/2010      | 01516   |                 | NA                         | 3                       |                  |            | 0.08                    |                |
|                    |                       |                 |                  | 0552-927   | 8/11/2010      | 25804   |                 | 0                          | 6                       | 2.6              |            | <.02                    | <.04           |
|                    |                       |                 |                  | 0552-941   | 8/25/2010      | 27367   |                 | 0                          | 10                      | 3.6              |            | 0.13                    | 0.13           |
|                    |                       |                 |                  | 0552-954   | 9/8/2010       | 28665   |                 | 0                          | 9                       | 11.6             |            | <.02                    | <.04           |
| 0552-968           | 9/22/2010             | 29664           |                  | 0          | 9              | 3.2     |                 | 0.03                       | <.04                    |                  |            |                         |                |
| 0552-982           | 10/6/2010             | 31138           |                  | 0          | 9              | 1.4     |                 | 0.06                       | 0.15                    |                  |            |                         |                |
| 0552-996           | 10/20/2010            | 32727           |                  | 0          | 12             | 3.1     |                 | <.02                       | <.04                    |                  |            |                         |                |
| 39.2               | Miracle Run @ Mouth   | N 39° 43' 05.0" | W 080° 14' 28.8" | 1552-142   | 9/17/2009      | 33127   |                 | NA                         | 53                      |                  |            |                         |                |
|                    |                       |                 |                  | 1552-175   | 9/21/2009      | 33371   | 8.88            | NA                         | 60                      | 2.1              | 10         | 0.03                    |                |
|                    |                       |                 |                  | 1552-208   | 9/29/2009      | 34479   | 10.55           | NA                         | 31                      |                  |            |                         |                |
|                    |                       |                 |                  | 1552-238   | 10/6/2009      | 35251   | 10.91           | NA                         | 36                      |                  |            |                         | 0.04           |
|                    |                       |                 |                  | 1552-272   | 10/21/2009     | 37172   | 10.02           | NA                         | 13                      |                  |            | 0.04                    |                |
| 1552-301           | 11/4/2009             | 39191           | 11.45            | NA         | 17             |         |                 | 0.75                       |                         |                  |            |                         |                |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |  |               |               |            |                |                 | DO     | P. Parvum  | OSMOTIC  | BOD 5  | TSS    | AMMONIA | NITRATE |
|--------------------|--|---------------|---------------|------------|----------------|-----------------|--------|------------|----------|--------|--------|---------|---------|
|                    |  |               |               |            |                |                 | FIELD  | Count      | PRESSURE | DAY    | (mg/L) | (mg/L)  | (mg/L)  |
| RMI                | SAMPLE LOCATION                            | LATITUDE      | LONGITUDE     | SAMPLE ID# | DATE COLLECTED | LAB ID#         | (mg/L) | (cells/mL) | (MOSM)   | (mg/L) | (mg/L) | (mg/L)  | (mg/L)  |
|                    |  |               |               | 1552-322   | 11/18/2009     | 40445           |        | NA         | 35       |        |        | 0.85    |         |
|                    |  |               |               | 1552-337   | 12/2/2009      | 41540           |        | NA         | 16       |        |        | 1.83    |         |
|                    |  |               |               | 1552-354   | 12/16/2009     | 43374           |        | NA         | 5        |        |        | 1.13    |         |
|                    |  |               |               | 1552-371   | 1/6/2010       | 00344           |        | NA         | 9        |        |        | 1.34    |         |
| 37.5               | Dunkard Creek @ Blacksville                | 39° 43' 15.7" | 80° 13' 20.6" | 1552       | 9/17/2009      | Field Data Only | 10.98  | NA         |          |        |        |         |         |
|                    |  |               |               | 1552       | 9/21/2009      | Field Data Only | 13.94  | NA         |          |        |        |         |         |
|                    |  |               |               | 1552-214   | 9/29/2009      | 34471           | 9.41   | NA         | 50       |        |        |         |         |
|                    |  |               |               | 1552-240   | 10/6/2009      | 35252           | 11.46  | NA         | 29       |        |        |         | 0.01    |
|                    |  |               |               | 1552-274   | 10/21/2009     | 37171           | 10.81  | NA         | 8        |        |        |         |         |
|                    |  |               |               | 1552-302   | 11/4/2009      | 39207           | 12.3   | NA         | 6        |        |        | 0.08    |         |
|                    |  |               |               | 1552-323   | 11/18/2009     | 40446           |        | NA         | 22       |        |        | 0.09    |         |
|                    |  |               |               | 1552-338   | 12/2/2009      | 41541           |        | NA         | 18       |        |        | 0.46    |         |
|                    |  |               |               | 1552-355   | 12/16/2009     | 43375           |        | NA         | 4        |        |        | 0.21    |         |
|                    |  |               |               | 1552-372   | 1/6/2010       | 00345           |        | NA         | 5        |        |        | 0.34    |         |
|                    |  |               |               | 0552-928   | 8/11/2010      | 25782           |        | 0          | 24       | 2.4    |        | 0.05    | 1.78    |
|                    |  |               |               | 0552-942   | 8/25/2010      | 27380           |        | 0          | 20       | 2.8    |        | 0.04    | 1.39    |
|                    |  |               |               | 0552-955   | 9/8/2010       | 28666           |        | 0          | 14       | 2.5    |        | 0.02    | <.04    |
|                    |  |               |               | 0552-969   | 9/22/2010      | 29696           |        | 0          | 28       | 5      |        | 5.31    | 1.86    |
| 0552-983           | 10/6/2010                                  | 31161         |               | 0          | 19             | 7.7             |        | 5.11       | 2.18     |        |        |         |         |
| 0552-997           | 10/20/2010                                 | 32721         |               | 0          | 29             | 2               |        | 0.48       | 3.74     |        |        |         |         |
| 30.3               | Dunkard Creek @ Route 7 bridge in Pentress | 39° 42' 43"   | 80° 9' 43"    | 1552-214   | 9/29/2009      | 34471           | 10.3   | NA         | 46       |        |        |         |         |
|                    |  |               |               | 1552-242   | 10/6/2009      | 35245           | 14.92  | NA         | 38       |        |        |         | 0.03    |
|                    |  |               |               | 1552-276   | 10/21/2009     | 37148           | 9.97   | NA         | 9        |        |        |         |         |
|                    |  |               |               | 1552-303   | 11/4/2009      | 39208           | 11.43  | NA         | 6        |        |        | 0.03    |         |
|                    |  |               |               | 1552-324   | 11/18/2009     | 40451           |        | NA         | 13       |        |        |         |         |
|                    |  |               |               | 1552-339   | 12/2/2009      | 41516           |        | NA         | 15       |        |        | 0.47    |         |
|                    |  |               |               | 1552-356   | 12/16/2009     | 43391           |        | NA         | 4        |        |        | 0.26    |         |
|                    |  |               |               | 1552-373   | 1/6/2010       | 00346           |        | NA         | 5        |        |        | 0.28    |         |
|                    |  |               |               | 0552-929   | 8/11/2010      | 25783           |        | 0          | 15       | 3.2    |        | <.02    | 0.18    |
|                    |  |               |               | 0552-943   | 8/25/2010      | 27381           |        | 0          | 24       | 2.6    |        | <.02    | 0.19    |
|                    |  |               |               | 0552-956   | 9/8/2010       | 28667           |        | 0          | 19       | 2.2    |        | 0.02    | <.04    |
|                    |  |               |               | 0552-970   | 9/22/2010      | 29697           |        | 0          | 18       | 2.3    |        | 0.13    | <.04    |
| 0552-984           | 10/6/2010                                  | 31162         |               | 0          | 22             | 2.1             |        | 4.94       | 1.81     |        |        |         |         |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.



| SAMPLE INFORMATION |                                  |               |               |            |                |         |                 |                            |                         |                  |            |                         |                |      |
|--------------------|----------------------------------|---------------|---------------|------------|----------------|---------|-----------------|----------------------------|-------------------------|------------------|------------|-------------------------|----------------|------|
|                    |                                  |               |               |            |                |         | DO FIELD (mg/L) | P. Parvum Count (cells/mL) | OSMOTIC PRESSURE (MOSM) | BOD 5 DAY (mg/L) | TSS (mg/L) | AMMONIA NITROGEN (mg/L) | NITRATE (mg/L) |      |
| RMI                | SAMPLE LOCATION                  | LATITUDE      | LONGITUDE     | SAMPLE ID# | DATE COLLECTED | LAB ID# |                 |                            |                         |                  |            |                         |                |      |
|                    |                                  |               |               | 0552-998   | 10/20/2010     | 32722   |                 | 0                          | 27                      | 1.8              |            | <0.02                   | 3.07           |      |
| 22.8               | Dunkard Creek @ Mason Dixon Park | 39° 42' 55.7" | 80° 06' 40.8" | 1552-129   | 9/15/2009      | 06810   | 12.67           | NA                         | 32                      |                  |            |                         |                |      |
|                    |                                  |               |               | 1552-179   | 9/21/2009      | 33375   | 11.31           | NA                         | 34                      | 15.8             | 26         |                         | <.02           |      |
|                    |                                  |               |               | 1552-216   | 9/29/2009      | 34472   | 10.2            | NA                         | 37                      |                  |            |                         |                |      |
|                    |                                  |               |               | 1552-244   | 10/6/2009      | 35246   | 13.7            | NA                         | 38                      |                  |            |                         |                | 0.03 |
|                    |                                  |               |               | 1552-278   | 10/21/2009     | 37149   | 11.26           | NA                         | 8                       |                  |            |                         | 0.05           |      |
|                    |                                  |               |               | 1552-304   | 11/4/2009      | 39209   | 11.99           | NA                         | 8                       |                  |            |                         |                |      |
|                    |                                  |               |               | 1552-325   | 11/18/2009     | 40452   |                 | NA                         | 11                      |                  |            |                         |                |      |
|                    |                                  |               |               | 1552-340   | 12/2/2009      | 41517   |                 | NA                         | 15                      |                  |            |                         | 0.47           |      |
|                    |                                  |               |               | 1552-357   | 12/16/2009     | 43392   |                 | NA                         | 5                       |                  |            |                         | 0.28           |      |
|                    |                                  |               |               | 1552-374   | 1/6/2010       | 00347   |                 | NA                         | 4                       |                  |            |                         | 0.2            |      |
|                    |                                  |               |               | 0552-930   | 8/11/2010      | 25835   |                 | 0                          | 12                      | 3                |            |                         | <.02           | <.04 |
|                    |                                  |               |               | 0552-944   | 8/25/2010      | 27389   |                 | 0                          | 16                      | 3.5              |            |                         | <.02           | <.04 |
|                    |                                  |               |               | 0552-957   | 9/8/2010       | 28699   |                 | 0                          | 9                       | 11.6             |            |                         | <.02           | <.04 |
|                    |                                  |               |               | 0552-971   | 9/22/2010      | 29725   |                 | 0                          | 18                      | 2.7              |            |                         | <.02           | <.04 |
|                    |                                  |               |               | 0552-985   | 10/6/2010      | 31135   |                 | 0                          | 17                      | 10.4             |            |                         | 2.51           | 1.52 |
|                    |                                  |               |               | 0552-999   | 10/20/2010     | 32715   |                 | 0                          | 21                      | 1.8              |            |                         | <.02           | 1.79 |
|                    |                                  |               |               | CMU*       | 9/17/2009      | NA      |                 | NA                         |                         |                  |            |                         |                |      |
|                    |                                  |               |               | CMU*       | 9/22/2009      | NA      |                 | NA                         |                         |                  |            |                         |                |      |
|                    |                                  |               |               | CMU*       | 9/29/2009      | NA      |                 | NA                         |                         |                  |            |                         |                |      |
|                    |                                  |               |               | CMU*       | 10/6/2009      | NA      |                 | NA                         |                         |                  |            |                         |                |      |
|                    |                                  |               |               | CMU*       | 10/13/2009     | NA      |                 | NA                         |                         |                  |            |                         |                |      |
|                    |                                  |               |               | CMU*       | 10/20/2009     | NA      |                 | NA                         |                         |                  |            |                         |                |      |
|                    |                                  |               |               | CMU*       | 10/27/2009     | NA      |                 | NA                         |                         |                  |            |                         |                |      |
|                    |                                  |               |               | CMU*       | 11/3/2009      | NA      |                 | NA                         |                         |                  |            |                         |                |      |
|                    |                                  |               |               | CMU*       | 11/10/2009     | NA      |                 | NA                         |                         |                  |            |                         |                |      |
|                    |                                  |               |               | CMU*       | 11/17/2009     | NA      |                 | NA                         |                         |                  |            |                         |                |      |
|                    |                                  |               |               | CMU*       | 11/24/2009     | NA      |                 | NA                         |                         |                  |            |                         |                |      |
|                    |                                  |               |               | CMU*       | 12/1/2009      | NA      |                 | NA                         |                         |                  |            |                         |                |      |
|                    |                                  |               |               | CMU*       | 12/8/2009      | NA      |                 | NA                         |                         |                  |            |                         |                |      |
|                    |                                  |               |               | CMU*       | 12/15/2009     | NA      |                 | NA                         |                         |                  |            |                         |                |      |
|                    |                                  |               |               | CMU*       | 1/5/2010       | NA      |                 | NA                         |                         |                  |            |                         |                |      |
|                    |                                  |               |               | CMU*       | 1/12/2010      | NA      |                 | NA                         |                         |                  |            |                         |                |      |
|                    |                                  |               |               | CMU*       | 1/19/2010      | NA      |                 | NA                         |                         |                  |            |                         |                |      |
|                    |                                  |               |               | CMU*       | 2/3/2010       | NA      |                 | NA                         |                         |                  |            |                         |                |      |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |                 |          |           |            |                |         | DO     | P. Parvum  | OSMOTIC  | BOD 5  | TSS    | AMMONIA | NITRATE |  |
|--------------------|-----------------|----------|-----------|------------|----------------|---------|--------|------------|----------|--------|--------|---------|---------|--|
|                    |                 |          |           |            |                |         | FIELD  | Count      | PRESSURE | DAY    | (mg/L) | (mg/L)  | (mg/L)  |  |
| RMI                | SAMPLE LOCATION | LATITUDE | LONGITUDE | SAMPLE ID# | DATE COLLECTED | LAB ID# | (mg/L) | (cells/mL) | (MOSM)   | (mg/L) | (mg/L) | (mg/L)  | (mg/L)  |  |
| 15                 | East Dunkard    |          |           | CMU*       | 2/23/2010      | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 3/9/2010       | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 3/23/2010      | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 4/6/2010       | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 4/20/2010      | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 5/4/2010       | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 5/18/2010      | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 5/25/2010      | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 6/1/2010       | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 6/8/2010       | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 6/15/2010      | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 6/29/2010      | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 7/5/2010       | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 7/13/2010      | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 7/22/2010      | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 7/27/2010      | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 8/5/2010       | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 8/10/2010      | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 8/17/2010      | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 8/24/2010      | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 8/31/2010      | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 9/7/2010       | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 9/14/2010      | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 9/21/2010      | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 9/29/2010      | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 10/7/2010      | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 10/11/2010     | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 10/19/2010     | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 10/26/2010     | NA      |        | NA         |          |        |        |         |         |  |
|                    |                 |          |           | CMU*       | 11/3/2010      | NA      |        | NA         |          |        |        |         |         |  |
| CMU*               | 12/14/2010      | NA       |           | NA         |                |         |        |            |          |        |        |         |         |  |
| CMU*               | 1/19/2011       | NA       |           | NA         |                |         |        |            |          |        |        |         |         |  |
| CMU*               | 2/16/2011       | NA       |           | NA         |                |         |        |            |          |        |        |         |         |  |
| CMU*               | 3/16/2011       | NA       |           | NA         |                |         |        |            |          |        |        |         |         |  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |  |               |               |            |                |         | DO     | P. Parvum  | OSMOTIC  | BOD 5  | TSS    | AMMONIA | NITRATE |      |
|--------------------|--|---------------|---------------|------------|----------------|---------|--------|------------|----------|--------|--------|---------|---------|------|
|                    |  |               |               |            |                |         | FIELD  | Count      | PRESSURE | DAY    | (mg/L) | (mg/L)  | (mg/L)  |      |
| RMI                | SAMPLE LOCATION                              | LATITUDE      | LONGITUDE     | SAMPLE ID# | DATE COLLECTED | LAB ID# | (mg/L) | (cells/mL) | (MOSM)   | (mg/L) | (mg/L) | (mg/L)  | (mg/L)  |      |
| 13                 | Dunkard Creek DC5                            |               |               | 7485-701   | 10/21/2008     | 38485   |        | NA         |          |        |        |         |         |      |
| 10.9               | Dunkard Creek @ end of Bald Hill Church Road | 39° 45' 20.0" | 80° 00' 43.4" | 1552-100   | 9/10/2009      | 06686   | 11.44  | NA         |          |        |        |         |         |      |
|                    |  |               |               | 1552-135   | 9/15/2009      | 06811   | 13.34  | NA         | 28       |        |        |         |         |      |
|                    |  |               |               | 1552-183   | 9/21/2009      | 33379   | 14.93  | NA         | 24       | 28.5   | 84     | <.02    |         |      |
|                    |  |               |               | 1552-218   | 9/29/2009      | 34467   | 9.15   | NA         | 25       |        |        |         |         |      |
|                    |  |               |               | 1552-246   | 10/6/2009      | 35243   | 11.2   | NA         | 32       |        |        |         |         |      |
|                    |  |               |               | 1552-280   | 10/21/2009     | 37164   | 9.82   | NA         | 8        |        |        |         |         |      |
|                    |  |               |               | 1552-305   | 11/4/2009      | 39193   | 11.06  | NA         | 3        |        |        |         |         |      |
|                    |  |               |               | 1552-326   | 11/18/2009     | 40453   |        | NA         | 3        |        |        |         |         |      |
|                    |  |               |               | 1552-341   | 12/2/2009      | 41518   |        | NA         | 10       |        |        |         |         |      |
|                    |  |               |               | 1552-358   | 12/16/2009     | 43393   |        | NA         | 4        |        |        |         | 0.09    |      |
|                    |  |               |               | 1552-375   | 1/6/2010       | 00348   |        | NA         | 4        |        |        |         | 0.13    |      |
|                    |  |               |               | 0552-931   | 8/11/2010      | 25836   |        | 0          | 9        | 3.5    |        |         | <.02    | <.04 |
|                    |  |               |               | 0552-945   | 8/25/2010      | 27390   |        | 0          | 9        | 11     |        |         | <.02    | <.04 |
|                    |  |               |               | 0552-958   | 9/8/2010       | 28700   |        | 0          | 15       | 2.8    |        |         | <.02    | <.04 |
|                    |  |               |               | 0552-972   | 9/22/2010      | 29726   |        | 0          | 18       | 2.1    |        |         | 0.03    | <.04 |
|                    |  |               |               | 0552-986   | 10/6/2010      | 31136   |        | 0          | 18       | 1.1    |        |         | 1.72    | 0.9  |
| 0552-001           | 10/20/2010                                   | 32716         |               | 0          | 17             | 1.9     |        |            | 0.03     | 1.35   |        |         |         |      |
| 0552-030           | 7/19/2012                                    | 22234         |               | 7.88       | 8              |         |        |            |          |        |        |         |         |      |
| 10.8               | SHANNOPIN MINE DISCHARGE                     | 39° 45' 20.3" | 80° 00' 35.0" | 1552-141   | 9/15/2009      | 32737   | 8.25   | NA         |          |        |        |         |         |      |
|                    |  |               |               | 1552-187   | 9/21/2009      | 34468   | 8.8    | NA         | 181      | 7      | 5      | 7.77    |         |      |
|                    |  |               |               | 1552-220   | 9/29/2009      | 34468   | 9.36   | NA         | 187      |        |        |         |         |      |
|                    |  |               |               | 1552-248   | 10/6/2009      | 35244   | 7.89   | NA         | 151      |        |        | 5.1     | 1.17    |      |
|                    |  |               |               | 1552-282   | 10/21/2009     | 37165   | 9.34   | NA         | 180      | 8.2    |        | 4.67    |         |      |
|                    |  |               |               | 1552-306   | 11/4/2009      | 39194   | 7.84   | NA         | 181      | 8.9    |        | 2.35    |         |      |
|                    |  |               |               | 1552-327   | 11/18/2009     | 40447   |        | NA         | 160      | 1.8    |        | 5.04    |         |      |
|                    |  |               |               | 1552-342   | 12/2/2009      | 41543   |        | NA         | 146      | 9.8    |        | 3.58    |         |      |
|                    |  |               |               | 1552-376   | 1/6/2010       | 00353   |        | NA         | 4        | 0.7    |        | 0.07    |         |      |
|                    |  |               |               | 1552-388   | 1/20/2010      | 01541   |        | NA         | 173      |        |        | 5.07    |         |      |
|                    |  |               |               | 7485-704   | 10/21/2008     | 38488   |        | NA         |          |        |        |         |         |      |
|                    |  |               |               | 0552-932   | 8/11/2010      | 25861   |        | 0          | 160      | 4.8    |        | 3.68    | 0.32    |      |
|                    |  |               |               | 0552-946   | 8/25/2010      | 27387   |        | 0          | 158      | 8.6    |        | 3.7     | 0.35    |      |
|                    |  |               |               | 0552-959   | 9/8/2010       | 28651   |        | 0          | 157      | 4      |        | 3.58    | 0.44    |      |
|                    |  |               |               | 0552-973   | 9/22/2010      | 29656   |        | 0          | 151      | 1.5    |        | 3.84    | 0.42    |      |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |                               |               |                |            |                |           |                 |                            |                         |                  |            |                         |                |      |      |
|--------------------|-------------------------------|---------------|----------------|------------|----------------|-----------|-----------------|----------------------------|-------------------------|------------------|------------|-------------------------|----------------|------|------|
|                    |                               |               |                |            |                |           | DO FIELD (mg/L) | P. Parvum Count (cells/mL) | OSMOTIC PRESSURE (MOSM) | BOD 5 DAY (mg/L) | TSS (mg/L) | AMMONIA NITROGEN (mg/L) | NITRATE (mg/L) |      |      |
| RMI                | SAMPLE LOCATION               | LATITUDE      | LONGITUDE      | SAMPLE ID# | DATE COLLECTED | LAB ID#   |                 |                            |                         |                  |            |                         |                |      |      |
|                    |                               |               |                | 0552-987   | 10/6/2010      | 31132     |                 | 0                          | 169                     | 2.8              |            | 4.15                    | 0.38           |      |      |
|                    |                               |               |                | 0552-002   | 10/20/2010     | 32760     | st 5 MG         | NA                         | 171                     | 6.5              |            | 4.07                    | 0.47           |      |      |
|                    |                               |               |                | 0552-031   | 7/19/2012      | 22235     | 6.16            |                            | 106                     |                  |            |                         |                |      |      |
| 9.8                | Dunkard Creek DC5B            |               |                | 7485-702   | 10/21/2008     | 38486     |                 | NA                         |                         |                  |            |                         |                |      |      |
| 9.5                | Dunkard Creek DC6             |               |                | 7485-703   | 10/21/2008     | 38487     |                 | NA                         |                         |                  |            |                         |                |      |      |
| 6.7                | Dunkard Creek @ LR2008 Bridge | N 39° 44' 52" | W 079° 58' 46" | 1552-192   | 9/21/2009      | 33347     | 10.73           | NA                         | 133                     | 7.6              | 23         | 0.81                    |                |      |      |
|                    |                               |               |                | 1552-222   | 9/29/2009      | 34469     | 10.55           | NA                         | 120                     |                  |            |                         |                |      |      |
|                    |                               |               |                | 1552-250   | 10/6/2009      | 35242     | 12.32           | NA                         | 105                     |                  |            |                         | 0.22           | 0.17 |      |
|                    |                               |               |                | 1552-284   | 10/21/2009     | 37162     | 10.23           | NA                         | 60                      |                  |            |                         | 0.53           |      |      |
|                    |                               |               |                | 1552-307   | 11/4/2009      | 39195     | 11.86           | NA                         | 53                      |                  |            |                         | 0.42           |      |      |
|                    |                               |               |                | 1552-328   | 11/18/2009     | 40448     |                 | NA                         | 86                      |                  |            |                         | 0.52           |      |      |
|                    |                               |               |                | 1552-343   | 12/2/2009      | 41544     |                 | NA                         | 47                      |                  |            |                         | 0.17           |      |      |
|                    |                               |               |                | 1552-360   | 12/16/2009     | 43388     |                 | NA                         | 2                       |                  |            |                         | 0.1            |      |      |
|                    |                               |               |                | 1552-377   | 1/6/2010       | 00354     |                 | NA                         | 3                       |                  |            |                         | 0.12           |      |      |
|                    |                               |               |                | 0552-034   | 7/19/2012      | 22691     | 12.62           |                            | 3                       |                  |            |                         |                |      |      |
| 4.6                | USGS Shannopin Gauge          | 39° 45' 33"   | 79° 58' 15"    | NA         | 9/10/2009      | Gage Data |                 | NA                         |                         |                  |            |                         |                |      |      |
|                    |                               |               |                | NA         | 9/15/2009      | Gage Data |                 | NA                         |                         |                  |            |                         |                |      |      |
|                    |                               |               |                | NA         | 9/17/2009      | Gage Data |                 | NA                         |                         |                  |            |                         |                |      |      |
|                    |                               |               |                | NA         | 9/21/2009      | Gage Data |                 | NA                         |                         |                  |            |                         |                |      |      |
|                    |                               |               |                | NA         | 9/29/2009      | Gage Data |                 | NA                         |                         |                  |            |                         |                |      |      |
|                    |                               |               |                | NA         | 10/6/2009      | Gage Data |                 | NA                         |                         |                  |            |                         |                |      |      |
|                    |                               |               |                | NA         | 10/21/2009     | Gage Data |                 | NA                         |                         |                  |            |                         |                |      |      |
|                    |                               |               |                | NA         | 11/4/2009      | Gage Data |                 | NA                         |                         |                  |            |                         |                |      |      |
|                    |                               |               |                | NA         | 11/18/2009     | Gage Data |                 | NA                         |                         |                  |            |                         |                |      |      |
|                    |                               |               |                | NA         | 12/2/2009      | Gage Data |                 | NA                         |                         |                  |            |                         |                |      |      |
|                    |                               |               |                | NA         | 12/16/2009     | Gage Data | 173             | NA                         |                         |                  |            |                         |                |      |      |
|                    |                               |               |                | NA         | 1/6/2010       | Gage Data |                 | NA                         |                         |                  |            |                         |                |      |      |
|                    |                               |               |                | 0552-933   | 8/11/2010      | 35862     |                 | 0                          | 38                      | 6.1              |            |                         |                | <.02 | <.04 |
|                    |                               |               |                | 0552-947   | 8/25/2010      | 27388     |                 | 0                          | 36                      | 5.2              |            |                         |                | <.02 | 0.13 |
|                    |                               |               |                | 0552-960   | 9/8/2010       | 28652     |                 | 0                          | 58                      | 1.3              |            |                         |                | 0.02 | 0.57 |
| 0552-974           | 9/22/2010                     | 29657         |                | 0          | 52             | 1         |                 |                            |                         | <.02             | 0.58       |                         |                |      |      |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |  |                |                 |            |                |         |                 |                            |                         |                  |            |                         |                |      |
|--------------------|--|----------------|-----------------|------------|----------------|---------|-----------------|----------------------------|-------------------------|------------------|------------|-------------------------|----------------|------|
|                    |  |                |                 |            |                |         | DO FIELD (mg/L) | P. Parvum Count (cells/mL) | OSMOTIC PRESSURE (MOSM) | BOD 5 DAY (mg/L) | TSS (mg/L) | AMMONIA NITROGEN (mg/L) | NITRATE (mg/L) |      |
| RMI                | SAMPLE LOCATION                              | LATITUDE       | LONGITUDE       | SAMPLE ID# | DATE COLLECTED | LAB ID# |                 |                            |                         |                  |            |                         |                |      |
|                    |  |                |                 | 0552-988   | 10/6/2010      | 31133   |                 | 0                          | 34                      | 1.4              |            | 0.23                    | 0.93           |      |
|                    |  |                |                 | 0552-003   | 10/20/2010     | 32761   |                 | NA                         | 44                      | <0.2             |            | <.02                    | 0.9            |      |
| 4                  | Dunkard Creek DC7                            |                |                 | 7485-705   | 10/21/2008     | 38489   |                 | NA                         |                         |                  |            |                         |                |      |
| 3.46               | Algae Sampling Point                         | N 39°45' 47.3" | W 079°56' 54.8" | 0577-012   | 11/18/2009     | 40484   | 10.73           | NA                         | 10                      |                  |            |                         |                |      |
| 2.95               | Dunkard Creek DC8A                           |                |                 | 7485-706   | 10/21/2008     | 38490   |                 | NA                         |                         |                  |            |                         |                |      |
| 1                  | Dunkard Creek DC8A                           |                |                 | 7485-707   | 10/21/2008     | 38491   |                 | NA                         |                         |                  |            |                         |                |      |
| 0.1                | RMI 0.5 Mouth of Dunkard Creek Under 88 Brdg | N 39° 45' 51"  | W 079° 56' 17"  | 1552-196   | 9/21/2009      | 33339   | 9.65            | NA                         | 2                       | 2.1              | <5         | 0.03                    |                |      |
|                    |  |                |                 | 1552-224   | 9/29/2009      | 34476   | 9.34            | NA                         | 8                       |                  |            |                         |                |      |
|                    |  |                |                 | 1552-252   | 10/6/2009      | 35241   | 9.93            | NA                         | 5                       |                  |            |                         | 0.11           | 0.02 |
|                    |  |                |                 | 1552-286   | 10/21/2009     | 37163   | 9.04            | NA                         | 5                       |                  |            |                         | 0.14           |      |
|                    |  |                |                 | 1552-308   | 11/4/2009      | 39235   | 10.65           | NA                         |                         |                  |            |                         | 0.05           |      |
|                    |  |                |                 | 1552-329   | 11/18/2009     | 40520   |                 | NA                         | 5                       |                  |            |                         | 0.1            |      |
|                    |  |                |                 | 1552-344   | 12/2/2009      | 41547   |                 | NA                         | 1                       |                  |            |                         | 0.05           |      |
|                    |  |                |                 | 1552-361   | 12/16/2009     | 43389   |                 | NA                         | 4                       |                  |            |                         | 0.11           |      |
|                    |  |                |                 | 0593-020   | 10/15/2008     | 37432   |                 | NA                         | NA                      |                  |            |                         |                |      |
|                    |  |                |                 | 0593-029   | 10/22/2008     | 39040   |                 | 9.54                       | NA                      |                  |            |                         |                |      |
|                    |  |                |                 | 0552-879   | 11/17/2008     | 42551   |                 | NA                         |                         |                  |            |                         |                |      |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |   |                  |               |               |                   |                    | VOLATILE ORGANICS |                                |               |                      |                   |                              |       |
|--------------------|---|------------------|---------------|---------------|-------------------|--------------------|-------------------|--------------------------------|---------------|----------------------|-------------------|------------------------------|-------|
|                    |   |                  |               |               |                   |                    | NITRITE<br>(mg/L) | NITRATE /<br>NITRITE<br>(mg/L) | TKN<br>(mg/L) | PHOSPHORUS<br>(mg/L) | Acetone<br>(ug/L) | t-Butyl<br>Alcohol<br>(ug/L) |       |
| RMI                | SAMPLE<br>LOCATION                                | LATITUDE         | LONGITUDE     | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID#         |                   |                                | 750<br>(AFC)  |                      |                   |                              |       |
| 1.1                | PA Fork<br>Dunkard<br>Creek                       | 39° 43'<br>44.6" | 80° 16' 42.8" | 1552-075      | 9/10/2009         | 06681              |                   |                                |               |                      |                   |                              |       |
|                    |   |                  |               | 1552-111      | 9/15/2009         | 06807              |                   |                                |               |                      | 2.6               |                              |       |
|                    |   |                  |               | 1552-159      | 9/21/2009         | 33355              |                   |                                |               |                      | 0.091             |                              |       |
|                    |   |                  |               | 1552-200      | 9/29/2009         | 34473              |                   |                                |               |                      |                   |                              |       |
|                    |   |                  |               | 1552-228      | 10/6/2009         | 35248              |                   |                                |               |                      | 0.028             |                              |       |
|                    |   |                  |               | 1552-260      | 10/21/2009        | 37169              |                   |                                |               |                      | 0.032             |                              |       |
|                    |   |                  |               | 1552-296      | 11/4/2009         | 39186              |                   |                                |               | 0.024                |                   |                              |       |
|                    |   |                  |               | 1552-317      | 11/18/2009        | 40449              |                   |                                |               |                      | 0.02              |                              |       |
|                    |   |                  |               | 1552-332      | 12/2/2009         | 41519              |                   |                                |               |                      | 0.015             |                              |       |
|                    |   |                  |               | 1552-349      | 12/16/2009        | 43385              |                   |                                |               | 0.021                | 0.35              | 0.021                        |       |
|                    |   |                  |               | 1552-366      | 1/6/2010          | 00349              |                   |                                |               |                      | 0.21              | 0.013                        |       |
|                    |   |                  |               | 1552-383      | 1/20/2010         | 01538              |                   |                                |               |                      | 0.5               | 0.024                        |       |
|                    |   |                  |               | 0552-922      | 8/11/2010         | 25779              |                   |                                |               | <.01                 | 0.04              | <1.0                         | 0.422 |
|                    |   |                  |               | 0552-936      | 8/25/2010         | 27336              |                   |                                |               | <.01                 | <.05              | <1.0                         | 0.436 |
|                    |   |                  |               | 0552-949      | 9/8/2010          | 28689              |                   |                                |               | <.01                 | <.05              | <1.0                         | 1.333 |
|                    |   |                  |               | 0552-963      | 9/22/2010         | 29661              |                   |                                |               | <.01                 | <.05              | <1.0                         | 0.505 |
| 0552-977           | 10/6/2010   | 31139            |               |               |                   | <.01               | <.05              | <1.0                           | 0.432         |                      |                   |                              |       |
| 0552-991           | 10/20/2010  | 32724            |               |               |                   | <.01               | <.05              | <1.0                           | 0.044         |                      |                   |                              |       |
| 0.6                | WV Fork<br>Dunkard<br>Creek 50' US<br>Outfall 003 | 39° 42' 48"      | 80° 17' 17"   | 1552          | 9/15/2009         | Field Data<br>Only |                   |                                |               |                      |                   |                              |       |
|                    |   |                  |               |               | 9/21/2009         |                    |                   |                                |               |                      |                   |                              |       |
|                    |   |                  |               | 1552-202      | 9/29/2009         | 34474              |                   |                                |               |                      |                   |                              |       |
|                    |   |                  |               | 1552-230      | 10/6/2009         | 35249,             |                   |                                |               |                      | 0.027             |                              |       |
|                    |   |                  |               | 1552-264      | 10/21/2009        | 37173              |                   |                                |               | 0.09                 | 1.08              |                              |       |
|                    |   |                  |               | 1552-297      | 11/4/2009         | 39187              |                   |                                |               |                      | 0.015             |                              |       |
|                    |   |                  |               | 1552-318      | 11/18/2009        | 40450              |                   |                                |               |                      | 0.022             |                              |       |
|                    |   |                  |               | 1552-333      | 12/2/2009         | 41520              |                   |                                |               | 0.14                 | 0.017             |                              |       |
|                    |   |                  |               | 1552-350      | 12/16/2009        | 43387              |                   |                                |               | 0.49                 | 0.017             |                              |       |
|                    |   |                  |               | 1552-367      | 1/6/2010          | 00350              |                   |                                |               | 0.32                 | 0.013             |                              |       |
|                    |   |                  |               | 1552-384      | 1/20/2010         | 01539              |                   |                                |               | 0.66                 | 0.019             |                              |       |
|                    |   |                  |               | 0552-923      | 8/11/2010         | 25793              |                   |                                |               | <.01                 | <.05              | <1.0                         | 0.255 |
|                    |   |                  |               | 0552-937      | 8/25/2010         | 27337              |                   |                                |               | <.01                 | <.05              | <1.0                         | 0.067 |
|                    |   |                  |               | 0552-950      | 9/8/2010          | 28690              |                   |                                |               | <.01                 | <.05              | <1.0                         | 0.076 |
|                    |   |                  |               | 0552-964      | 9/22/2010         | 29662              |                   |                                |               | <.01                 | <.05              | 1.08                         | 0.072 |
| 0552-978           | 10/6/2010   | 31140            |               |               |                   | <.01               | 0.22              | <1.0                           | 0.059         |                      |                   |                              |       |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |   |                  |               |               |                   |                    | VOLATILE ORGANICS |                                |               |                      |                   |                              |  |  |
|--------------------|---|------------------|---------------|---------------|-------------------|--------------------|-------------------|--------------------------------|---------------|----------------------|-------------------|------------------------------|--|--|
|                    |   |                  |               |               |                   |                    | NITRITE<br>(mg/L) | NITRATE /<br>NITRITE<br>(mg/L) | TKN<br>(mg/L) | PHOSPHORUS<br>(mg/L) | Acetone<br>(ug/L) | t-Butyl<br>Alcohol<br>(ug/L) |  |  |
| RMI                | SAMPLE<br>LOCATION  | LATITUDE         | LONGITUDE     | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID#         |                   |                                |               | 750<br>(AFC)         |                   |                              |  |  |
|                    |   |                  |               | 0552-992      | 10/20/2010        | 32725              | <.01              | <.05                           | <1.0          | 0.081                |                   |                              |  |  |
| 0.5                | Blacksville #2<br>discharge<br>from Beaver<br>Pond or Pond<br>Itself Outfall<br>003                       | 39° 42' 52"      | 80° 17' 15"   | 0552-925      | 8/11/2010         | 25794              | 0.01              | 0.01                           | <1.0          | 0.037                |                   |                              |  |  |
|                    |   |                  |               | 0552-939      | 8/25/2010         | ND                 |                   |                                |               |                      |                   |                              |  |  |
|                    |   |                  |               | 0552-952      | 9/8/2010          | ND                 |                   |                                |               |                      |                   |                              |  |  |
|                    |   |                  |               | 0552-966      | 9/22/2010         | ND                 |                   |                                |               |                      |                   |                              |  |  |
|                    |   |                  |               | 0552-979      | 10/6/2010         | ND                 |                   |                                |               |                      |                   |                              |  |  |
|                    |   |                  |               | 0552-994      | 10/20/2010        | ND                 |                   |                                |               |                      |                   |                              |  |  |
| 0.4                | Blacksville #2<br>Mine Outfall<br>005<br>Discharge to<br>WV Fork<br>2000' US jct<br>PA Fork @<br>Shamrock | 39° 43'<br>07.6" | 80° 16' 38.8" | 1552          | 9/15/2009         | Field Data<br>Only |                   |                                |               |                      |                   |                              |  |  |
|                    |   |                  |               | 1552-148      | 9/17/2009         | 33133              |                   |                                |               |                      |                   |                              |  |  |
|                    |   |                  |               | 1552-167      | 9/21/2009         | 33363              |                   |                                |               |                      | 0.051             |                              |  |  |
|                    |   |                  |               | 1552-204      | 9/29/2009         | 34475              |                   |                                |               |                      |                   |                              |  |  |
|                    |   |                  |               | 1552-232      | 10/6/2009         | 35250              | 0.29              |                                | 1.72          | 0.05                 |                   |                              |  |  |
|                    |   |                  |               | 1552-266      | 10/21/2009        | 37174              |                   | 0.55                           |               | 0.039                |                   |                              |  |  |
|                    |   |                  |               | 1552-298      | 11/4/2009         | 39188              |                   | 0.3                            |               | 0.029                |                   |                              |  |  |
|                    |   |                  |               | 1552-319      | 11/18/2009        | 40504              |                   | 0.28                           |               | 0.022                |                   |                              |  |  |
|                    |   |                  |               | 1552-334      | 12/2/2009         | 41545              |                   | 0.33                           |               | 0.021                |                   |                              |  |  |
|                    |   |                  |               | 1552-351      | 12/16/2009        | 43377              |                   | 0.64                           |               | 0.021                |                   |                              |  |  |
|                    |   |                  |               | 1552-368      | 1/6/2010          | 00351              |                   | 0.4                            |               | 0.014                |                   |                              |  |  |
|                    |   |                  |               | 1552-385      | 1/20/2010         | 01515              |                   | 0.92                           |               | 0.019                |                   |                              |  |  |
|                    |   |                  |               | 0552-938      | 8/25/2010         | ND                 |                   |                                |               |                      |                   |                              |  |  |
|                    |   |                  |               | 0552-950      | 9/8/2010          | ND                 |                   |                                |               |                      |                   |                              |  |  |
|                    |   |                  |               | 0552-965      | 9/22/2010         | ND                 |                   |                                |               |                      |                   |                              |  |  |
| 0552-980           | 10/6/2010   | ND               |               |               |                   |                    |                   |                                |               |                      |                   |                              |  |  |
| 0552-993           | 10/20/2010  | ND               |               |               |                   |                    |                   |                                |               |                      |                   |                              |  |  |
|                    |   |                  |               | 1552-090      | 9/10/2009         | 06684              |                   |                                |               |                      |                   |                              |  |  |
|                    |   |                  |               | 1552-117      | 9/15/2009         | 06808              |                   |                                |               |                      |                   |                              |  |  |
|                    |   |                  |               | 1552-151      | 9/17/2009         | 33136              |                   |                                |               |                      |                   |                              |  |  |
|                    |   |                  |               | 1552-163      | 9/21/2009         | 33359              |                   |                                |               | 0.116                |                   |                              |  |  |
|                    |   |                  |               | 1552-206      | 9/29/2009         | 34478              |                   |                                |               |                      |                   |                              |  |  |
|                    |   |                  |               | 1552-234      | 10/6/2009         | 35253              |                   |                                |               | 0.028                |                   |                              |  |  |
|                    |   |                  |               | 1552-268      | 10/21/2009        | 37185              |                   | 0.11                           |               | 0.018                |                   |                              |  |  |
|                    |   |                  |               | 1552-299      | 11/4/2009         | 39189              |                   | ~                              |               | 0.014                |                   |                              |  |  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.



| SAMPLE INFORMATION |                             |                    |                     |               |                   |            | VOLATILE ORGANICS |                                |               |                      |                   |                              |
|--------------------|-----------------------------|--------------------|---------------------|---------------|-------------------|------------|-------------------|--------------------------------|---------------|----------------------|-------------------|------------------------------|
|                    |                             |                    |                     |               |                   |            | NITRITE<br>(mg/L) | NITRATE /<br>NITRITE<br>(mg/L) | TKN<br>(mg/L) | PHOSPHORUS<br>(mg/L) | Acetone<br>(ug/L) | t-Butyl<br>Alcohol<br>(ug/L) |
| RMI                | SAMPLE<br>LOCATION          | LATITUDE           | LONGITUDE           | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID# |                   |                                | 750<br>(AFC)  |                      |                   |                              |
| 0.2                | WV Fork<br>Dunkard<br>Creek | 39° 43'<br>18.3"   | 80° 16' 25.1"       | 1552-320      | 11/18/2009        | 40505      |                   | 0.28                           |               | 0.022                |                   |                              |
|                    |                             |                    |                     | 1552-335      | 12/2/2009         | 41546      |                   | 0.13                           |               | 0.016                |                   |                              |
|                    |                             |                    |                     | 1552-352      | 12/16/2009        | 43378      |                   | 0.49                           |               | 0.019                |                   |                              |
|                    |                             |                    |                     | 1552-369      | 1/6/2010          | 00352      |                   | 0.32                           |               | 0.014                |                   |                              |
|                    |                             |                    |                     | 1552-386      | 1/20/2010         | 01540      |                   | 0.67                           |               | 0.019                |                   |                              |
|                    |                             |                    |                     | 0552-926      | 8/11/2010         | 25803      | <.01              | <.05                           | <1.0          | 0.046                |                   |                              |
|                    |                             |                    |                     | 0552-940      | 8/25/2010         | 27366      | <.01              | <.05                           | <1.0          | 0.081                |                   |                              |
|                    |                             |                    |                     | 0552-953      | 9/8/2010          | 28664      | <.01              | <.05                           | <1.0          | 0.045                |                   |                              |
|                    |                             |                    |                     | 0552-967      | 9/22/2010         | 29663      | <.01              | <.05                           | <1.0          | 0.043                |                   |                              |
|                    |                             |                    |                     | 0552-981      | 10/6/2010         | 31137      | <.01              | 0.3                            | <1.0          | 0.043                |                   |                              |
| 0552-995           | 10/20/2010                  | 32726              | <.01                | <.05          | <1.0              | 0.051      |                   |                                |               |                      |                   |                              |
| 41                 | Dunkard<br>Creek @<br>Brave | 39° 43'<br>39.0"   | 080° 15'<br>21.9"   | 1552-085      | 9/10/2009         | 06683      |                   |                                |               | 3.3                  | 9                 |                              |
|                    |                             |                    |                     | 1552-123      | 9/15/2009         | 06809      |                   |                                |               |                      | ~                 | ~                            |
|                    |                             |                    |                     | 1552-171      | 9/21/2009         | 33367      |                   |                                |               | 0.214                |                   |                              |
|                    |                             |                    |                     | 1552-208      | 9/29/2009         | 34479      |                   |                                |               |                      |                   |                              |
|                    |                             |                    |                     | 1552-236      | 10/6/2009         | 35254      |                   |                                |               | 0.056                |                   |                              |
|                    |                             |                    |                     | 1552-270      | 10/21/2009        | 37184      |                   | 0.11                           |               | 0.028                |                   |                              |
|                    |                             |                    |                     | 1552-300      | 11/4/2009         | 39190      |                   |                                |               | 0.022                |                   |                              |
|                    |                             |                    |                     | 1552-321      | 11/18/2009        | 40444      |                   |                                |               | 0.032                |                   |                              |
|                    |                             |                    |                     | 1552-336      | 12/2/2009         | 41539      |                   |                                |               | 0.019                |                   |                              |
|                    |                             |                    |                     | 1552-353      | 12/16/2009        | 43373      |                   | 0.43                           |               | 0.027                |                   |                              |
|                    |                             |                    |                     | 1552-370      | 1/6/2010          | 00343      |                   | 0.28                           |               | 0.014                |                   |                              |
|                    |                             |                    |                     | 1552-387      | 1/20/2010         | 01516      |                   | 0.55                           |               | 0.024                |                   |                              |
|                    |                             |                    |                     | 0552-927      | 8/11/2010         | 25804      | <.01              | <.05                           | <1.0          | 0.064                |                   |                              |
|                    |                             |                    |                     | 0552-941      | 8/25/2010         | 27367      | 0.01              | 0.14                           | <1.0          | 0.076                |                   |                              |
|                    |                             |                    |                     | 0552-954      | 9/8/2010          | 28665      | 0.01              | 0.01                           | 1.61          | 0.106                |                   |                              |
| 0552-968           | 9/22/2010                   | 29664              | <.01                | <.05          | 1.04              | 0.071      |                   |                                |               |                      |                   |                              |
| 0552-982           | 10/6/2010                   | 31138              | <.01                | 0.15          | <1.0              | 0.057      |                   |                                |               |                      |                   |                              |
| 0552-996           | 10/20/2010                  | 32727              | <.01                | <.05          | <1.0              | 0.054      |                   |                                |               |                      |                   |                              |
| 39.2               | Miracle Run<br>@ Mouth      | N 39° 43'<br>05.0" | W 080° 14'<br>28.8" | 1552-142      | 9/17/2009         | 33127      |                   |                                |               |                      |                   |                              |
|                    |                             |                    |                     | 1552-175      | 9/21/2009         | 33371      |                   |                                |               | 0.029                |                   |                              |
|                    |                             |                    |                     | 1552-208      | 9/29/2009         | 34479      |                   |                                |               |                      |                   |                              |
|                    |                             |                    |                     | 1552-238      | 10/6/2009         | 35251      | 5.95              |                                |               | 0.025                |                   |                              |
|                    |                             |                    |                     | 1552-272      | 10/21/2009        | 37172      |                   | 1.79                           |               | 0.015                |                   |                              |
|                    |                             |                    |                     | 1552-301      | 11/4/2009         | 39191      |                   | 3.53                           | 1.03          | 0.01                 |                   |                              |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |  |                  |               |               |                   |                    | VOLATILE ORGANICS |                                |               |                      |                   |                              |  |  |
|--------------------|--|------------------|---------------|---------------|-------------------|--------------------|-------------------|--------------------------------|---------------|----------------------|-------------------|------------------------------|--|--|
|                    |  |                  |               |               |                   |                    | NITRITE<br>(mg/L) | NITRATE /<br>NITRITE<br>(mg/L) | TKN<br>(mg/L) | PHOSPHORUS<br>(mg/L) | Acetone<br>(ug/L) | t-Butyl<br>Alcohol<br>(ug/L) |  |  |
| RMI                | SAMPLE<br>LOCATION                                     | LATITUDE         | LONGITUDE     | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID#         |                   |                                |               | 750<br>(AFC)         |                   |                              |  |  |
|                    |  |                  |               | 1552-322      | 11/18/2009        | 40445              |                   | 4.47                           | 1.19          | 0.014                |                   |                              |  |  |
|                    |  |                  |               | 1552-337      | 12/2/2009         | 41540              |                   | 2.22                           | 2.13          | 0.013                |                   |                              |  |  |
|                    |  |                  |               | 1552-354      | 12/16/2009        | 43374              |                   | 1.01                           | 1.3           | 0.025                |                   |                              |  |  |
|                    |  |                  |               | 1552-371      | 1/6/2010          | 00344              |                   | 0.79                           | 1.39          | ~                    |                   |                              |  |  |
| 37.5               | Dunkard<br>Creek @<br>Blacksville                      | 39° 43'<br>15.7" | 80° 13' 20.6" | 1552          | 9/17/2009         | Field Data<br>Only |                   |                                |               |                      |                   |                              |  |  |
|                    |  |                  |               | 1552          | 9/21/2009         | Field Data<br>Only |                   |                                |               |                      |                   |                              |  |  |
|                    |  |                  |               | 1552-214      | 9/29/2009         | 34471              |                   |                                |               |                      |                   |                              |  |  |
|                    |  |                  |               | 1552-240      | 10/6/2009         | 35252              | 1.79              |                                |               |                      | 0.033             |                              |  |  |
|                    |  |                  |               | 1552-274      | 10/21/2009        | 37171              |                   | 0.46                           |               |                      | 0.022             |                              |  |  |
|                    |  |                  |               | 1552-302      | 11/4/2009         | 39207              |                   | 0.84                           |               |                      | 0.017             |                              |  |  |
|                    |  |                  |               | 1552-323      | 11/18/2009        | 40446              |                   | 1.54                           |               |                      | 0.019             |                              |  |  |
|                    |  |                  |               | 1552-338      | 12/2/2009         | 41541              |                   | 0.76                           |               |                      | 0.016             |                              |  |  |
|                    |  |                  |               | 1552-355      | 12/16/2009        | 43375              |                   | 0.59                           |               |                      | 0.022             |                              |  |  |
|                    |  |                  |               | 1552-372      | 1/6/2010          | 00345              |                   | 0.41                           |               |                      | 0.012             |                              |  |  |
|                    |  |                  |               | 0552-928      | 8/11/2010         | 25782              | 0.06              | 1.84                           | <1.0          |                      | 0.038             |                              |  |  |
|                    |  |                  |               | 0552-942      | 8/25/2010         | 27380              | 0.05              | 1.44                           | <1.0          |                      | 0.038             |                              |  |  |
|                    |  |                  |               | 0552-955      | 9/8/2010          | 28666              | <.01              | <.05                           | <1.0          |                      | 0.04              |                              |  |  |
|                    |  |                  |               | 0552-969      | 9/22/2010         | 29696              | 0.17              | 2.03                           | 6.32          |                      | 0.047             |                              |  |  |
|                    |  |                  |               | 0552-983      | 10/6/2010         | 31161              | 0.25              | 2.43                           | 5.54          |                      | 0.032             |                              |  |  |
| 0552-997           | 10/20/2010   | 32721            | 0.32          | 4.06          | <1.0              |                    | 0.026             |                                |               |                      |                   |                              |  |  |
| 30.3               | Dunkard<br>Creek @<br>Route 7<br>bridge in<br>Pentress | 39° 42' 43"      | 80° 9' 43"    | 1552-214      | 9/29/2009         | 34471              |                   |                                |               |                      |                   |                              |  |  |
|                    |  |                  |               | 1552-242      | 10/6/2009         | 35245              | 0.76              |                                |               | 0.067                |                   |                              |  |  |
|                    |  |                  |               | 1552-276      | 10/21/2009        | 37148              |                   | 0.61                           |               |                      | 0.023             |                              |  |  |
|                    |  |                  |               | 1552-303      | 11/4/2009         | 39208              |                   | 0.6                            |               |                      | 0.018             |                              |  |  |
|                    |  |                  |               | 1552-324      | 11/18/2009        | 40451              |                   | 0.58                           |               |                      | 0.023             |                              |  |  |
|                    |  |                  |               | 1552-339      | 12/2/2009         | 41516              |                   | 1.12                           |               |                      | 0.016             |                              |  |  |
|                    |  |                  |               | 1552-356      | 12/16/2009        | 43391              |                   | 0.65                           |               |                      | 0.021             |                              |  |  |
|                    |  |                  |               | 1552-373      | 1/6/2010          | 00346              |                   | 0.45                           |               |                      | 0.012             |                              |  |  |
|                    |  |                  |               | 0552-929      | 8/11/2010         | 25783              | <.01              | 0.18                           | <1.0          |                      | 0.038             |                              |  |  |
|                    |  |                  |               | 0552-943      | 8/25/2010         | 27381              | <.01              | 0.19                           | <1.0          |                      | 0.06              |                              |  |  |
|                    |  |                  |               | 0552-956      | 9/8/2010          | 28667              | <.01              | <.05                           | <1.0          |                      | 0.037             |                              |  |  |
|                    |  |                  |               | 0552-970      | 9/22/2010         | 29697              | <.01              | <.05                           | <1.0          |                      | 0.043             |                              |  |  |
| 0552-984           | 10/6/2010  | 31162            | 0.27          | 2.08          | 5.46              |                    | 0.027             |                                |               |                      |                   |                              |  |  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |   |                  |               |               |                   |            | VOLATILE ORGANICS |                                |               |                      |                   |                              |  |  |
|--------------------|---|------------------|---------------|---------------|-------------------|------------|-------------------|--------------------------------|---------------|----------------------|-------------------|------------------------------|--|--|
|                    |   |                  |               |               |                   |            | NITRITE<br>(mg/L) | NITRATE /<br>NITRITE<br>(mg/L) | TKN<br>(mg/L) | PHOSPHORUS<br>(mg/L) | Acetone<br>(ug/L) | t-Butyl<br>Alcohol<br>(ug/L) |  |  |
| RMI                | SAMPLE<br>LOCATION                        | LATITUDE         | LONGITUDE     | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID# |                   |                                |               | 750<br>(AFC)         |                   |                              |  |  |
|                    |   |                  |               | 0552-998      | 10/20/2010        | 32722      | 0.04              | 3.11                           | <1.0          | 0.027                |                   |                              |  |  |
| 22.8               | Dunkard<br>Creek @<br>Mason Dixon<br>Park | 39° 42'<br>55.7" | 80° 06' 40.8" | 1552-129      | 9/15/2009         | 06810      |                   |                                |               |                      | ~                 | ~                            |  |  |
|                    |   |                  |               | 1552-179      | 9/21/2009         | 33375      |                   |                                |               | 0.134                |                   |                              |  |  |
|                    |   |                  |               | 1552-216      | 9/29/2009         | 34472      |                   |                                |               |                      |                   |                              |  |  |
|                    |   |                  |               | 1552-244      | 10/6/2009         | 35246      | 0.1               |                                | 1.02          | 0.057                |                   |                              |  |  |
|                    |   |                  |               | 1552-278      | 10/21/2009        | 37149      |                   | 0.62                           |               | 0.021                |                   |                              |  |  |
|                    |   |                  |               | 1552-304      | 11/4/2009         | 39209      |                   | 0.36                           |               | 0.017                |                   |                              |  |  |
|                    |   |                  |               | 1552-325      | 11/18/2009        | 40452      |                   | 0.32                           |               | 0.018                |                   |                              |  |  |
|                    |   |                  |               | 1552-340      | 12/2/2009         | 41517      |                   | 1.12                           |               | 0.016                |                   |                              |  |  |
|                    |   |                  |               | 1552-357      | 12/16/2009        | 43392      |                   | 0.66                           |               | 0.02                 |                   |                              |  |  |
|                    |   |                  |               | 1552-374      | 1/6/2010          | 00347      |                   | 0.46                           |               | 0.012                |                   |                              |  |  |
|                    |   |                  |               | 0552-930      | 8/11/2010         | 25835      | <.01              | <.05                           | <1.0          | 0.042                |                   |                              |  |  |
|                    |   |                  |               | 0552-944      | 8/25/2010         | 27389      | <.01              | <.05                           | <1.0          | 0.047                |                   |                              |  |  |
|                    |   |                  |               | 0552-957      | 9/8/2010          | 28699      | 0.01              | <.05                           | <1.0          | 0.106                |                   |                              |  |  |
|                    |   |                  |               | 0552-971      | 9/22/2010         | 29725      | <.01              | <.05                           | <1.0          | 0.037                |                   |                              |  |  |
|                    |   |                  |               | 0552-985      | 10/6/2010         | 31135      | 0.18              | 1.7                            | 3             | 0.032                |                   |                              |  |  |
| 0552-999           | 10/20/2010                                | 32715            | 0.04          | 1.83          | <1.0              | 0.023      |                   |                                |               |                      |                   |                              |  |  |
|                    |   |                  |               | CMU*          | 9/17/2009         | NA         |                   |                                |               | NA                   |                   |                              |  |  |
|                    |   |                  |               | CMU*          | 9/22/2009         | NA         |                   |                                |               | NA                   |                   |                              |  |  |
|                    |   |                  |               | CMU*          | 9/29/2009         | NA         |                   |                                |               | NA                   |                   |                              |  |  |
|                    |   |                  |               | CMU*          | 10/6/2009         | NA         |                   |                                |               | NA                   |                   |                              |  |  |
|                    |   |                  |               | CMU*          | 10/13/2009        | NA         |                   |                                |               | NA                   |                   |                              |  |  |
|                    |   |                  |               | CMU*          | 10/20/2009        | NA         |                   |                                |               | NA                   |                   |                              |  |  |
|                    |   |                  |               | CMU*          | 10/27/2009        | NA         |                   |                                |               | NA                   |                   |                              |  |  |
|                    |   |                  |               | CMU*          | 11/3/2009         | NA         |                   |                                |               | NA                   |                   |                              |  |  |
|                    |   |                  |               | CMU*          | 11/10/2009        | NA         |                   |                                |               | NA                   |                   |                              |  |  |
|                    |   |                  |               | CMU*          | 11/17/2009        | NA         |                   |                                |               | NA                   |                   |                              |  |  |
|                    |   |                  |               | CMU*          | 11/24/2009        | NA         |                   |                                |               | NA                   |                   |                              |  |  |
|                    |   |                  |               | CMU*          | 12/1/2009         | NA         |                   |                                |               | NA                   |                   |                              |  |  |
|                    |   |                  |               | CMU*          | 12/8/2009         | NA         |                   |                                |               | NA                   |                   |                              |  |  |
|                    |   |                  |               | CMU*          | 12/15/2009        | NA         |                   |                                |               | NA                   |                   |                              |  |  |
|                    |   |                  |               | CMU*          | 1/5/2010          | NA         |                   |                                |               | NA                   |                   |                              |  |  |
|                    |   |                  |               | CMU*          | 1/12/2010         | NA         |                   |                                |               | NA                   |                   |                              |  |  |
|                    |   |                  |               | CMU*          | 1/19/2010         | NA         |                   |                                |               | NA                   |                   |                              |  |  |
|                    |   |                  |               | CMU*          | 2/3/2010          | NA         |                   |                                |               | NA                   |                   |                              |  |  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |                    |          |           |               |                   |            | VOLATILE ORGANICS |                                |               |                      |                   |                              |
|--------------------|--------------------|----------|-----------|---------------|-------------------|------------|-------------------|--------------------------------|---------------|----------------------|-------------------|------------------------------|
|                    |                    |          |           |               |                   |            | NITRITE<br>(mg/L) | NITRATE /<br>NITRITE<br>(mg/L) | TKN<br>(mg/L) | PHOSPHORUS<br>(mg/L) | Acetone<br>(ug/L) | t-Butyl<br>Alcohol<br>(ug/L) |
| RMI                | SAMPLE<br>LOCATION | LATITUDE | LONGITUDE | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID# |                   |                                | 750<br>(AFC)  |                      |                   |                              |
| 15                 | East Dunkard       |          |           | CMU*          | 2/23/2010         | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 3/9/2010          | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 3/23/2010         | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 4/6/2010          | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 4/20/2010         | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 5/4/2010          | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 5/18/2010         | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 5/25/2010         | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 6/1/2010          | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 6/8/2010          | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 6/15/2010         | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 6/29/2010         | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 7/5/2010          | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 7/13/2010         | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 7/22/2010         | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 7/27/2010         | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 8/5/2010          | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 8/10/2010         | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 8/17/2010         | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 8/24/2010         | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 8/31/2010         | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 9/7/2010          | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 9/14/2010         | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 9/21/2010         | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 9/29/2010         | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 10/7/2010         | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 10/11/2010        | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 10/19/2010        | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 10/26/2010        | NA         |                   |                                |               |                      |                   |                              |
|                    |                    |          |           | CMU*          | 11/3/2010         | NA         |                   |                                |               |                      |                   |                              |
| CMU*               | 12/14/2010         | NA       |           |               |                   |            |                   |                                |               |                      |                   |                              |
| CMU*               | 1/19/2011          | NA       |           |               |                   |            |                   |                                |               |                      |                   |                              |
| CMU*               | 2/16/2011          | NA       |           |               |                   |            |                   |                                |               |                      |                   |                              |
| CMU*               | 3/16/2011          | NA       |           |               |                   |            |                   |                                |               |                      |                   |                              |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |   |                  |               |               |                   |            | VOLATILE ORGANICS |                                |               |                      |                   |                              |  |
|--------------------|---|------------------|---------------|---------------|-------------------|------------|-------------------|--------------------------------|---------------|----------------------|-------------------|------------------------------|--|
|                    |   |                  |               |               |                   |            | NITRITE<br>(mg/L) | NITRATE /<br>NITRITE<br>(mg/L) | TKN<br>(mg/L) | PHOSPHORUS<br>(mg/L) | Acetone<br>(ug/L) | t-Butyl<br>Alcohol<br>(ug/L) |  |
| RMI                | SAMPLE<br>LOCATION                                    | LATITUDE         | LONGITUDE     | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID# |                   |                                | 750<br>(AFC)  |                      |                   |                              |  |
| 13                 | Dunkard<br>Creek DC5                                  |                  |               | 7485-701      | 10/21/2008        | 38485      |                   |                                | <200          |                      |                   |                              |  |
| 10.9               | Dunkard<br>Creek @ end<br>of Bald Hill<br>Church Road | 39° 45'<br>20.0" | 80° 00' 43.4" | 1552-100      | 9/10/2009         | 06686      |                   |                                |               |                      |                   |                              |  |
|                    |   |                  |               | 1552-135      | 9/15/2009         | 06811      |                   |                                |               |                      |                   |                              |  |
|                    |   |                  |               | 1552-183      | 9/21/2009         | 33379      |                   |                                |               | 0.432                |                   |                              |  |
|                    |   |                  |               | 1552-218      | 9/29/2009         | 34467      |                   |                                |               |                      |                   |                              |  |
|                    |   |                  |               | 1552-246      | 10/6/2009         | 35243      |                   |                                |               | 0.077                |                   |                              |  |
|                    |   |                  |               | 1552-280      | 10/21/2009        | 37164      |                   | 0.58                           |               | 0.023                |                   |                              |  |
|                    |   |                  |               | 1552-305      | 11/4/2009         | 39193      |                   | 0.1                            |               | 0.016                |                   |                              |  |
|                    |   |                  |               | 1552-326      | 11/18/2009        | 40453      |                   | 0.06                           |               | 0.024                |                   |                              |  |
|                    |   |                  |               | 1552-341      | 12/2/2009         | 41518      |                   | 0.52                           |               | 0.021                |                   |                              |  |
|                    |   |                  |               | 1552-358      | 12/16/2009        | 43393      |                   | 0.64                           |               | 0.019                |                   |                              |  |
|                    |   |                  |               | 1552-375      | 1/6/2010          | 00348      |                   | 0.45                           |               | 0.017                |                   |                              |  |
|                    |   |                  |               | 0552-931      | 8/11/2010         | 25836      |                   | <.01                           | <.05          | <1.0                 | 0.048             |                              |  |
|                    |   |                  |               | 0552-945      | 8/25/2010         | 27390      |                   | <.01                           | <.05          | <1.0                 | 0.084             |                              |  |
|                    |   |                  |               | 0552-958      | 9/8/2010          | 28700      |                   | <.01                           | <.05          | <1.0                 | 0.03              |                              |  |
|                    |   |                  |               | 0552-972      | 9/22/2010         | 29726      |                   | <.01                           | <.05          | <1.0                 | 0.034             |                              |  |
|                    |   |                  |               | 0552-986      | 10/6/2010         | 31136      |                   | 0.07                           | 0.97          | 2.13                 | 0.028             |                              |  |
| 0552-001           | 10/20/2010  | 32716            |               | 0.06          | 1.41              | <1.0       | 0.042             |                                |               |                      |                   |                              |  |
| 10.8               | SHANNOPIN<br>MINE<br>DISCHARGE                        | 39° 45' 20.3"    | 80° 00' 35.0" | 1552-141      | 9/15/2009         | 32737      |                   |                                |               |                      |                   |                              |  |
|                    |   |                  |               | 1552-187      | 9/21/2009         | 34468      |                   |                                |               | 0.152                |                   |                              |  |
|                    |   |                  |               | 1552-220      | 9/29/2009         | 34468      |                   |                                |               |                      |                   |                              |  |
|                    |   |                  |               | 1552-248      | 10/6/2009         | 35244      | 0.1               |                                | 4.57          | 0.198                |                   |                              |  |
|                    |   |                  |               | 1552-282      | 10/21/2009        | 37165      |                   | 1.32                           | 3.98          | 0.387                |                   |                              |  |
|                    |   |                  |               | 1552-306      | 11/4/2009         | 39194      |                   | 1.19                           | 4.67          | 0.219                |                   |                              |  |
|                    |   |                  |               | 1552-327      | 11/18/2009        | 40447      |                   | 1.35                           | 3.52          | 1.161                |                   |                              |  |
|                    |   |                  |               | 1552-342      | 12/2/2009         | 41543      |                   | 1.8                            | 3.88          | 0.43                 |                   |                              |  |
|                    |   |                  |               | 1552-376      | 1/6/2010          | 00353      |                   | 0.65                           |               | 0.038                |                   |                              |  |
|                    |   |                  |               | 1552-388      | 1/20/2010         | 01541      |                   | 0.63                           | 4.74          | 0.227                |                   |                              |  |
|                    |   |                  |               | 7485-704      | 10/21/2008        | 38488      |                   |                                |               | <200                 |                   |                              |  |
|                    |   |                  |               | 0552-932      | 8/11/2010         | 25861      | 1.81              | 2.13                           | 4.03          | 1.223                |                   |                              |  |
|                    |   |                  |               | 0552-946      | 8/25/2010         | 27387      | 2.55              | 2.9                            | 4.25          | 1.472                |                   |                              |  |
|                    |   |                  |               | 0552-959      | 9/8/2010          | 28651      | 2.38              | 2.82                           | 3.82          | 0.511                |                   |                              |  |
|                    |   |                  |               | 0552-973      | 9/22/2010         | 29656      | 2.04              | 2.46                           | 4.08          | 0.201                |                   |                              |  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |  |                  |                   |               |                   |            | VOLATILE ORGANICS |                                |               |                      |                   |                              |  |
|--------------------|--|------------------|-------------------|---------------|-------------------|------------|-------------------|--------------------------------|---------------|----------------------|-------------------|------------------------------|--|
|                    |  |                  |                   |               |                   |            | NITRITE<br>(mg/L) | NITRATE /<br>NITRITE<br>(mg/L) | TKN<br>(mg/L) | PHOSPHORUS<br>(mg/L) | Acetone<br>(ug/L) | t-Butyl<br>Alcohol<br>(ug/L) |  |
| RMI                | SAMPLE<br>LOCATION                     | LATITUDE         | LONGITUDE         | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID# |                   |                                |               | 750<br>(AFC)         |                   |                              |  |
|                    |  |                  |                   | 0552-987      | 10/6/2010         | 31132      | 1.71              | 2.09                           | 4.38          | 0.133                |                   |                              |  |
|                    |  |                  |                   | 0552-002      | 10/20/2010        | 32760      | 2.08              | 2.55                           | 4.14          | 0.273                |                   |                              |  |
|                    |  |                  |                   | 0552-031      | 7/19/2012         | 22235      |                   |                                |               |                      |                   |                              |  |
| 9.8                | Dunkard<br>Creek DC5B                  |                  |                   | 7485-702      | 10/21/2008        | 38486      |                   |                                |               | <200                 |                   |                              |  |
| 9.5                | Dunkard<br>Creek DC6                   |                  |                   | 7485-703      | 10/21/2008        | 38487      |                   |                                |               | <200                 |                   |                              |  |
| 6.7                | Dunkard<br>Creek @<br>LR2008<br>Bridge | N 39° 44'<br>52" | W 079° 58'<br>46" | 1552-192      | 9/21/2009         | 33347      |                   |                                |               | 0.152                |                   |                              |  |
|                    |  |                  |                   | 1552-222      | 9/29/2009         | 34469      |                   |                                |               |                      |                   |                              |  |
|                    |  |                  |                   | 1552-250      | 10/6/2009         | 35242      | 1.8               |                                |               | 0.086                |                   |                              |  |
|                    |  |                  |                   | 1552-284      | 10/21/2009        | 37162      |                   | 1.11                           |               | 0.056                |                   |                              |  |
|                    |  |                  |                   | 1552-307      | 11/4/2009         | 39195      |                   | 0.84                           |               | 0.06                 |                   |                              |  |
|                    |  |                  |                   | 1552-328      | 11/18/2009        | 40448      |                   | 1.61                           |               | 0.054                |                   |                              |  |
|                    |  |                  |                   | 1552-343      | 12/2/2009         | 41544      |                   | 1.36                           |               | 0.073                |                   |                              |  |
|                    |  |                  |                   | 1552-360      | 12/16/2009        | 43388      |                   | 0.71                           |               | 0.025                |                   |                              |  |
|                    |  |                  |                   | 1552-377      | 1/6/2010          | 00354      |                   | 0.49                           |               | 0.018                |                   |                              |  |
| 4.6                | USGS<br>Shannopin<br>Gauge             | 39° 45' 33"      | 79° 58' 15"       | 0552-034      | 7/19/2012         | 22691      |                   |                                |               |                      |                   |                              |  |
|                    |  |                  |                   | NA            | 9/10/2009         | Gage Data  |                   |                                |               |                      |                   |                              |  |
|                    |  |                  |                   | NA            | 9/15/2009         | Gage Data  |                   |                                |               |                      |                   |                              |  |
|                    |  |                  |                   | NA            | 9/17/2009         | Gage Data  |                   |                                |               |                      |                   |                              |  |
|                    |  |                  |                   | NA            | 9/21/2009         | Gage Data  |                   |                                |               |                      |                   |                              |  |
|                    |  |                  |                   | NA            | 9/29/2009         | Gage Data  |                   |                                |               |                      |                   |                              |  |
|                    |  |                  |                   | NA            | 10/6/2009         | Gage Data  |                   |                                |               |                      |                   |                              |  |
|                    |  |                  |                   | NA            | 10/21/2009        | Gage Data  |                   |                                |               |                      |                   |                              |  |
|                    |  |                  |                   | NA            | 11/4/2009         | Gage Data  |                   |                                |               |                      |                   |                              |  |
|                    |  |                  |                   | NA            | 11/18/2009        | Gage Data  |                   |                                |               |                      |                   |                              |  |
|                    |  |                  |                   | NA            | 12/2/2009         | Gage Data  |                   |                                |               |                      |                   |                              |  |
|                    |  |                  |                   | NA            | 12/16/2009        | Gage Data  |                   |                                |               |                      |                   |                              |  |
|                    |  |                  |                   | NA            | 1/6/2010          | Gage Data  |                   |                                |               |                      |                   |                              |  |
|                    |  |                  |                   | 0552-933      | 8/11/2010         | 35862      | <.01              | <.05                           | <1.0          | 0.135                |                   |                              |  |
|                    |  |                  |                   | 0552-947      | 8/25/2010         | 27388      | 0.04              | 0.17                           | <1.0          | 0.158                |                   |                              |  |
| 0552-960           | 9/8/2010                               | 28652            | <.01              | 0.57          | <1.0              | 0.05       |                   |                                |               |                      |                   |                              |  |
| 0552-974           | 9/22/2010                              | 29657            | 0.02              | 0.6           | <1.0              | 0.035      |                   |                                |               |                      |                   |                              |  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |  |                   |                    |               |                   |            | VOLATILE ORGANICS |                                |               |                      |                   |                              |  |
|--------------------|--|-------------------|--------------------|---------------|-------------------|------------|-------------------|--------------------------------|---------------|----------------------|-------------------|------------------------------|--|
|                    |  |                   |                    |               |                   |            | NITRITE<br>(mg/L) | NITRATE /<br>NITRITE<br>(mg/L) | TKN<br>(mg/L) | PHOSPHORUS<br>(mg/L) | Acetone<br>(ug/L) | t-Butyl<br>Alcohol<br>(ug/L) |  |
| RMI                | SAMPLE<br>LOCATION                                       | LATITUDE          | LONGITUDE          | SAMPLE<br>ID# | DATE<br>COLLECTED | LAB<br>ID# |                   |                                |               | 750<br>(AFC)         |                   |                              |  |
|                    |  |                   |                    | 0552-988      | 10/6/2010         | 31133      | 0.09              | 1.02                           | <1.0          | 0.031                |                   |                              |  |
|                    |  |                   |                    | 0552-003      | 10/20/2010        | 32761      | <.01              | 0.9                            | <1.0          | 1.246                |                   |                              |  |
| 4                  | Dunkard<br>Creek DC7                                     |                   |                    | 7485-705      | 10/21/2008        | 38489      |                   |                                |               | 242                  |                   |                              |  |
| 3.46               | Algae<br>Sampling<br>Point                               | N 39°45'<br>47.3" | W 079°56'<br>54.8" | 0577-012      | 11/18/2009        | 40484      |                   |                                |               |                      |                   |                              |  |
| 2.95               | Dunkard<br>Creek DC8A                                    |                   |                    | 7485-706      | 10/21/2008        | 38490      |                   |                                |               | 301                  |                   |                              |  |
| 1                  | Dunkard<br>Creek DC8A                                    |                   |                    | 7485-707      | 10/21/2008        | 38491      |                   |                                |               | <200                 |                   |                              |  |
| 0.1                | RMI 0.5<br>Mouth of<br>Dunkard<br>Creek Under<br>88 Brdg | N 39° 45'<br>51"  | W 079° 56'<br>17"  | 1552-196      | 9/21/2009         | 33339      |                   |                                |               | 0.017                |                   |                              |  |
|                    |  |                   |                    | 1552-224      | 9/29/2009         | 34476      |                   |                                |               |                      |                   |                              |  |
|                    |  |                   |                    | 1552-252      | 10/6/2009         | 35241      | 0.6               |                                |               | 0.021                |                   |                              |  |
|                    |  |                   |                    | 1552-286      | 10/21/2009        | 37163      |                   |                                | 0.43          | 0.012                |                   |                              |  |
|                    |  |                   |                    | 1552-308      | 11/4/2009         | 39235      |                   |                                | 0.36          | 0.022                |                   |                              |  |
|                    |  |                   |                    | 1552-329      | 11/18/2009        | 40520      |                   |                                | 1.61          | 0.054                |                   |                              |  |
|                    |  |                   |                    | 1552-344      | 12/2/2009         | 41547      |                   |                                | 0.33          | 0.013                |                   |                              |  |
|                    |  |                   |                    | 1552-361      | 12/16/2009        | 43389      |                   |                                | 0.72          | 0.035                |                   |                              |  |
|                    |  |                   |                    | 0593-020      | 10/15/2008        | 37432      |                   |                                |               | <200                 |                   |                              |  |
|                    |  |                   |                    | 0593-029      | 10/22/2008        | 39040      |                   |                                |               | <200                 |                   |                              |  |
|                    |  |                   |                    | 0552-879      | 11/17/2008        | 42551      |                   |                                |               |                      |                   |                              |  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |  |               |               |            |                |                 | SEMI VOLATILE ORGANICS            | PESTICIDE          |           |           |           |           |           |
|--------------------|--|---------------|---------------|------------|----------------|-----------------|-----------------------------------|--------------------|-----------|-----------|-----------|-----------|-----------|
|                    |  |               |               |            |                |                 | bis(2-Ethylhexyl)phthalate (ug/L) | ETRIDIAZOLE (ug/L) | Mg (mg/L) | Zn (ug/L) | Mn (ug/L) | Ba (ug/L) | Ca (mg/L) |
| RMI                | SAMPLE LOCATION                          | LATITUDE      | LONGITUDE     | SAMPLE ID# | DATE COLLECTED | LAB ID#         |                                   |                    |           |           | 2400      |           |           |
| 1.1                | PA Fork Dunkard Creek                    | 39° 43' 44.6" | 80° 16' 42.8" | 1552-075   | 9/10/2009      | 06681           |                                   |                    | 7.4       |           | 72        | 66        | 36.2      |
|                    |  |               |               | 1552-111   | 9/15/2009      | 06807           |                                   |                    | 8.1       |           | 126       | 75        | 42.1      |
|                    |  |               |               | 1552-159   | 9/21/2009      | 33355           |                                   |                    | 8.015     |           | 145       | 74        | 40.5      |
|                    |  |               |               | 1552-200   | 9/29/2009      | 34473           |                                   |                    | 7.44      |           | 47        | 63        | 38.2      |
|                    |  |               |               | 1552-228   | 10/6/2009      | 35248           |                                   |                    | 7.388     |           | 38        | 59        | 36.2      |
|                    |  |               |               | 1552-260   | 10/21/2009     | 37169           |                                   |                    | 5.372     |           | 24        | 48        | 28.05     |
|                    |  |               |               | 1552-296   | 11/4/2009      | 39186           |                                   |                    | 5.541     |           | 27        | 49        | 30.9      |
|                    |  |               |               | 1552-317   | 11/18/2009     | 40449           |                                   |                    | 6.69      |           | 46        | 58        | 35.4      |
|                    |  |               |               | 1552-332   | 12/2/2009      | 41519           |                                   |                    | 6.58      |           | 21        | 54        | 37.2      |
|                    |  |               |               | 1552-349   | 12/16/2009     | 43385           |                                   |                    | 4.61      | 11.0      | 73.0      | 41.0      | 25.5      |
|                    |  |               |               | 1552-366   | 1/6/2010       | 00349           |                                   |                    | 5.01      |           | 69.0      | 41        | 26.1      |
|                    |  |               |               | 1552-383   | 1/20/2010      | 01538           |                                   |                    | 3.876     |           | 50.0      | 37.0      | 21.1      |
|                    |  |               |               | 0552-922   | 8/11/2010      | 25779           |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-936   | 8/25/2010      | 27336           |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-949   | 9/8/2010       | 28689           |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-963   | 9/22/2010      | 29661           |                                   |                    |           |           |           |           |           |
| 0552-977           | 10/6/2010                                | 31139         |               |            |                |                 |                                   |                    |           |           |           |           |           |
| 0552-991           | 10/20/2010                               | 32724         |               |            |                |                 |                                   |                    |           |           |           |           |           |
| 0.6                | WV Fork Dunkard Creek 50' US Outfall 003 | 39° 42' 48"   | 80° 17' 17"   | 1552       | 9/15/2009      | Field Data Only |                                   |                    |           |           |           |           |           |
|                    |  |               |               |            | 9/21/2009      |                 |                                   |                    | 31.1      |           | 443       | 90        | 80.8      |
|                    |  |               |               | 1552-202   | 9/29/2009      | 34474           |                                   |                    | 23.2      |           | 95        | 69        | 44.3      |
|                    |  |               |               | 1552-230   | 10/6/2009      | 35249,          |                                   |                    | 14.5      |           | 91        | 51        | 39.2      |
|                    |  |               |               | 1552-264   | 10/21/2009     | 37173           |                                   |                    | 7.253     | 29        | 53        | 45        | 34.38     |
|                    |  |               |               | 1552-297   | 11/4/2009      | 39187           |                                   |                    | 7.04      |           | 53        | 48        | 30.1      |
|                    |  |               |               | 1552-318   | 11/18/2009     | 40450           |                                   |                    | 21.1      |           | 76        | 96        | 47.4      |
|                    |  |               |               | 1552-333   | 12/2/2009      | 41520           |                                   |                    | 14        |           | 47        | 55        | 38        |
|                    |  |               |               | 1552-350   | 12/16/2009     | 43387           |                                   |                    | 6.82      |           | 101.0     | 46        | 27        |
|                    |  |               |               | 1552-367   | 1/6/2010       | 00350           |                                   |                    | 8.64      |           | 142       | 48        | 35.9      |
|                    |  |               |               | 1552-384   | 1/20/2010      | 01539           |                                   |                    | 5.343     |           | 74.0      | 40        | 22.9      |
|                    |  |               |               | 0552-923   | 8/11/2010      | 25793           |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-937   | 8/25/2010      | 27337           |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-950   | 9/8/2010       | 28690           |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-964   | 9/22/2010      | 29662           |                                   |                    |           |           |           |           |           |
| 0552-978           | 10/6/2010                                | 31140         |               |            |                |                 |                                   |                    |           |           |           |           |           |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.



| SAMPLE INFORMATION |  |               |               |            |                |                 | SEMI VOLATILE ORGANICS            | PESTICIDE          |           |           |           |           |           |
|--------------------|--|---------------|---------------|------------|----------------|-----------------|-----------------------------------|--------------------|-----------|-----------|-----------|-----------|-----------|
|                    |  |               |               |            |                |                 | bis(2-Ethylhexyl)phthalate (ug/L) | ETRIDIAZOLE (ug/L) | Mg (mg/L) | Zn (ug/L) | Mn (ug/L) | Ba (ug/L) | Ca (mg/L) |
| RMI                | SAMPLE LOCATION  | LATITUDE      | LONGITUDE     | SAMPLE ID# | DATE COLLECTED | LAB ID#         |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-992   | 10/20/2010     | 32725           |                                   |                    |           |           |           | 2400      |           |
| 0.5                | Blacksville #2 discharge from Beaver Pond or Pond Itself Outfall 003                 | 39° 42' 52"   | 80° 17' 15"   | 0552-925   | 8/11/2010      | 25794           |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-939   | 8/25/2010      | ND              |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-952   | 9/8/2010       | ND              |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-966   | 9/22/2010      | ND              |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-979   | 10/6/2010      | ND              |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-994   | 10/20/2010     | ND              |                                   |                    |           |           |           |           |           |
| 0.4                | Blacksville #2 Mine Outfall 005 Discharge to WV Fork 2000' US jct PA Fork @ Shamrock | 39° 43' 07.6" | 80° 16' 38.8" | 1552       | 9/15/2009      | Field Data Only |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 1552-148   | 9/17/2009      | 33133           |                                   |                    | 302       |           | 876       |           | 566       |
|                    |  |               |               | 1552-167   | 9/21/2009      | 33363           |                                   |                    | 308       |           | 906       | 11        | 580       |
|                    |  |               |               | 1552-204   | 9/29/2009      | 34475           |                                   |                    | 141       |           | 824       | 17        | 298       |
|                    |  |               |               | 1552-232   | 10/6/2009      | 35250           |                                   |                    | 218       |           | 1,745     | 19        | 441       |
|                    |  |               |               | 1552-266   | 10/21/2009     | 37174           |                                   |                    | 85.75     |           | 967       | 32        | 201.6     |
|                    |  |               |               | 1552-298   | 11/4/2009      | 39188           |                                   |                    | 85        |           | 841       | 31        | 177       |
|                    |  |               |               | 1552-319   | 11/18/2009     | 40504           |                                   |                    | 109       |           | 946       | 29        | 254       |
|                    |  |               |               | 1552-334   | 12/2/2009      | 41545           |                                   |                    | 126       |           | 1,020     | 31        | 287       |
|                    |  |               |               | 1552-351   | 12/16/2009     | 43377           |                                   |                    | 30.4      |           | 395.0     | 38.0      | 81.7      |
|                    |  |               |               | 1552-368   | 1/6/2010       | 00351           |                                   |                    | 18.9      |           | 479       | 42        | 63.2      |
|                    |  |               |               | 1552-385   | 1/20/2010      | 01515           |                                   |                    | 10.8      |           | 140.0     | 34.0      | 39.1      |
|                    |  |               |               | 0552-938   | 8/25/2010      | ND              |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-950   | 9/8/2010       | ND              |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-965   | 9/22/2010      | ND              |                                   |                    |           |           |           |           |           |
| 0552-980           | 10/6/2010  | ND            |               |            |                |                 |                                   |                    |           |           |           |           |           |
| 0552-993           | 10/20/2010   | ND            |               |            |                |                 |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 1552-090   | 9/10/2009      | 06684           |                                   | 313                | 12        | 606       | 33        | 620       |           |
|                    |  |               |               | 1552-117   | 9/15/2009      | 06808           |                                   | 219                |           | 566       | 36        | 421       |           |
|                    |  |               |               | 1552-151   | 9/17/2009      | 33136           |                                   | 175                |           | 385       | 37        | 339       |           |
|                    |  |               |               | 1552-163   | 9/21/2009      | 33359           |                                   | 59                 |           | 285       | 71        | 128       |           |
|                    |  |               |               | 1552-206   | 9/29/2009      | 34478           |                                   | 26.6               |           | 96        | 68        | 51.9      |           |
|                    |  |               |               | 1552-234   | 10/6/2009      | 35253           |                                   | 16.6               |           | 78        | 48        | 45.1      |           |
|                    |  |               |               | 1552-268   | 10/21/2009     | 37185           |                                   | 7.757              |           | 54        | 45        | 35.04     |           |
|                    |  |               |               | 1552-299   | 11/4/2009      | 39189           |                                   | 7.052              |           | 50        | 45        | 31.4      |           |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |                       |                 |                  |            |                |         | SEMI VOLATILE ORGANICS            | PESTICIDE          |           |           |           |           |           |
|--------------------|-----------------------|-----------------|------------------|------------|----------------|---------|-----------------------------------|--------------------|-----------|-----------|-----------|-----------|-----------|
|                    |                       |                 |                  |            |                |         | bis(2-Ethylhexyl)phthalate (ug/L) | ETRIDIAZOLE (ug/L) | Mg (mg/L) | Zn (ug/L) | Mn (ug/L) | Ba (ug/L) | Ca (mg/L) |
| RMI                | SAMPLE LOCATION       | LATITUDE        | LONGITUDE        | SAMPLE ID# | DATE COLLECTED | LAB ID# |                                   |                    |           |           | 2400      |           |           |
| 0.2                | WV Fork Dunkard Creek | 39° 43' 18.3"   | 80° 16' 25.1"    | 1552-320   | 11/18/2009     | 40505   |                                   |                    | 23.4      |           | 70        | 96        | 54.3      |
|                    |                       |                 |                  | 1552-335   | 12/2/2009      | 41546   |                                   |                    | 14.4      |           | 49        | 56        | 38.4      |
|                    |                       |                 |                  | 1552-352   | 12/16/2009     | 43378   |                                   |                    | 6.77      |           | 94        | 42        | 26        |
|                    |                       |                 |                  | 1552-369   | 1/6/2010       | 00352   |                                   |                    | 8.81      |           | 142       | 48        | 37.1      |
|                    |                       |                 |                  | 1552-386   | 1/20/2010      | 01540   |                                   |                    | 5.195     |           | 75        | 38        | 22        |
|                    |                       |                 |                  | 0552-926   | 8/11/2010      | 25803   |                                   |                    |           |           |           |           |           |
|                    |                       |                 |                  | 0552-940   | 8/25/2010      | 27366   |                                   |                    |           |           |           |           |           |
|                    |                       |                 |                  | 0552-953   | 9/8/2010       | 28664   |                                   |                    |           |           |           |           |           |
|                    |                       |                 |                  | 0552-967   | 9/22/2010      | 29663   |                                   |                    |           |           |           |           |           |
|                    |                       |                 |                  | 0552-981   | 10/6/2010      | 31137   |                                   |                    |           |           |           |           |           |
| 0552-995           | 10/20/2010            | 32726           |                  |            |                |         |                                   |                    |           |           |           |           |           |
| 41                 | Dunkard Creek @ Brave | 39° 43' 39.0"   | 080° 15' 21.9"   | 1552-085   | 9/10/2009      | 06683   | 5.18                              | ~                  | 67.5      |           | 455       | 90        | 135       |
|                    |                       |                 |                  | 1552-123   | 9/15/2009      | 06809   | ~                                 | ~                  | 69.2      |           | 325       | 77        | 147       |
|                    |                       |                 |                  | 1552-171   | 9/21/2009      | 33367   |                                   |                    | 77.31     |           | 606       | 87        | 192       |
|                    |                       |                 |                  | 1552-208   | 9/29/2009      | 34479   |                                   |                    | 35.2      |           | 220       | 73        | 79.6      |
|                    |                       |                 |                  | 1552-236   | 10/6/2009      | 35254   |                                   |                    | 19.3      |           | 95        | 59        | 53.1      |
|                    |                       |                 |                  | 1552-270   | 10/21/2009     | 37184   |                                   |                    | 7.105     |           | 59        | 47        | 36.76     |
|                    |                       |                 |                  | 1552-300   | 11/4/2009      | 39190   |                                   |                    | 6.253     |           | 47        | 47        | 31.8      |
|                    |                       |                 |                  | 1552-321   | 11/18/2009     | 40444   |                                   |                    | 12.4      |           | 90        | 71        | 43.1      |
|                    |                       |                 |                  | 1552-336   | 12/2/2009      | 41539   |                                   |                    | 14.1      |           | 93        | 62        | 44.4      |
|                    |                       |                 |                  | 1552-353   | 12/16/2009     | 43373   |                                   |                    | 5.9       |           | 91        | 47        | 27.4      |
|                    |                       |                 |                  | 1552-370   | 1/6/2010       | 00343   |                                   |                    | 6.9       |           | 108       | 46        | 32.2      |
|                    |                       |                 |                  | 1552-387   | 1/20/2010      | 01516   |                                   |                    | 5.917     |           | 125       | 41        | 25.4      |
|                    |                       |                 |                  | 0552-927   | 8/11/2010      | 25804   |                                   |                    |           |           |           |           |           |
|                    |                       |                 |                  | 0552-941   | 8/25/2010      | 27367   |                                   |                    |           |           |           |           |           |
|                    |                       |                 |                  | 0552-954   | 9/8/2010       | 28665   |                                   |                    |           |           |           |           |           |
| 0552-968           | 9/22/2010             | 29664           |                  |            |                |         |                                   |                    |           |           |           |           |           |
| 0552-982           | 10/6/2010             | 31138           |                  |            |                |         |                                   |                    |           |           |           |           |           |
| 0552-996           | 10/20/2010            | 32727           |                  |            |                |         |                                   |                    |           |           |           |           |           |
| 39.2               | Miracle Run @ Mouth   | N 39° 43' 05.0" | W 080° 14' 28.8" | 1552-142   | 9/17/2009      | 33127   |                                   |                    | 56.6      |           | 88        | 69        | 115       |
|                    |                       |                 |                  | 1552-175   | 9/21/2009      | 33371   |                                   |                    | 60        | 12        | 85        | 76        | 129       |
|                    |                       |                 |                  | 1552-208   | 9/29/2009      | 34479   |                                   |                    | 35.1      |           | 55        | 47        | 81        |
|                    |                       |                 |                  | 1552-238   | 10/6/2009      | 35251   |                                   |                    | 36.51     |           | 42        | 49        | 84.39     |
|                    |                       |                 |                  | 1552-272   | 10/21/2009     | 37172   |                                   |                    | 17.54     | 25        | 70        | 44        | 58.51     |
|                    |                       |                 |                  | 1552-301   | 11/4/2009      | 39191   |                                   |                    | 24.9      |           | 104       | 50        | 62.9      |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |  |               |               |            |                |                 | SEMI VOLATILE ORGANICS            | PESTICIDE          |           |           |           |           |           |  |  |
|--------------------|--|---------------|---------------|------------|----------------|-----------------|-----------------------------------|--------------------|-----------|-----------|-----------|-----------|-----------|--|--|
|                    |  |               |               |            |                |                 | bis(2-Ethylhexyl)phthalate (ug/L) | ETRIDIAZOLE (ug/L) | Mg (mg/L) | Zn (ug/L) | Mn (ug/L) | Ba (ug/L) | Ca (mg/L) |  |  |
| RMI                | SAMPLE LOCATION                            | LATITUDE      | LONGITUDE     | SAMPLE ID# | DATE COLLECTED | LAB ID#         |                                   |                    |           |           | 2400      |           |           |  |  |
|                    |  |               |               | 1552-322   | 11/18/2009     | 40445           |                                   |                    | 38.9      |           | 151       | 57        | 81.6      |  |  |
|                    |  |               |               | 1552-337   | 12/2/2009      | 41540           |                                   |                    | 21.8      |           | 113       | 42        | 58.1      |  |  |
|                    |  |               |               | 1552-354   | 12/16/2009     | 43374           |                                   |                    | 12.6      |           | 136       | 46        | 36.5      |  |  |
|                    |  |               |               | 1552-371   | 1/6/2010       | 00344           |                                   |                    | 13.3      |           | 121       | 54        | 39.1      |  |  |
| 37.5               | Dunkard Creek @ Blacksville                | 39° 43' 15.7" | 80° 13' 20.6" | 1552       | 9/17/2009      | Field Data Only |                                   |                    |           |           |           |           |           |  |  |
|                    |  |               |               | 1552       | 9/21/2009      | Field Data Only |                                   |                    |           |           |           |           |           |  |  |
|                    |  |               |               | 1552-214   | 9/29/2009      | 34471           |                                   |                    | 39.1      |           | 85        | 58        | 91.1      |  |  |
|                    |  |               |               | 1552-240   | 10/6/2009      | 35252           |                                   |                    | 26.8      |           | 45        | 47        | 64.7      |  |  |
|                    |  |               |               | 1552-274   | 10/21/2009     | 37171           |                                   |                    | 10.77     |           | 49        | 43        | 43.66     |  |  |
|                    |  |               |               | 1552-302   | 11/4/2009      | 39207           |                                   |                    | 10.5      |           | 34        | 41        | 3801      |  |  |
|                    |  |               |               | 1552-323   | 11/18/2009     | 40446           |                                   |                    | 19.4      |           | 75        | 61        | 55.3      |  |  |
|                    |  |               |               | 1552-338   | 12/2/2009      | 41541           |                                   |                    | 16.7      |           | 57        | 54        | 50.5      |  |  |
|                    |  |               |               | 1552-355   | 12/16/2009     | 43375           |                                   |                    | 7.15      |           | 76        | 43        | 29.3      |  |  |
|                    |  |               |               | 1552-372   | 1/6/2010       | 00345           |                                   |                    | 8.2       |           | 91        | 45        | 33.1      |  |  |
|                    |  |               |               | 0552-928   | 8/11/2010      | 25782           |                                   |                    |           |           |           |           |           |  |  |
|                    |  |               |               | 0552-942   | 8/25/2010      | 27380           |                                   |                    |           |           |           |           |           |  |  |
|                    |  |               |               | 0552-955   | 9/8/2010       | 28666           |                                   |                    |           |           |           |           |           |  |  |
|                    |  |               |               | 0552-969   | 9/22/2010      | 29696           |                                   |                    |           |           |           |           |           |  |  |
| 0552-983           | 10/6/2010                                  | 31161         |               |            |                |                 |                                   |                    |           |           |           |           |           |  |  |
| 0552-997           | 10/20/2010                                 | 32721         |               |            |                |                 |                                   |                    |           |           |           |           |           |  |  |
| 30.3               | Dunkard Creek @ Route 7 bridge in Pentress | 39° 42' 43"   | 80° 9' 43"    | 1552-214   | 9/29/2009      | 34471           |                                   |                    | 38.7      |           | 64        | 67        | 96.9      |  |  |
|                    |  |               |               | 1552-242   | 10/6/2009      | 35245           |                                   |                    | 28.4      |           | 59        | 59        | 72.1      |  |  |
|                    |  |               |               | 1552-276   | 10/21/2009     | 37148           |                                   |                    | 10.12     |           | 34        | 47        | 45.97     |  |  |
|                    |  |               |               | 1552-303   | 11/4/2009      | 39208           |                                   |                    | 10.1      |           | 34        | 42        | 42.7      |  |  |
|                    |  |               |               | 1552-324   | 11/18/2009     | 40451           |                                   |                    | 14.2      |           | 59        | 56        | 53.2      |  |  |
|                    |  |               |               | 1552-339   | 12/2/2009      | 41516           |                                   |                    | 21        |           | 35        | 71        | 65.6      |  |  |
|                    |  |               |               | 1552-356   | 12/16/2009     | 43391           |                                   |                    | 8.02      |           | 66        | 49        | 33.7      |  |  |
|                    |  |               |               | 1552-373   | 1/6/2010       | 00346           |                                   |                    | 8.12      |           | 64        | 47        | 35.1      |  |  |
|                    |  |               |               | 0552-929   | 8/11/2010      | 25783           |                                   |                    |           |           |           |           |           |  |  |
|                    |  |               |               | 0552-943   | 8/25/2010      | 27381           |                                   |                    |           |           |           |           |           |  |  |
|                    |  |               |               | 0552-956   | 9/8/2010       | 28667           |                                   |                    |           |           |           |           |           |  |  |
|                    |  |               |               | 0552-970   | 9/22/2010      | 29697           |                                   |                    |           |           |           |           |           |  |  |
| 0552-984           | 10/6/2010                                  | 31162         |               |            |                |                 |                                   |                    |           |           |           |           |           |  |  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |                                  |               |               |            |                |         | SEMI VOLATILE ORGANICS            | PESTICIDE          |           |           |           |           |           |  |
|--------------------|----------------------------------|---------------|---------------|------------|----------------|---------|-----------------------------------|--------------------|-----------|-----------|-----------|-----------|-----------|--|
|                    |                                  |               |               |            |                |         | bis(2-Ethylhexyl)phthalate (ug/L) | ETRIDIAZOLE (ug/L) | Mg (mg/L) | Zn (ug/L) | Mn (ug/L) | Ba (ug/L) | Ca (mg/L) |  |
| RMI                | SAMPLE LOCATION                  | LATITUDE      | LONGITUDE     | SAMPLE ID# | DATE COLLECTED | LAB ID# |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | 0552-998   | 10/20/2010     | 32722   |                                   |                    |           |           |           |           | 2400      |  |
| 22.8               | Dunkard Creek @ Mason Dixon Park | 39° 42' 55.7" | 80° 06' 40.8" | 1552-129   | 9/15/2009      | 06810   | ~                                 | 0.304              | 25.3      |           | 268       | 93        | 67.7      |  |
|                    |                                  |               |               | 1552-179   | 9/21/2009      | 33375   |                                   |                    | 30        |           | 197       | 92        | 75.6      |  |
|                    |                                  |               |               | 1552-216   | 9/29/2009      | 34472   |                                   |                    | 31.5      |           | 77        | 83        | 86.5      |  |
|                    |                                  |               |               | 1552-244   | 10/6/2009      | 35246   |                                   |                    | 29.1      |           | 65        | 67        | 73.9      |  |
|                    |                                  |               |               | 1552-278   | 10/21/2009     | 37149   |                                   |                    | 10.96     |           | 26        | 49        | 48.08     |  |
|                    |                                  |               |               | 1552-304   | 11/4/2009      | 39209   |                                   |                    | 9.82      |           | 25        | 43        | 39.2      |  |
|                    |                                  |               |               | 1552-325   | 11/18/2009     | 40452   |                                   |                    | 12.5      |           | 46        | 52        | 45.5      |  |
|                    |                                  |               |               | 1552-340   | 12/2/2009      | 41517   |                                   |                    | 21        |           | 35        | 71        | 65.6      |  |
|                    |                                  |               |               | 1552-357   | 12/16/2009     | 43392   |                                   |                    | 8.09      |           | 52        | 51        | 34.4      |  |
|                    |                                  |               |               | 1552-374   | 1/6/2010       | 00347   |                                   |                    | 7.76      |           | 47        | 44        | 34        |  |
|                    |                                  |               |               | 0552-930   | 8/11/2010      | 25835   |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | 0552-944   | 8/25/2010      | 27389   |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | 0552-957   | 9/8/2010       | 28699   |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | 0552-971   | 9/22/2010      | 29725   |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | 0552-985   | 10/6/2010      | 31135   |                                   |                    |           |           |           |           |           |  |
| 0552-999           | 10/20/2010                       | 32715         |               |            |                |         |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | CMU*       | 9/17/2009      | NA      |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | CMU*       | 9/22/2009      | NA      |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | CMU*       | 9/29/2009      | NA      |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | CMU*       | 10/6/2009      | NA      |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | CMU*       | 10/13/2009     | NA      |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | CMU*       | 10/20/2009     | NA      |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | CMU*       | 10/27/2009     | NA      |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | CMU*       | 11/3/2009      | NA      |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | CMU*       | 11/10/2009     | NA      |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | CMU*       | 11/17/2009     | NA      |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | CMU*       | 11/24/2009     | NA      |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | CMU*       | 12/1/2009      | NA      |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | CMU*       | 12/8/2009      | NA      |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | CMU*       | 12/15/2009     | NA      |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | CMU*       | 1/5/2010       | NA      |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | CMU*       | 1/12/2010      | NA      |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | CMU*       | 1/19/2010      | NA      |                                   |                    |           |           |           |           |           |  |
|                    |                                  |               |               | CMU*       | 2/3/2010       | NA      |                                   |                    |           |           |           |           |           |  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |                 |          |           |            |                |         | SEMI VOLATILE ORGANICS            | PESTICIDE          |           |           |           |           |           |  |  |
|--------------------|-----------------|----------|-----------|------------|----------------|---------|-----------------------------------|--------------------|-----------|-----------|-----------|-----------|-----------|--|--|
|                    |                 |          |           |            |                |         | bis(2-Ethylhexyl)phthalate (ug/L) | ETRIDIAZOLE (ug/L) | Mg (mg/L) | Zn (ug/L) | Mn (ug/L) | Ba (ug/L) | Ca (mg/L) |  |  |
| RMI                | SAMPLE LOCATION | LATITUDE | LONGITUDE | SAMPLE ID# | DATE COLLECTED | LAB ID# |                                   |                    |           |           |           | 2400      |           |  |  |
| 15                 | East Dunkard    |          |           | CMU*       | 2/23/2010      | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 3/9/2010       | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 3/23/2010      | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 4/6/2010       | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 4/20/2010      | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 5/4/2010       | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 5/18/2010      | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 5/25/2010      | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 6/1/2010       | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 6/8/2010       | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 6/15/2010      | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 6/29/2010      | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 7/5/2010       | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 7/13/2010      | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 7/22/2010      | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 7/27/2010      | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 8/5/2010       | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 8/10/2010      | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 8/17/2010      | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 8/24/2010      | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 8/31/2010      | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 9/7/2010       | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 9/14/2010      | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 9/21/2010      | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 9/29/2010      | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 10/7/2010      | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 10/11/2010     | NA      |                                   |                    |           |           |           |           |           |  |  |
|                    |                 |          |           | CMU*       | 10/19/2010     | NA      |                                   |                    |           |           |           |           |           |  |  |
| CMU*               | 10/26/2010      | NA       |           |            |                |         |                                   |                    |           |           |           |           |           |  |  |
| CMU*               | 11/3/2010       | NA       |           |            |                |         |                                   |                    |           |           |           |           |           |  |  |
| CMU*               | 12/14/2010      | NA       |           |            |                |         |                                   |                    |           |           |           |           |           |  |  |
| CMU*               | 1/19/2011       | NA       |           |            |                |         |                                   |                    |           |           |           |           |           |  |  |
| CMU*               | 2/16/2011       | NA       |           |            |                |         |                                   |                    |           |           |           |           |           |  |  |
| CMU*               | 3/16/2011       | NA       |           |            |                |         |                                   |                    |           |           |           |           |           |  |  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |  |               |               |            |                |         | SEMI VOLATILE ORGANICS            | PESTICIDE          |           |           |           |           |           |
|--------------------|--|---------------|---------------|------------|----------------|---------|-----------------------------------|--------------------|-----------|-----------|-----------|-----------|-----------|
|                    |  |               |               |            |                |         | bis(2-Ethylhexyl)phthalate (ug/L) | ETRIDIAZOLE (ug/L) | Mg (mg/L) | Zn (ug/L) | Mn (ug/L) | Ba (ug/L) | Ca (mg/L) |
| RMI                | SAMPLE LOCATION                              | LATITUDE      | LONGITUDE     | SAMPLE ID# | DATE COLLECTED | LAB ID# |                                   |                    |           |           |           |           |           |
| 13                 | Dunkard Creek DC5                            |               |               | 7485-701   | 10/21/2008     | 38485   |                                   |                    |           |           |           |           | 2400      |
| 10.9               | Dunkard Creek @ end of Bald Hill Church Road | 39° 45' 20.0" | 80° 00' 43.4" | 1552-100   | 9/10/2009      | 06686   |                                   |                    | 21        | 10        | 191       | 109       | 68.2      |
|                    |  |               |               | 1552-135   | 9/15/2009      | 06811   |                                   |                    | 23.3      |           | 205       | 108       | 70.2      |
|                    |  |               |               | 1552-183   | 9/21/2009      | 33379   |                                   |                    | 24.6      |           | 270       | 94        | 60.5      |
|                    |  |               |               | 1552-218   | 9/29/2009      | 34467   |                                   |                    | 24.3      |           | 118       | 96        | 69.5      |
|                    |  |               |               | 1552-246   | 10/6/2009      | 35243   |                                   |                    | 28.3      |           | 95        | 101       | 81.2      |
|                    |  |               |               | 1552-280   | 10/21/2009     | 37164   |                                   |                    | 12.4      |           | 32        | 51        | 49.63     |
|                    |  |               |               | 1552-305   | 11/4/2009      | 39193   |                                   |                    | 8.997     |           | 23        | 41        | 40.8      |
|                    |  |               |               | 1552-326   | 11/18/2009     | 40453   |                                   |                    | 11.9      |           | 68        | 50        | 44.3      |
|                    |  |               |               | 1552-341   | 12/2/2009      | 41518   |                                   |                    | 16        |           | 42        | 63        | 57.9      |
|                    |  |               |               | 1552-358   | 12/16/2009     | 43393   |                                   |                    | 7.7       |           | 36        | 46        | 37.3      |
|                    |  |               |               | 1552-375   | 1/6/2010       | 00348   |                                   |                    | 8.57      |           | 39        | 46        | 38.1      |
|                    |  |               |               | 0552-931   | 8/11/2010      | 25836   |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-945   | 8/25/2010      | 27390   |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-958   | 9/8/2010       | 28700   |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-972   | 9/22/2010      | 29726   |                                   |                    |           |           |           |           |           |
| 0552-986           | 10/6/2010                                    | 31136         |               |            |                |         |                                   |                    |           |           |           |           |           |
| 0552-001           | 10/20/2010                                   | 32716         |               |            |                |         |                                   |                    |           |           |           |           |           |
| 0552-030           | 7/19/2012                                    | 22234         |               |            |                |         |                                   |                    |           |           |           |           |           |
| 10.8               | SHANNOPIN MINE DISCHARGE                     | 39° 45' 20.3" | 80° 00' 35.0" | 1552-141   | 9/15/2009      | 32737   |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 1552-187   | 9/21/2009      | 34468   |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 1552-220   | 9/29/2009      | 34468   |                                   |                    | 264       |           | 788       |           | 748       |
|                    |  |               |               | 1552-248   | 10/6/2009      | 35244   |                                   |                    | 217.8     |           | 510       | 4000      | 758.6     |
|                    |  |               |               | 1552-282   | 10/21/2009     | 37165   |                                   |                    | 232       |           | 355       |           | 603.4     |
|                    |  |               |               | 1552-306   | 11/4/2009      | 39194   |                                   |                    | 252       |           | 333       |           | 725       |
|                    |  |               |               | 1552-327   | 11/18/2009     | 40447   |                                   |                    | 180       |           | 142       |           | 564       |
|                    |  |               |               | 1552-342   | 12/2/2009      | 41543   |                                   |                    | 220       |           | 474       |           | 841       |
|                    |  |               |               | 1552-376   | 1/6/2010       | 00353   |                                   |                    | 8.91      |           | 25        | 42        | 130       |
|                    |  |               |               | 1552-388   | 1/20/2010      | 01541   |                                   |                    | 219       |           | 162       |           | 600       |
|                    |  |               |               | 7485-704   | 10/21/2008     | 38488   |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-932   | 8/11/2010      | 25861   |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-946   | 8/25/2010      | 27387   |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-959   | 9/8/2010       | 28651   |                                   |                    |           |           |           |           |           |
|                    |  |               |               | 0552-973   | 9/22/2010      | 29656   |                                   |                    |           |           |           |           |           |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |                               |               |                |            |                |           | SEMI VOLATILE ORGANICS            | PESTICIDE          |           |           |           |           |           |
|--------------------|-------------------------------|---------------|----------------|------------|----------------|-----------|-----------------------------------|--------------------|-----------|-----------|-----------|-----------|-----------|
|                    |                               |               |                |            |                |           | bis(2-Ethylhexyl)phthalate (ug/L) | ETRIDIAZOLE (ug/L) | Mg (mg/L) | Zn (ug/L) | Mn (ug/L) | Ba (ug/L) | Ca (mg/L) |
| RMI                | SAMPLE LOCATION               | LATITUDE      | LONGITUDE      | SAMPLE ID# | DATE COLLECTED | LAB ID#   |                                   |                    |           |           |           |           |           |
|                    |                               |               |                | 0552-987   | 10/6/2010      | 31132     |                                   |                    |           |           |           | 2400      |           |
|                    |                               |               |                | 0552-002   | 10/20/2010     | 32760     |                                   |                    |           |           |           |           |           |
|                    |                               |               |                | 0552-031   | 7/19/2012      | 22235     |                                   |                    |           |           |           |           |           |
| 9.8                | Dunkard Creek DC5B            |               |                | 7485-702   | 10/21/2008     | 38486     |                                   |                    |           |           |           |           |           |
| 9.5                | Dunkard Creek DC6             |               |                | 7485-703   | 10/21/2008     | 38487     |                                   |                    |           |           |           |           |           |
| 6.7                | Dunkard Creek @ LR2008 Bridge | N 39° 44' 52" | W 079° 58' 46" | 1552-192   | 9/21/2009      | 33347     |                                   |                    | 189       | 14        | 589       | 24        | 573       |
|                    |                               |               |                | 1552-222   | 9/29/2009      | 34469     |                                   |                    | 112       |           | 304       | 50        | 327       |
|                    |                               |               |                | 1552-250   | 10/6/2009      | 35242     |                                   |                    | 140       |           | 348       | 41000     | 430.2     |
|                    |                               |               |                | 1552-284   | 10/21/2009     | 37162     |                                   |                    | 78.86     |           | 138       | 36        | 211.8     |
|                    |                               |               |                | 1552-307   | 11/4/2009      | 39195     |                                   |                    | 76.5      |           | 123       | 29        | 206.5     |
|                    |                               |               |                | 1552-328   | 11/18/2009     | 40448     |                                   |                    | 115       |           | 232       | 30        | 368       |
|                    |                               |               |                | 1552-343   | 12/2/2009      | 41544     |                                   |                    | 62.6      |           | 121       |           | 221       |
|                    |                               |               |                | 1552-360   | 12/16/2009     | 43388     |                                   |                    | 8.46      |           | 54        | 42        | 37.3      |
|                    |                               |               |                | 1552-377   | 1/6/2010       | 00354     |                                   |                    | 9.9       |           | 59        | 44        | 39.1      |
| 4.6                | USGS Shannopin Gauge          | 39° 45' 33"   | 79° 58' 15"    | NA         | 9/10/2009      | Gage Data |                                   |                    |           |           |           |           |           |
|                    |                               |               |                | NA         | 9/15/2009      | Gage Data |                                   |                    |           |           |           |           |           |
|                    |                               |               |                | NA         | 9/17/2009      | Gage Data |                                   |                    |           |           |           |           |           |
|                    |                               |               |                | NA         | 9/21/2009      | Gage Data |                                   |                    | 233       |           | 484       |           | 637       |
|                    |                               |               |                | NA         | 9/29/2009      | Gage Data |                                   |                    |           |           |           |           |           |
|                    |                               |               |                | NA         | 10/6/2009      | Gage Data |                                   |                    |           |           |           |           |           |
|                    |                               |               |                | NA         | 10/21/2009     | Gage Data |                                   |                    |           |           |           |           |           |
|                    |                               |               |                | NA         | 11/4/2009      | Gage Data |                                   |                    |           |           |           |           |           |
|                    |                               |               |                | NA         | 11/18/2009     | Gage Data |                                   |                    |           |           |           |           |           |
|                    |                               |               |                | NA         | 12/2/2009      | Gage Data |                                   |                    |           |           |           |           |           |
|                    |                               |               |                | NA         | 12/16/2009     | Gage Data |                                   |                    |           |           |           |           |           |
|                    |                               |               |                | NA         | 1/6/2010       | Gage Data |                                   |                    |           |           |           |           |           |
|                    |                               |               |                | 0552-933   | 8/11/2010      | 35862     |                                   |                    |           |           |           |           |           |
|                    |                               |               |                | 0552-947   | 8/25/2010      | 27388     |                                   |                    |           |           |           |           |           |
|                    |                               |               |                | 0552-960   | 9/8/2010       | 28652     |                                   |                    |           |           |           |           |           |
| 0552-974           | 9/22/2010                     | 29657         |                |            |                |           |                                   |                    |           |           |           |           |           |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |  |                |                 |            |                |         | SEMI VOLATILE ORGANICS            | PESTICIDE          |           |           |           |           |           |  |
|--------------------|--|----------------|-----------------|------------|----------------|---------|-----------------------------------|--------------------|-----------|-----------|-----------|-----------|-----------|--|
|                    |  |                |                 |            |                |         | bis(2-Ethylhexyl)phthalate (ug/L) | ETRIDIAZOLE (ug/L) | Mg (mg/L) | Zn (ug/L) | Mn (ug/L) | Ba (ug/L) | Ca (mg/L) |  |
| RMI                | SAMPLE LOCATION                              | LATITUDE       | LONGITUDE       | SAMPLE ID# | DATE COLLECTED | LAB ID# |                                   |                    |           |           |           |           |           |  |
|                    |  |                |                 | 0552-988   | 10/6/2010      | 31133   |                                   |                    |           |           |           |           |           |  |
|                    |  |                |                 | 0552-003   | 10/20/2010     | 32761   |                                   |                    |           |           |           |           |           |  |
| 4                  | Dunkard Creek DC7                            |                |                 | 7485-705   | 10/21/2008     | 38489   |                                   |                    |           |           |           |           |           |  |
| 3.46               | Algae Sampling Point                         | N 39°45' 47.3" | W 079°56' 54.8" | 0577-012   | 11/18/2009     | 40484   |                                   |                    |           |           |           |           |           |  |
| 2.95               | Dunkard Creek DC8A                           |                |                 | 7485-706   | 10/21/2008     | 38490   |                                   |                    |           |           |           |           |           |  |
| 1                  | Dunkard Creek DC8A                           |                |                 | 7485-707   | 10/21/2008     | 38491   |                                   |                    |           |           |           |           |           |  |
| 0.1                | RMI 0.5 Mouth of Dunkard Creek Under 88 Brdg | N 39° 45' 51"  | W 079° 56' 17"  | 1552-196   | 9/21/2009      | 33339   |                                   |                    | 1.06      | 5000      | 53        | 41        | 36        |  |
|                    |  |                |                 | 1552-224   | 9/29/2009      | 34476   |                                   |                    | 15.3      |           | 95        | 39        | 51.8      |  |
|                    |  |                |                 | 1552-252   | 10/6/2009      | 35241   |                                   |                    | 10.8      |           | 120       | 43        | 37.7      |  |
|                    |  |                |                 | 1552-286   | 10/21/2009     | 37163   |                                   |                    | 11.58     |           | 123       | 39        | 39.44     |  |
|                    |  |                |                 | 1552-308   | 11/4/2009      | 39235   |                                   |                    | 4.25      |           | 45        | 28        | 19        |  |
|                    |  |                |                 | 1552-329   | 11/18/2009     | 40520   |                                   |                    | 115       |           | 232       | 30        | 368       |  |
|                    |  |                |                 | 1552-344   | 12/2/2009      | 41547   |                                   |                    | 6.94      |           | 133       | 34        | 27.8      |  |
|                    |  |                |                 | 1552-361   | 12/16/2009     | 43389   |                                   |                    | 9.51      | 11        | 172       | 45        | 39.4      |  |
|                    |  |                |                 | 0593-020   | 10/15/2008     | 37432   |                                   |                    |           |           |           |           |           |  |
|                    |  |                |                 | 0593-029   | 10/22/2008     | 39040   |                                   |                    |           |           |           |           |           |  |
|                    |  |                |                 | 0552-879   | 11/17/2008     | 42551   |                                   |                    |           |           |           |           |           |  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.



| SAMPLE INFORMATION |  |               |               |            |                |                 | METALS       |             |              |              |               |              |              |               |  |
|--------------------|--|---------------|---------------|------------|----------------|-----------------|--------------|-------------|--------------|--------------|---------------|--------------|--------------|---------------|--|
|                    |  |               |               |            |                |                 | Fe<br>(ug/L) | K<br>(mg/L) | Na<br>(ug/L) | Al<br>(ug/L) | Cu<br>(ug/L)  | Se<br>(ug/L) | Sr<br>(ug/L) | Pb<br>(ug/L)  |  |
| RMI                | SAMPLE LOCATION                          | LATITUDE      | LONGITUDE     | SAMPLE ID# | DATE COLLECTED | LAB ID#         | 1500<br>(AL) |             |              |              | @H=100<br>9.0 | 4.6<br>(CFC) |              | @H=100<br>2.5 |  |
| 1.1                | PA Fork Dunkard Creek                    | 39° 43' 44.6" | 80° 16' 42.8" | 1552-075   | 9/10/2009      | 06681           | 534          | 3           | 23           | 311          |               |              |              |               |  |
|                    |  |               |               | 1552-111   | 9/15/2009      | 06807           | 1030         | 2.9         | 40.7         | 451          |               |              |              |               |  |
|                    |  |               |               | 1552-159   | 9/21/2009      | 33355           | 283          | 3.061       | 38.4         | 116,000      | 2,000         |              |              |               |  |
|                    |  |               |               | 1552-200   | 9/29/2009      | 34473           | 335          | 3.44        | 31.6         | 207          |               |              |              | 191           |  |
|                    |  |               |               | 1552-228   | 10/6/2009      | 35248           | 177          | 3.114       | 30.6         |              |               |              |              | 178           |  |
|                    |  |               |               | 1552-260   | 10/21/2009     | 37169           | 274          | 2.268       | 16.03        |              |               |              |              | 123           |  |
|                    |  |               |               | 1552-296   | 11/4/2009      | 39186           | 261          | 2.085       | 13.6         |              |               |              |              | 126           |  |
|                    |  |               |               | 1552-317   | 11/18/2009     | 40449           | 225          | 2.05        | 21           |              |               |              |              | 168           |  |
|                    |  |               |               | 1552-332   | 12/2/2009      | 41519           | 237          | 1.96        | 21.7         |              |               |              |              | 165           |  |
|                    |  |               |               | 1552-349   | 12/16/2009     | 43385           | 433.0        | 1.56        | 10.3         |              |               |              |              | 111.0         |  |
|                    |  |               |               | 1552-366   | 1/6/2010       | 00349           | 271          | 1.13        | 11.7         |              |               |              |              | 115           |  |
|                    |  |               |               | 1552-383   | 1/20/2010      | 01538           | 399.0        | 1.065       | 7.888        | 247          |               |              |              | 86.0          |  |
|                    |  |               |               | 0552-922   | 8/11/2010      | 25779           |              |             |              |              |               |              |              |               |  |
|                    |  |               |               | 0552-936   | 8/25/2010      | 27336           |              |             |              |              |               |              |              |               |  |
|                    |  |               |               | 0552-949   | 9/8/2010       | 28689           |              |             |              |              |               |              |              |               |  |
|                    |  |               |               | 0552-963   | 9/22/2010      | 29661           |              |             |              |              |               |              |              |               |  |
| 0552-977           | 10/6/2010                                | 31139         |               |            |                |                 |              |             |              |              |               |              |              |               |  |
| 0552-991           | 10/20/2010                               | 32724         |               |            |                |                 |              |             |              |              |               |              |              |               |  |
| 0.6                | WV Fork Dunkard Creek 50' US Outfall 003 | 39° 42' 48"   | 80° 17' 17"   | 1552       | 9/15/2009      | Field Data Only |              |             |              |              |               |              |              |               |  |
|                    |  |               |               |            | 9/21/2009      |                 | 511          | 5.2         | 738          |              |               |              |              |               |  |
|                    |  |               |               | 1552-202   | 9/29/2009      | 34474           | 341          | 5.03        | 623          |              |               |              | 611          |               |  |
|                    |  |               |               | 1552-230   | 10/6/2009      | 35249,          | 298          | 3.598       | 299          | 27,000       |               |              | 406          |               |  |
|                    |  |               |               | 1552-264   | 10/21/2009     | 37173           | 295          | 2.152       | 97.18        |              |               |              | 200          |               |  |
|                    |  |               |               | 1552-297   | 11/4/2009      | 39187           | 285          | 1.908       | 80.6         |              |               |              | 201          |               |  |
|                    |  |               |               | 1552-318   | 11/18/2009     | 40450           | 368          | 3.33        | 517          |              |               |              | 704          |               |  |
|                    |  |               |               | 1552-333   | 12/2/2009      | 41520           | 313          | 2.62        | 253          |              |               |              | 412          |               |  |
|                    |  |               |               | 1552-350   | 12/16/2009     | 43387           | 372          | 1.59        | 82.1         |              |               |              | 186          |               |  |
|                    |  |               |               | 1552-367   | 1/6/2010       | 00350           | 260          | 1.67        | 137          |              |               |              | 335          |               |  |
|                    |  |               |               | 1552-384   | 1/20/2010      | 01539           | 299          | 1.254       | 45.2         |              |               |              | 150          |               |  |
|                    |  |               |               | 0552-923   | 8/11/2010      | 25793           |              |             |              |              |               |              |              |               |  |
|                    |  |               |               | 0552-937   | 8/25/2010      | 27337           |              |             |              |              |               |              |              |               |  |
|                    |  |               |               | 0552-950   | 9/8/2010       | 28690           |              |             |              |              |               |              |              |               |  |
|                    |  |               |               | 0552-964   | 9/22/2010      | 29662           |              |             |              |              |               |              |              |               |  |
| 0552-978           | 10/6/2010                                | 31140         |               |            |                |                 |              |             |              |              |               |              |              |               |  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |  |               |               |            |                |                 | METALS       |             |              |              |               |              |               |
|--------------------|--|---------------|---------------|------------|----------------|-----------------|--------------|-------------|--------------|--------------|---------------|--------------|---------------|
|                    |  |               |               |            |                |                 | Fe<br>(ug/L) | K<br>(mg/L) | Na<br>(ug/L) | Al<br>(ug/L) | Cu<br>(ug/L)  | Se<br>(ug/L) | Sr<br>(ug/L)  |
| RMI                | SAMPLE LOCATION  | LATITUDE      | LONGITUDE     | SAMPLE ID# | DATE COLLECTED | LAB ID#         | 1500<br>(AL) |             |              |              | @H=100<br>9.0 | 4.6<br>(CFC) | @H=100<br>2.5 |
|                    |  |               |               | 0552-992   | 10/20/2010     | 32725           |              |             |              |              |               |              |               |
| 0.5                | Blacksville #2 discharge from Beaver Pond or Pond Itself Outfall 003                 | 39° 42' 52"   | 80° 17' 15"   | 0552-925   | 8/11/2010      | 25794           |              |             |              |              |               |              |               |
|                    |  |               |               | 0552-939   | 8/25/2010      | ND              |              |             |              |              |               |              |               |
|                    |  |               |               | 0552-952   | 9/8/2010       | ND              |              |             |              |              |               |              |               |
|                    |  |               |               | 0552-966   | 9/22/2010      | ND              |              |             |              |              |               |              |               |
|                    |  |               |               | 0552-979   | 10/6/2010      | ND              |              |             |              |              |               |              |               |
|                    |  |               |               | 0552-994   | 10/20/2010     | ND              |              |             |              |              |               |              |               |
| 0.4                | Blacksville #2 Mine Outfall 005 Discharge to WV Fork 2000' US jct PA Fork @ Shamrock | 39° 43' 07.6" | 80° 16' 38.8" | 1552       | 9/15/2009      | Field Data Only |              |             |              |              |               |              |               |
|                    |  |               |               | 1552-148   | 9/17/2009      | 33133           | 182          | 15          | 5890         |              |               |              |               |
|                    |  |               |               | 1552-167   | 9/21/2009      | 33363           | 731          | 14.1        | 5700         |              |               |              |               |
|                    |  |               |               | 1552-204   | 9/29/2009      | 34475           | 1,190        | 8.84        | 2,610        |              |               | 3,640        |               |
|                    |  |               |               | 1552-232   | 10/6/2009      | 35250           | 2,827        | 10.57       | 3,600        |              |               | 5,899        |               |
|                    |  |               |               | 1552-266   | 10/21/2009     | 37174           | 933          | 6.326       | 1,542        |              | 7             | 2,313        |               |
|                    |  |               |               | 1552-298   | 11/4/2009      | 39188           | 830          | 5.743       | 1,360        |              |               | 1,999        |               |
|                    |  |               |               | 1552-319   | 11/18/2009     | 40504           | 939          | 6.29        | 1,690        |              |               | 2,490        |               |
|                    |  |               |               | 1552-334   | 12/2/2009      | 41545           | 942          | 6.92        | 1,950        |              |               | 3,050        |               |
|                    |  |               |               | 1552-351   | 12/16/2009     | 43377           | 588          | 2.78        | 412          |              |               | 194          |               |
|                    |  |               |               | 1552-368   | 1/6/2010       | 00351           | 546          | 1.8         | 176          |              |               | 420          |               |
|                    |  |               |               | 1552-385   | 1/20/2010      | 01515           | 311          | 1.396       | 78.3         |              |               | 235          |               |
|                    |  |               |               | 0552-938   | 8/25/2010      | ND              |              |             |              |              |               |              |               |
|                    |  |               |               | 0552-950   | 9/8/2010       | ND              |              |             |              |              |               |              |               |
|                    |  |               |               | 0552-965   | 9/22/2010      | ND              |              |             |              |              |               |              |               |
| 0552-980           | 10/6/2010  | ND            |               |            |                |                 |              |             |              |              |               |              |               |
| 0552-993           | 10/20/2010   | ND            |               |            |                |                 |              |             |              |              |               |              |               |
|                    |  |               |               | 1552-090   | 9/10/2009      | 06684           | 480          | 13.7        | 5480         |              |               |              |               |
|                    |  |               |               | 1552-117   | 9/15/2009      | 06808           | 255          | 12.2        | 4080         |              |               |              |               |
|                    |  |               |               | 1552-151   | 9/17/2009      | 33136           | 296          | 10.5        | 3600         |              |               |              |               |
|                    |  |               |               | 1552-163   | 9/21/2009      | 33359           | 472          | 7.013       | 1,120        |              |               |              |               |
|                    |  |               |               | 1552-206   | 9/29/2009      | 34478           | 310          | 5.14        | 710          |              | 680           |              |               |
|                    |  |               |               | 1552-234   | 10/6/2009      | 35253           | 317          | 3.783       | 353          |              | 462           |              |               |
|                    |  |               |               | 1552-268   | 10/21/2009     | 37185           | 304          | 2.27        | 104          |              | 243           |              |               |
|                    |  |               |               | 1552-299   | 11/4/2009      | 39189           | 263          | 1.89        | 87.7         |              | 201           |              |               |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |                       |                 |                  |            |                |         | METALS       |             |              |              |               |              |              |               |     |  |
|--------------------|-----------------------|-----------------|------------------|------------|----------------|---------|--------------|-------------|--------------|--------------|---------------|--------------|--------------|---------------|-----|--|
|                    |                       |                 |                  |            |                |         | Fe<br>(ug/L) | K<br>(mg/L) | Na<br>(ug/L) | Al<br>(ug/L) | Cu<br>(ug/L)  | Se<br>(ug/L) | Sr<br>(ug/L) | Pb<br>(ug/L)  |     |  |
| RMI                | SAMPLE LOCATION       | LATITUDE        | LONGITUDE        | SAMPLE ID# | DATE COLLECTED | LAB ID# | 1500<br>(AL) |             |              |              | @H=10C<br>9.0 | 4.6<br>(CFC) |              | @H=10C<br>2.5 |     |  |
| 0.2                | WV Fork Dunkard Creek | 39° 43' 18.3"   | 80° 16' 25.1"    | 1552-320   | 11/18/2009     | 40505   | 377          | 3.51        | 567          |              |               |              | 723          |               |     |  |
|                    |                       |                 |                  | 1552-335   | 12/2/2009      | 41546   | 308          | 2.69        | 278          |              |               |              |              | 433           |     |  |
|                    |                       |                 |                  | 1552-352   | 12/16/2009     | 43378   | 348          | 1.73        | 79.5         |              |               |              |              | 194           |     |  |
|                    |                       |                 |                  | 1552-369   | 1/6/2010       | 00352   | 275          | 1.71        | 139          |              |               |              |              | 339           |     |  |
|                    |                       |                 |                  | 1552-386   | 1/20/2010      | 01540   | 282          | 1.17        | 43           |              |               |              |              | 145           |     |  |
|                    |                       |                 |                  | 0552-926   | 8/11/2010      | 25803   |              |             |              |              |               |              |              |               |     |  |
|                    |                       |                 |                  | 0552-940   | 8/25/2010      | 27366   |              |             |              |              |               |              |              |               |     |  |
|                    |                       |                 |                  | 0552-953   | 9/8/2010       | 28664   |              |             |              |              |               |              |              |               |     |  |
|                    |                       |                 |                  | 0552-967   | 9/22/2010      | 29663   |              |             |              |              |               |              |              |               |     |  |
|                    |                       |                 |                  | 0552-981   | 10/6/2010      | 31137   |              |             |              |              |               |              |              |               |     |  |
| 0552-995           | 10/20/2010            | 32726           |                  |            |                |         |              |             |              |              |               |              |              |               |     |  |
| 41                 | Dunkard Creek @ Brave | 39° 43' 39.0"   | 080° 15' 21.9"   | 1552-085   | 9/10/2009      | 06683   | 242          | 5.3         | 1210         |              |               |              |              |               |     |  |
|                    |                       |                 |                  | 1552-123   | 9/15/2009      | 06809   | 219          | 5           | 1280         |              |               |              |              |               |     |  |
|                    |                       |                 |                  | 1552-171   | 9/21/2009      | 33367   | 250          | 6.934       | 1450         |              |               |              |              |               |     |  |
|                    |                       |                 |                  | 1552-208   | 9/29/2009      | 34479   | 365          | 4.97        | 766          |              |               |              |              | 911           |     |  |
|                    |                       |                 |                  | 1552-236   | 10/6/2009      | 35254   | 218          | 4.302       | 374          |              |               |              |              | 546           |     |  |
|                    |                       |                 |                  | 1552-270   | 10/21/2009     | 37184   | 419          | 2.462       | 79.3         |              |               |              |              | 231           |     |  |
|                    |                       |                 |                  | 1552-300   | 11/4/2009      | 39190   | 283          | 2.124       | 52.3         |              |               |              |              | 168           |     |  |
|                    |                       |                 |                  | 1552-321   | 11/18/2009     | 40444   | 365          | 2.41        | 221          |              |               |              |              | 362           |     |  |
|                    |                       |                 |                  | 1552-336   | 12/2/2009      | 41539   | 319          | 2.48        | 232          |              |               |              |              | 408           |     |  |
|                    |                       |                 |                  | 1552-353   | 12/16/2009     | 43373   | 423          | 1.73        | 48.1         |              |               |              |              | 163           |     |  |
|                    |                       |                 |                  | 1552-370   | 1/6/2010       | 00343   | 306          | 1.42        | 68.5         |              |               |              |              | 227           |     |  |
|                    |                       |                 |                  | 1552-387   | 1/20/2010      | 01516   | 425          | 1.33        | 54.6         | 241          |               |              |              | 180           |     |  |
|                    |                       |                 |                  | 0552-927   | 8/11/2010      | 25804   |              |             |              |              |               |              |              |               |     |  |
|                    |                       |                 |                  | 0552-941   | 8/25/2010      | 27367   |              |             |              |              |               |              |              |               |     |  |
|                    |                       |                 |                  | 0552-954   | 9/8/2010       | 28665   |              |             |              |              |               |              |              |               |     |  |
| 0552-968           | 9/22/2010             | 29664           |                  |            |                |         |              |             |              |              |               |              |              |               |     |  |
| 0552-982           | 10/6/2010             | 31138           |                  |            |                |         |              |             |              |              |               |              |              |               |     |  |
| 0552-996           | 10/20/2010            | 32727           |                  |            |                |         |              |             |              |              |               |              |              |               |     |  |
| 39.2               | Miracle Run @ Mouth   | N 39° 43' 05.0" | W 080° 14' 28.8" | 1552-142   | 9/17/2009      | 33127   | 227          | 6           | 746          |              |               |              |              |               |     |  |
|                    |                       |                 |                  | 1552-175   | 9/21/2009      | 33371   | 175          | 6.814       | 825          |              |               |              |              |               |     |  |
|                    |                       |                 |                  | 1552-208   | 9/29/2009      | 34479   | 171          | 4.43        | 441          |              |               |              |              | 988           |     |  |
|                    |                       |                 |                  | 1552-238   | 10/6/2009      | 35251   | 125          | 4.303       | 423          |              |               |              |              | 1051          |     |  |
|                    |                       |                 |                  | 1552-272   | 10/21/2009     | 37172   | 309          | 2.658       | 178.1        |              |               |              |              | 458           |     |  |
|                    |                       |                 |                  | 1552-301   | 11/4/2009      | 39191   | 239          | 2.951       | 292          |              |               |              |              | 658           | 1.3 |  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |  |                  |               |            |                |                    | METALS       |             |              |              |               |              |              |               |  |
|--------------------|--|------------------|---------------|------------|----------------|--------------------|--------------|-------------|--------------|--------------|---------------|--------------|--------------|---------------|--|
|                    |  |                  |               |            |                |                    | Fe<br>(ug/L) | K<br>(mg/L) | Na<br>(ug/L) | Al<br>(ug/L) | Cu<br>(ug/L)  | Se<br>(ug/L) | Sr<br>(ug/L) | Pb<br>(ug/L)  |  |
| RMI                | SAMPLE LOCATION  | LATITUDE         | LONGITUDE     | SAMPLE ID# | DATE COLLECTED | LAB ID#            | 1500<br>(AL) |             |              |              | @H=100<br>9.0 | 4.6<br>(CFC) |              | @H=100<br>2.5 |  |
|                    |  |                  |               | 1552-322   | 11/18/2009     | 40445              | 240          | 3.8         | 472          |              |               |              | 1050         |               |  |
|                    |  |                  |               | 1552-337   | 12/2/2009      | 41540              | 266          | 2.77        | 229          |              |               |              | 626          |               |  |
|                    |  |                  |               | 1552-354   | 12/16/2009     | 43374              | 610          | 1.85        | 94.8         | 264          |               |              | 290          |               |  |
|                    |  |                  |               | 1552-371   | 1/6/2010       | 00344              | 258          | 1.55        | 92.6         |              |               |              | 312          |               |  |
| 37.5               | Dunkard<br>Creek @<br>Blacksville                      | 39° 43'<br>15.7" | 80° 13' 20.6" | 1552       | 9/17/2009      | Field Data<br>Only |              |             |              |              |               |              |              |               |  |
|                    |  |                  |               | 1552       | 9/21/2009      | Field Data<br>Only |              |             |              |              |               |              |              |               |  |
|                    |  |                  |               | 1552-214   | 9/29/2009      | 34471              | 142          | 4.91        | 616          |              |               |              |              | 1040          |  |
|                    |  |                  |               | 1552-240   | 10/6/2009      | 35252              | 109          | 4.238       | 413          |              |               |              |              | 743           |  |
|                    |  |                  |               | 1552-274   | 10/21/2009     | 37171              | 350          | 2.449       | 122.1        |              |               |              |              | 296           |  |
|                    |  |                  |               | 1552-302   | 11/4/2009      | 39207              | 206          | 2.074       | 91.9         |              |               |              |              | 240           |  |
|                    |  |                  |               | 1552-323   | 11/18/2009     | 40446              | 216          | 2.86        | 275          |              |               |              |              | 566           |  |
|                    |  |                  |               | 1552-338   | 12/2/2009      | 41541              | 253          | 2.58        | 223          |              |               |              |              | 475           |  |
|                    |  |                  |               | 1552-355   | 12/16/2009     | 43375              | 393          | 1.75        | 54.7         |              |               |              |              | 183           |  |
|                    |  |                  |               | 1552-372   | 1/6/2010       | 00345              | 271          | 1.46        | 71           |              |               |              |              | 239           |  |
|                    |  |                  |               | 0552-928   | 8/11/2010      | 25782              |              |             |              |              |               |              |              |               |  |
|                    |  |                  |               | 0552-942   | 8/25/2010      | 27380              |              |             |              |              |               |              |              |               |  |
|                    |  |                  |               | 0552-955   | 9/8/2010       | 28666              |              |             |              |              |               |              |              |               |  |
|                    |  |                  |               | 0552-969   | 9/22/2010      | 29696              |              |             |              |              |               |              |              |               |  |
| 0552-983           | 10/6/2010  | 31161            |               |            |                |                    |              |             |              |              |               |              |              |               |  |
| 0552-997           | 10/20/2010   | 32721            |               |            |                |                    |              |             |              |              |               |              |              |               |  |
| 30.3               | Dunkard<br>Creek @<br>Route 7<br>bridge in<br>Pentress | 39° 42' 43"      | 80° 9' 43"    | 1552-214   | 9/29/2009      | 34471              | 181          | 6.13        | 571          |              |               |              | 1060         |               |  |
|                    |  |                  |               | 1552-242   | 10/6/2009      | 35245              | 161          | 5.236       | 473          |              |               |              |              | 791           |  |
|                    |  |                  |               | 1552-276   | 10/21/2009     | 37148              | 244          | 3.109       | 106.9        |              |               |              |              | 325           |  |
|                    |  |                  |               | 1552-303   | 11/4/2009      | 39208              | 236          | 2.557       | 78.1         |              |               |              |              | 249           |  |
|                    |  |                  |               | 1552-324   | 11/18/2009     | 40451              | 225          | 3.46        | 142          |              |               |              |              | 436           |  |
|                    |  |                  |               | 1552-339   | 12/2/2009      | 41516              | 209          | 3.61        | 243          |              |               |              |              | 580           |  |
|                    |  |                  |               | 1552-356   | 12/16/2009     | 43391              | 373          | 1.97        | 62.4         |              |               |              |              | 216           |  |
|                    |  |                  |               | 1552-373   | 1/6/2010       | 00346              | 228          | 1.67        | 63.9         |              |               |              |              | 239           |  |
|                    |  |                  |               | 0552-929   | 8/11/2010      | 25783              |              |             |              |              |               |              |              |               |  |
|                    |  |                  |               | 0552-943   | 8/25/2010      | 27381              |              |             |              |              |               |              |              |               |  |
|                    |  |                  |               | 0552-956   | 9/8/2010       | 28667              |              |             |              |              |               |              |              |               |  |
|                    |  |                  |               | 0552-970   | 9/22/2010      | 29697              |              |             |              |              |               |              |              |               |  |
| 0552-984           | 10/6/2010  | 31162            |               |            |                |                    |              |             |              |              |               |              |              |               |  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |   |                  |               |            |                |         | METALS       |             |              |              |               |              |              |               |  |
|--------------------|---|------------------|---------------|------------|----------------|---------|--------------|-------------|--------------|--------------|---------------|--------------|--------------|---------------|--|
|                    |   |                  |               |            |                |         | Fe<br>(ug/L) | K<br>(mg/L) | Na<br>(ug/L) | Al<br>(ug/L) | Cu<br>(ug/L)  | Se<br>(ug/L) | Sr<br>(ug/L) | Pb<br>(ug/L)  |  |
| RMI                | SAMPLE LOCATION                           | LATITUDE         | LONGITUDE     | SAMPLE ID# | DATE COLLECTED | LAB ID# | 1500<br>(AL) |             |              |              | @H=100<br>9.0 | 4.6<br>(CFC) |              | @H=100<br>2.5 |  |
|                    |   |                  |               | 0552-998   | 10/20/2010     | 32722   |              |             |              |              |               |              |              |               |  |
| 22.8               | Dunkard<br>Creek @<br>Mason Dixon<br>Park | 39° 42'<br>55.7" | 80° 06' 40.8" | 1552-129   | 9/15/2009      | 06810   | 395          | 5.6         | 383          |              |               |              |              |               |  |
|                    |   |                  |               | 1552-179   | 9/21/2009      | 33375   | 212          | 5.887       | 461          |              |               |              |              |               |  |
|                    |   |                  |               | 1552-216   | 9/29/2009      | 34472   | 315          | 6.06        | 472          |              |               |              |              | 906           |  |
|                    |   |                  |               | 1552-244   | 10/6/2009      | 35246   | 131          | 5.201       | 476          |              |               |              |              | 814           |  |
|                    |   |                  |               | 1552-278   | 10/21/2009     | 37149   | 203          | 3.365       | 110.1        |              |               |              |              | 330           |  |
|                    |   |                  |               | 1552-304   | 11/4/2009      | 39209   | 157          | 2.533       | 71.7         |              |               |              |              | 245           |  |
|                    |   |                  |               | 1552-325   | 11/18/2009     | 40452   | 189          | 2.84        | 108          |              |               |              |              | 354           |  |
|                    |   |                  |               | 1552-340   | 12/2/2009      | 41517   | 209          | 3.61        | 243          |              |               |              |              | 580           |  |
|                    |   |                  |               | 1552-357   | 12/16/2009     | 43392   | 378          | 2.02        | 59.3         |              |               |              |              | 214           |  |
|                    |   |                  |               | 1552-374   | 1/6/2010       | 00347   | 234          | 1.59        | 51           |              |               |              |              | 216           |  |
|                    |   |                  |               | 0552-930   | 8/11/2010      | 25835   |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | 0552-944   | 8/25/2010      | 27389   |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | 0552-957   | 9/8/2010       | 28699   |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | 0552-971   | 9/22/2010      | 29725   |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | 0552-985   | 10/6/2010      | 31135   |              |             |              |              |               |              |              |               |  |
| 0552-999           | 10/20/2010                                | 32715            |               |            |                |         |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | CMU*       | 9/17/2009      | NA      |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | CMU*       | 9/22/2009      | NA      |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | CMU*       | 9/29/2009      | NA      |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | CMU*       | 10/6/2009      | NA      |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | CMU*       | 10/13/2009     | NA      |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | CMU*       | 10/20/2009     | NA      |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | CMU*       | 10/27/2009     | NA      |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | CMU*       | 11/3/2009      | NA      |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | CMU*       | 11/10/2009     | NA      |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | CMU*       | 11/17/2009     | NA      |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | CMU*       | 11/24/2009     | NA      |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | CMU*       | 12/1/2009      | NA      |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | CMU*       | 12/8/2009      | NA      |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | CMU*       | 12/15/2009     | NA      |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | CMU*       | 1/5/2010       | NA      |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | CMU*       | 1/12/2010      | NA      |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | CMU*       | 1/19/2010      | NA      |              |             |              |              |               |              |              |               |  |
|                    |   |                  |               | CMU*       | 2/3/2010       | NA      |              |             |              |              |               |              |              |               |  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |                 |          |           |            |                |         | METALS       |             |              |              |               |              |              |               |  |  |
|--------------------|-----------------|----------|-----------|------------|----------------|---------|--------------|-------------|--------------|--------------|---------------|--------------|--------------|---------------|--|--|
|                    |                 |          |           |            |                |         | Fe<br>(ug/L) | K<br>(mg/L) | Na<br>(ug/L) | Al<br>(ug/L) | Cu<br>(ug/L)  | Se<br>(ug/L) | Sr<br>(ug/L) | Pb<br>(ug/L)  |  |  |
| RMI                | SAMPLE LOCATION | LATITUDE | LONGITUDE | SAMPLE ID# | DATE COLLECTED | LAB ID# | 1500<br>(AL) |             |              |              | @H=10C<br>9.0 | 4.6<br>(CFC) |              | @H=10C<br>2.5 |  |  |
| 15                 | East Dunkard    |          |           | CMU*       | 2/23/2010      | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 3/9/2010       | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 3/23/2010      | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 4/6/2010       | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 4/20/2010      | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 5/4/2010       | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 5/18/2010      | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 5/25/2010      | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 6/1/2010       | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 6/8/2010       | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 6/15/2010      | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 6/29/2010      | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 7/5/2010       | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 7/13/2010      | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 7/22/2010      | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 7/27/2010      | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 8/5/2010       | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 8/10/2010      | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 8/17/2010      | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 8/24/2010      | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 8/31/2010      | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 9/7/2010       | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 9/14/2010      | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 9/21/2010      | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 9/29/2010      | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 10/7/2010      | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 10/11/2010     | NA      |              |             |              |              |               |              |              |               |  |  |
|                    |                 |          |           | CMU*       | 10/19/2010     | NA      |              |             |              |              |               |              |              |               |  |  |
| CMU*               | 10/26/2010      | NA       |           |            |                |         |              |             |              |              |               |              |              |               |  |  |
| CMU*               | 11/3/2010       | NA       |           |            |                |         |              |             |              |              |               |              |              |               |  |  |
| CMU*               | 12/14/2010      | NA       |           |            |                |         |              |             |              |              |               |              |              |               |  |  |
| CMU*               | 1/19/2011       | NA       |           |            |                |         |              |             |              |              |               |              |              |               |  |  |
| CMU*               | 2/16/2011       | NA       |           |            |                |         |              |             |              |              |               |              |              |               |  |  |
| CMU*               | 3/16/2011       | NA       |           |            |                |         |              |             |              |              |               |              |              |               |  |  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |  |               |               |            |                |         | METALS       |             |              |              |               |              |              |               |  |
|--------------------|--|---------------|---------------|------------|----------------|---------|--------------|-------------|--------------|--------------|---------------|--------------|--------------|---------------|--|
|                    |  |               |               |            |                |         | Fe<br>(ug/L) | K<br>(mg/L) | Na<br>(ug/L) | Al<br>(ug/L) | Cu<br>(ug/L)  | Se<br>(ug/L) | Sr<br>(ug/L) | Pb<br>(ug/L)  |  |
| RMI                | SAMPLE LOCATION                              | LATITUDE      | LONGITUDE     | SAMPLE ID# | DATE COLLECTED | LAB ID# | 1500<br>(AL) |             |              |              | @H=100<br>9.0 | 4.6<br>(CFC) |              | @H=100<br>2.5 |  |
| 13                 | Dunkard Creek DC5                            |               |               | 7485-701   | 10/21/2008     | 38485   |              |             |              |              |               |              |              |               |  |
| 10.9               | Dunkard Creek @ end of Bald Hill Church Road | 39° 45' 20.0" | 80° 00' 43.4" | 1552-100   | 9/10/2009      | 06686   | 573          | 4.6         | 261          | 369          |               |              |              |               |  |
|                    |  |               |               | 1552-135   | 9/15/2009      | 06811   | 265          | 4.8         | 316          |              |               |              |              |               |  |
|                    |  |               |               | 1552-183   | 9/21/2009      | 33379   |              | 5.83        | 336          |              |               |              |              |               |  |
|                    |  |               |               | 1552-218   | 9/29/2009      | 34467   | 194          | 5.09        | 365          |              |               |              |              | 708           |  |
|                    |  |               |               | 1552-246   | 10/6/2009      | 35243   | 210          | 5.677       | 370          |              |               |              |              | 840           |  |
|                    |  |               |               | 1552-280   | 10/21/2009     | 37164   | 315          | 3.185       | 97.25        |              |               |              |              | 362           |  |
|                    |  |               |               | 1552-305   | 11/4/2009      | 39193   | 141          | 2.514       | 63.2         |              |               |              |              | 252           |  |
|                    |  |               |               | 1552-326   | 11/18/2009     | 40453   | 236          | 2.69        | 80.6         |              |               |              |              | 344           |  |
|                    |  |               |               | 1552-341   | 12/2/2009      | 41518   | 242          | 2.89        | 151          |              |               |              |              | 446           |  |
|                    |  |               |               | 1552-358   | 12/16/2009     | 43393   | 311          | 1.99        | 39           |              |               |              |              | 213           |  |
|                    |  |               |               | 1552-375   | 1/6/2010       | 00348   | 415          | 1.62        | 49.2         |              |               |              |              | 241           |  |
|                    |  |               |               | 0552-931   | 8/11/2010      | 25836   |              |             |              |              |               |              |              |               |  |
|                    |  |               |               | 0552-945   | 8/25/2010      | 27390   |              |             |              |              |               |              |              |               |  |
|                    |  |               |               | 0552-958   | 9/8/2010       | 28700   |              |             |              |              |               |              |              |               |  |
|                    |  |               |               | 0552-972   | 9/22/2010      | 29726   |              |             |              |              |               |              |              |               |  |
| 0552-986           | 10/6/2010                                    | 31136         |               |            |                |         |              |             |              |              |               |              |              |               |  |
| 0552-001           | 10/20/2010                                   | 32716         |               |            |                |         |              |             |              |              |               |              |              |               |  |
| 0552-030           | 7/19/2012                                    | 22234         |               |            |                |         |              |             |              |              |               |              |              |               |  |
| 10.8               | SHANNOPIN MINE DISCHARGE                     | 39° 45' 20.3" | 80° 00' 35.0" | 1552-141   | 9/15/2009      | 32737   |              |             |              |              |               |              |              |               |  |
|                    |  |               |               | 1552-187   | 9/21/2009      | 34468   |              |             |              |              |               |              |              |               |  |
|                    |  |               |               | 1552-220   | 9/29/2009      | 34468   | 276          | 13.2        | 2810         |              |               |              | 5090         |               |  |
|                    |  |               |               | 1552-248   | 10/6/2009      | 35244   | 250          | 11.78       | 2040         |              |               |              | 4962         |               |  |
|                    |  |               |               | 1552-282   | 10/21/2009     | 37165   | 577          | 15.95       | 2560         |              |               |              | 4744         |               |  |
|                    |  |               |               | 1552-306   | 11/4/2009      | 39194   | 1043         | 14.1        | 2740         |              |               |              | 4021         |               |  |
|                    |  |               |               | 1552-327   | 11/18/2009     | 40447   | 203          | 13.6        | 2510         |              |               |              | 3460         |               |  |
|                    |  |               |               | 1552-342   | 12/2/2009      | 41543   | 235          | 12.2        | 2000         |              |               |              | 4700         |               |  |
|                    |  |               |               | 1552-376   | 1/6/2010       | 00353   | 200          | 1.64        | 49.9         |              |               |              | 471          |               |  |
|                    |  |               |               | 1552-388   | 1/20/2010      | 01541   | 386          | 15.6        | 2890         |              |               |              | 4522         |               |  |
|                    |  |               |               | 7485-704   | 10/21/2008     | 38488   |              |             |              |              |               |              |              |               |  |
|                    |  |               |               | 0552-932   | 8/11/2010      | 25861   |              |             |              |              |               |              |              |               |  |
|                    |  |               |               | 0552-946   | 8/25/2010      | 27387   |              |             |              |              |               |              |              |               |  |
|                    |  |               |               | 0552-959   | 9/8/2010       | 28651   |              |             |              |              |               |              |              |               |  |
|                    |  |               |               | 0552-973   | 9/22/2010      | 29656   |              |             |              |              |               |              |              |               |  |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.

| SAMPLE INFORMATION |                               |               |                |            |                |           | METALS       |             |              |              |               |              |              |               |
|--------------------|-------------------------------|---------------|----------------|------------|----------------|-----------|--------------|-------------|--------------|--------------|---------------|--------------|--------------|---------------|
|                    |                               |               |                |            |                |           | Fe<br>(ug/L) | K<br>(mg/L) | Na<br>(ug/L) | Al<br>(ug/L) | Cu<br>(ug/L)  | Se<br>(ug/L) | Sr<br>(ug/L) | Pb<br>(ug/L)  |
| RMI                | SAMPLE LOCATION               | LATITUDE      | LONGITUDE      | SAMPLE ID# | DATE COLLECTED | LAB ID#   | 1500<br>(AL) |             |              |              | @H=100<br>9.0 | 4.6<br>(CFC) |              | @H=100<br>2.5 |
|                    |                               |               |                | 0552-987   | 10/6/2010      | 31132     |              |             |              |              |               |              |              |               |
|                    |                               |               |                | 0552-002   | 10/20/2010     | 32760     |              |             |              |              |               |              |              |               |
|                    |                               |               |                | 0552-031   | 7/19/2012      | 22235     |              |             |              |              |               |              |              |               |
| 9.8                | Dunkard Creek DC5B            |               |                | 7485-702   | 10/21/2008     | 38486     |              |             |              |              |               |              |              |               |
| 9.5                | Dunkard Creek DC6             |               |                | 7485-703   | 10/21/2008     | 38487     |              |             |              |              |               |              |              |               |
| 6.7                | Dunkard Creek @ LR2008 Bridge | N 39° 44' 52" | W 079° 58' 46" | 1552-192   | 9/21/2009      | 33347     | 726          | 10.76       | 1880         | 647          |               |              |              |               |
|                    |                               |               |                | 1552-222   | 9/29/2009      | 34469     | 307          | 7.47        | 1130         | 237          |               |              | 2230         |               |
|                    |                               |               |                | 1552-250   | 10/6/2009      | 35242     | 610          | 8.34        | 1340         | 503          |               |              | 3154         |               |
|                    |                               |               |                | 1552-284   | 10/21/2009     | 37162     | 323          | 6.726       | 863.5        | 203          |               |              | 1688         |               |
|                    |                               |               |                | 1552-307   | 11/4/2009      | 39195     | 343          | 4.864       | 680          | 214          |               |              | 1250         |               |
|                    |                               |               |                | 1552-328   | 11/18/2009     | 40448     | 305          | 7.69        | 1140         | 220          |               |              | 2380         |               |
|                    |                               |               |                | 1552-343   | 12/2/2009      | 41544     | 332          | 5.26        | 588          |              |               |              | 1550         |               |
|                    |                               |               |                | 1552-360   | 12/16/2009     | 43388     | 490          | 2.01        | 43.4         | 228          |               |              | 235          |               |
|                    |                               |               |                | 1552-377   | 1/6/2010       | 00354     | 383          | 1.66        | 55.3         |              |               |              | 270          |               |
| 4.6                | USGS Shannopin Gauge          | 39° 45' 33"   | 79° 58' 15"    | 0552-034   | 7/19/2012      | 22691     |              |             |              |              |               |              |              |               |
|                    |                               |               |                | NA         | 9/10/2009      | Gage Data |              |             |              |              |               |              |              |               |
|                    |                               |               |                | NA         | 9/15/2009      | Gage Data |              |             |              |              |               |              |              |               |
|                    |                               |               |                | NA         | 9/17/2009      | Gage Data |              |             |              |              |               |              |              |               |
|                    |                               |               |                | NA         | 9/21/2009      | Gage Data | 594          | 13.13       | 2570         |              |               |              | 8.3          |               |
|                    |                               |               |                | NA         | 9/29/2009      | Gage Data |              |             |              |              |               |              |              |               |
|                    |                               |               |                | NA         | 10/6/2009      | Gage Data |              |             |              |              |               |              |              |               |
|                    |                               |               |                | NA         | 10/21/2009     | Gage Data |              |             |              |              |               |              |              |               |
|                    |                               |               |                | NA         | 11/4/2009      | Gage Data |              |             |              |              |               |              |              |               |
|                    |                               |               |                | NA         | 11/18/2009     | Gage Data |              |             |              |              |               |              |              |               |
|                    |                               |               |                | NA         | 12/2/2009      | Gage Data |              |             |              |              |               |              |              |               |
|                    |                               |               |                | NA         | 12/16/2009     | Gage Data |              |             |              |              |               |              |              |               |
|                    |                               |               |                | NA         | 1/6/2010       | Gage Data |              |             |              |              |               |              |              |               |
|                    |                               |               |                | 0552-933   | 8/11/2010      | 35862     |              |             |              |              |               |              |              |               |
|                    |                               |               |                | 0552-947   | 8/25/2010      | 27388     |              |             |              |              |               |              |              |               |
| 0552-960           | 9/8/2010                      | 28652         |                |            |                |           |              |             |              |              |               |              |              |               |
| 0552-974           | 9/22/2010                     | 29657         |                |            |                |           |              |             |              |              |               |              |              |               |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.



| SAMPLE INFORMATION |  |                   |                    |            |                |         | METALS       |             |              |              |               |              |              |               |
|--------------------|--|-------------------|--------------------|------------|----------------|---------|--------------|-------------|--------------|--------------|---------------|--------------|--------------|---------------|
|                    |  |                   |                    |            |                |         | Fe<br>(ug/L) | K<br>(mg/L) | Na<br>(ug/L) | Al<br>(ug/L) | Cu<br>(ug/L)  | Se<br>(ug/L) | Sr<br>(ug/L) | Pb<br>(ug/L)  |
| RMI                | SAMPLE LOCATION                              | LATITUDE          | LONGITUDE          | SAMPLE ID# | DATE COLLECTED | LAB ID# | 1500<br>(AL) |             |              |              | @H=10C<br>9.0 | 4.6<br>(CFC) |              | @H=10C<br>2.5 |
|                    |  |                   |                    | 0552-988   | 10/6/2010      | 31133   |              |             |              |              |               |              |              |               |
|                    |  |                   |                    | 0552-003   | 10/20/2010     | 32761   |              |             |              |              |               |              |              |               |
| 4                  | Dunkard Creek DC7                            |                   |                    | 7485-705   | 10/21/2008     | 38489   |              |             |              |              |               |              |              |               |
| 3.46               | Algae Sampling Point                         | N 39°45'<br>47.3" | W 079°56'<br>54.8" | 0577-012   | 11/18/2009     | 40484   |              |             |              |              |               |              |              |               |
| 2.95               | Dunkard Creek DC8A                           |                   |                    | 7485-706   | 10/21/2008     | 38490   |              |             |              |              |               |              |              |               |
| 1                  | Dunkard Creek DC8A                           |                   |                    | 7485-707   | 10/21/2008     | 38491   |              |             |              |              |               |              |              |               |
| 0.1                | RMI 0.5 Mouth of Dunkard Creek Under 88 Brdg | N 39° 45'<br>51"  | W 079° 56'<br>17"  | 1552-196   | 9/21/2009      | 33339   | 74           | 2.128       | 46.3         |              | 2000          |              |              |               |
|                    |  |                   |                    | 1552-224   | 9/29/2009      | 34476   | 229          | 2.4         | 95.3         |              |               |              | 373          |               |
|                    |  |                   |                    | 1552-252   | 10/6/2009      | 35241   | 147          | 2.108       | 58.6         |              |               |              | 277          |               |
|                    |  |                   |                    | 1552-286   | 10/21/2009     | 37163   | 277          | 1.901       | 78.79        |              |               |              | 270          |               |
|                    |  |                   |                    | 1552-308   | 11/4/2009      | 39235   | 281          | 1.419       | 16.3         |              |               |              | 92           |               |
|                    |  |                   |                    | 1552-329   | 11/18/2009     | 40520   | 305          | 7.69        | 1140         | 220          |               |              | 2380         |               |
|                    |  |                   |                    | 1552-344   | 12/2/2009      | 41547   | 338          | 1.44        | 36.2         | 265          |               |              | 153          |               |
|                    |  |                   |                    | 1552-361   | 12/16/2009     | 43389   | 1930         | 2.09        | 36.8         | 693          |               |              | 251          |               |
|                    |  |                   |                    | 0593-020   | 10/15/2008     | 37432   |              |             |              |              |               |              |              |               |
|                    |  |                   |                    | 0593-029   | 10/22/2008     | 39040   |              |             |              |              |               |              |              |               |
|                    |  |                   |                    | 0552-879   | 11/17/2008     | 42551   |              |             |              |              |               |              |              |               |

\*VanBriesen Research Group, Carnegie Mellon University (CMU)

\*\* All TDS data collected by CMU was analyzed at 180°C. All TDS data collected by the Department prior to August 2010 was analyzed at 105°C and 180°C from August 2010 forward.