

## Appendix A2: Long-Term Full-Scale Column Test Flow Rates, and Influent and Effluent Concentrations

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The appendix contains the influent and effluent concentrations measured during the long-term, full-column tests. The first set of tables shows the frequent analyses from grab samples obtained every few days (pH, conductivity, ORP, turbidity, and flow) for each column. The second set of tables shows the complete data for the laboratory analyses that were taken periodically. The last set of tables shows concentrations from the spent media for selected media for different layers. These data were subsequently plotted in different ways and analyzed, with the resulting figures presented in Appendices A3, A4, and A5.

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**Table A2-1. Grab Sample Results from March 10, 2009**

| Test Day                  | 1.0                  | 3/10/2009             |                   |                 |      |                      |          |                 |  |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|--|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |  |
| Influent                  |                      |                       |                   |                 | 7.8  | 280                  | 233      | 15              |  |
| MWH Sand                  | 20.0                 | 1000                  | 0.05              | 8.9             | 8.21 | 220                  | 230      | 56              |  |
| Rhyolite Sand             | 3.0                  | 150                   | 0.05              | 8.9             | 8.36 | 270                  | 206      | 151             |  |
| GAC                       | 3.0                  | 210                   | 0.07              | 12.4            | 9.8  | 120                  | 186      | 59              |  |
| Peat Moss                 | 9.0                  | 1000                  | 0.11              | 19.7            | 4.71 | 220                  | 301      | 70              |  |
| Site Zeolite              | 4.0                  | 360                   | 0.09              | 16.0            | 8.16 | 970                  | 222      | 10              |  |
| Surface Modified Zeolite  | 9.0                  | 1000                  | 0.11              | 19.7            | 7.3  | 290                  | 225      | 33              |  |
| Rhyolite-SMZ-GAC          | 5.0                  | 370                   | 0.07              | 13.1            | 8.94 | 350                  | 193      | 408             |  |
| Rhyolite-SMZ-GAC-PM       | 5.0                  | 370                   | 0.07              | 13.1            | 8.1  | 260                  | 207      | 528             |  |
| Rhyolite-SMZ              | 6.0                  | 310                   | 0.05              | 9.2             | 8.11 | 280                  | 210      | 242             |  |
| MWH Sand-Site Zeolite-GAC | 3.0                  | 260                   | 0.09              | 15.4            | 9.28 | 700                  | 197      | 68              |  |

**Table A2-2. Grab Sample Results from March 11, 2009**

| Test Day                  | 2.0                  | 3/11/2009             |                   |                 |      |                      |          |                 |  |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|--|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |  |
| Influent                  |                      |                       |                   |                 | 7.65 | 300                  | 217      | 37              |  |
| MWH Sand                  | 34.1                 | 874                   | 0.03              | 4.6             | 7.96 | 300                  | 220      | 14              |  |
| Rhyolite Sand             | 4.8                  | 774                   | 0.16              | 28.4            | 8.36 | 300                  | 204      | 78              |  |
| GAC                       | 9.3                  | 1000                  | 0.11              | 19.2            | 9.63 | 390                  | 181      | 22              |  |
| Peat Moss                 | 12.0                 | 711                   | 0.06              | 10.5            | 4.61 | 250                  | 302      | 155             |  |
| Site Zeolite              | 4.0                  | 746                   | 0.19              | 33.4            | 8.25 | 380                  | 191      | 27              |  |
| Surface Modified Zeolite  | 7.2                  | 610                   | 0.09              | 15.1            | 7.44 | 300                  | 228      | 34              |  |
| Rhyolite-SMZ-GAC          | 6.3                  | 839                   | 0.13              | 23.7            | 8.88 | 300                  | 206      | 14              |  |
| Rhyolite-SMZ-GAC-PM       | 5.7                  | 850                   | 0.15              | 26.7            | 7.94 | 250                  | 205      | 22              |  |
| Rhyolite-SMZ              | 5.5                  | 830                   | 0.15              | 26.9            | 7.8  | 300                  | 212      | 15              |  |
| MWH Sand-Site Zeolite-GAC | 3.5                  | 729                   | 0.21              | 36.7            | 9.2  | 560                  | 186      | 8               |  |

**Table A2-3. Grab Sample Results from March 12, 2009**

| Test Day                  | 3.0                  | 3/12/2009             |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.98 | 290                  | 233      | 52              |
| MWH Sand                  | 8.9                  | 210                   | 0.02              | 4.2             | 8.04 | 270                  | 235      | 2               |
| Rhyolite Sand             | 4.0                  | 340                   | 0.09              | 15.3            | 8.32 | 280                  | 253      | 71              |
| GAC                       | 5.1                  | 750                   | 0.15              | 26.0            | 9.62 | 330                  | 200      | 4               |
| Peat Moss                 | 2.7                  | 235                   | 0.09              | 15.7            | 4.87 | 220                  | 327      | 105             |
| Site Zeolite              | 4.5                  | 750                   | 0.17              | 29.7            | 8.47 | 340                  | 206      | 9               |
| Surface Modified Zeolite  | 5.4                  | 500                   | 0.09              | 16.6            | 7.74 | 260                  | 218      | 8               |
| Rhyolite-SMZ-GAC          | 4.9                  | 770                   | 0.16              | 28.1            | 8.94 | 260                  | 193      | 19              |
| Rhyolite-SMZ-GAC-PM       | 7.1                  | 520                   | 0.07              | 13.1            | 8.02 | 280                  | 203      | 13              |
| Rhyolite-SMZ              | 2.3                  | 370                   | 0.16              | 28.4            | 8.11 | 280                  | 207      | 24              |
| MWH Sand-Site Zeolite-GAC | 7.4                  | 830                   | 0.11              | 20.1            | 9.1  | 330                  | 199      | 5               |

**Table A2-4. Grab Sample Results from March 14, 2009**

| Test Day                  | 4.0                  | 3/14/2009             |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.98 | 310                  | 230      | 21              |
| MWH Sand                  | 23.7                 | 370                   | 0.02              | 2.8             | 8.22 | 290                  | 227      | 5               |
| Rhyolite Sand             | 3.6                  | 360                   | 0.10              | 17.8            | 8.28 | 310                  | 227      | 52              |
| GAC                       | 5.5                  | 1000                  | 0.18              | 32.3            | 9.39 | 340                  | 200      | 1               |
| Peat Moss                 | 6.4                  | 510                   | 0.08              | 14.1            | 4.96 | 240                  | 306      | 34              |
| Site Zeolite              | 4.8                  | 240                   | 0.05              | 8.9             | 8.28 | 320                  | 225      | 5               |
| Surface Modified Zeolite  | 9.1                  | 580                   | 0.06              | 11.3            | 7.59 | 280                  | 243      | 8               |
| Rhyolite-SMZ-GAC          | 4.5                  | 600                   | 0.13              | 23.9            | 8.87 | 290                  | 210      | 15              |
| Rhyolite-SMZ-GAC-PM       | 4.2                  | 440                   | 0.11              | 18.7            | 7.94 | 260                  | 236      | 20              |
| Rhyolite-SMZ              | 4.2                  | 370                   | 0.09              | 15.6            | 8.02 | 300                  | 233      | 17              |
| MWH Sand-Site Zeolite-GAC | 8.1                  | 630                   | 0.08              | 13.8            | 9.02 | 350                  | 223      | 8               |

**Table A2-5. Grab Sample Results from March 16, 2009**

| Test Day                  | 5.0                  | 3/16/2009             |                   |                 |      |                      |          |                 |  |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|--|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |  |
| Influent                  |                      |                       |                   |                 | 7.8  | 340                  | 237      | 17              |  |
| MWH Sand                  | 20.1                 | 250                   | 0.01              | 2.2             | 8    | 340                  | 244      | 1               |  |
| Rhyolite Sand             | 6.9                  | 575                   | 0.08              | 14.8            | 7.96 | 340                  | 214      | 9               |  |
| GAC                       | 3.0                  | 350                   | 0.12              | 20.5            | 9.12 | 320                  | 190      | 1               |  |
| Peat Moss                 | 9.8                  | 225                   | 0.02              | 4.1             | 4.43 | 280                  | 330      | 3               |  |
| Site Zeolite              | 17.6                 | 100                   | 0.01              | 1.0             | 8.04 | 650                  | 238      | 1               |  |
| Surface Modified Zeolite  | 4.9                  | 200                   | 0.04              | 7.2             | 7.58 | 340                  | 219      | 3               |  |
| Rhyolite-SMZ-GAC          | 2.6                  | 350                   | 0.13              | 23.6            | 8.54 | 320                  | 237      | 9               |  |
| Rhyolite-SMZ-GAC-PM       | 7.4                  | 500                   | 0.07              | 12.0            | 7.83 | 320                  | 237      | 5               |  |
| Rhyolite-SMZ              | 6.6                  | 750                   | 0.11              | 20.2            | 7.91 | 340                  | 233      | 7               |  |
| MWH Sand-Site Zeolite-GAC | 5.5                  | 350                   | 0.06              | 11.4            | 8.68 | 340                  | 221      | 3               |  |

**Table A2-6. Grab Sample Results from March 18, 2009**

| Test Day                  | 6.0                  | 3/18/2009             |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.69 | 330                  | 234      | 128             |
| MWH Sand                  | 8.2                  | 800                   | 0.10              | 17.4            | 7.98 | 320                  | 218      | 16              |
| Rhyolite Sand             | 11.7                 | 800                   | 0.07              | 12.1            | 7.95 | 290                  | 224      | 6               |
| GAC                       | 6.1                  | 750                   | 0.12              | 21.8            | 8.89 | 330                  | 194      | 1               |
| Peat Moss                 | 42.4                 | 500                   | 0.01              | 2.1             | 4.47 | 290                  | 329      | 3               |
| Site Zeolite              | 2.7                  | 700                   | 0.26              | 46.1            | 8.02 | 360                  | 212      | 8               |
| Surface Modified Zeolite  | 11.6                 | 500                   | 0.04              | 7.7             | 7.79 | 350                  | 219      | 3               |
| Rhyolite-SMZ-GAC          | 7.1                  | 800                   | 0.11              | 20.1            | 8.62 | 290                  | 207      | 8               |
| Rhyolite-SMZ-GAC-PM       | 4.1                  | 650                   | 0.16              | 28.4            | 7.88 | 330                  | 221      | 6               |
| Rhyolite-SMZ              | 5.2                  | 773                   | 0.15              | 26.2            | 7.76 | 310                  | 244      | 4               |
| MWH Sand-Site Zeolite-GAC | 8.6                  | 650                   | 0.08              | 13.5            | 8.5  | 360                  | 210      | 2               |

**Table A2-7. Grab Sample Results from March 20, 2009**

| Test Day                  | 7.0                  | 3/20/2009             |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.51 | 360                  | 207      | 183             |
| MWH Sand                  | 9.8                  | 655                   | 0.07              | 11.9            | 7.92 | 360                  | 202      | 2               |
| Rhyolite Sand             | 18.7                 | 600                   | 0.03              | 5.7             | 8.04 | 380                  | 206      | 3               |
| GAC                       | 13.7                 | 620                   | 0.05              | 8.0             | 8.88 | 340                  | 215      | 1               |
| Peat Moss                 | 4.6                  | 675                   | 0.15              | 26.4            | 4.52 | 290                  | 312      | 4               |
| Site Zeolite              | 5.6                  | 675                   | 0.12              | 21.3            | 7.89 | 380                  | 223      | 4               |
| Surface Modified Zeolite  | 21.7                 | 575                   | 0.03              | 4.7             | 7.77 | 350                  | 208      | 3               |
| Rhyolite-SMZ-GAC          | 6.3                  | 760                   | 0.12              | 21.5            | 8.37 | 360                  | 212      | 4               |
| Rhyolite-SMZ-GAC-PM       | 6.5                  | 760                   | 0.12              | 20.7            | 7.9  | 360                  | 223      | 5               |
| Rhyolite-SMZ              | 6.7                  | 645                   | 0.10              | 17.1            | 7.86 | 340                  | 203      | 4               |
| MWH Sand-Site Zeolite-GAC | 9.6                  | 525                   | 0.05              | 9.8             | 8.47 | 390                  | 222      | 2               |

**Table A2-8. Grab Sample Results from March 24, 2009**

| Test Day                  | 8.0                  | 3/24/2009             |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.7  | 390                  | 210      | 54              |
| MWH Sand                  | 39.2                 | 500                   | 0.01              | 2.3             | 7.46 | 510                  | 214      | 1               |
| Rhyolite Sand             | 3.0                  | 740                   | 0.24              | 43.3            | 7.88 | 320                  | 215      | 13              |
| GAC                       | 5.9                  | 650                   | 0.11              | 19.6            | 8.45 | 350                  | 210      | 1               |
| Peat Moss                 | 7.5                  | 600                   | 0.08              | 14.3            | 4.37 | 330                  | 308      | 11              |
| Site Zeolite              | 3.7                  | 510                   | 0.14              | 24.3            | 7.62 | 390                  | 216      | 4               |
| Surface Modified Zeolite  | 3.8                  | 600                   | 0.16              | 27.9            | 7.68 | 330                  | 221      | 10              |
| Rhyolite-SMZ-GAC          | 7.7                  | 660                   | 0.09              | 15.2            | 8.46 | 340                  | 195      | 5               |
| Rhyolite-SMZ-GAC-PM       | 4.3                  | 680                   | 0.16              | 28.4            | 7.88 | 300                  | 208      | 6               |
| Rhyolite-SMZ              | 49.2                 | 500                   | 0.01              | 1.8             | 7.94 | 400                  | 207      | 2               |
| MWH Sand-Site Zeolite-GAC | 12.8                 | 585                   | 0.05              | 8.1             | 8.5  | 450                  | 209      | 4               |

**Table A2-9. Grab Sample Results from March 25, 2009**

| Test Day                  | 9.0                  | 3/25/2009             |                   |                 |      |                      |          |                 |  |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|--|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |  |
| Influent                  |                      |                       |                   |                 | 7.66 | 330                  | 232      | 124             |  |
| MWH Sand                  | 6.6                  | 600                   | 0.09              | 16.2            | 7.46 | 330                  | 234      | 8               |  |
| Rhyolite Sand             | 33.0                 | 118                   | 0.00              | 0.6             | 7.85 | 310                  | 221      | 14              |  |
| GAC                       | 18.0                 | 520                   | 0.03              | 5.1             | 8.36 | 330                  | 212      | 1               |  |
| Peat Moss                 | 62.1                 | 780                   | 0.01              | 2.2             | 4.52 | 310                  | 315      | 11              |  |
| Site Zeolite              | 4.0                  | 700                   | 0.17              | 30.8            | 7.65 | 350                  | 243      | 4               |  |
| Surface Modified Zeolite  | 49.3                 | 650                   | 0.01              | 2.3             | 7.9  | 390                  | 237      | 5               |  |
| Rhyolite-SMZ-GAC          | 13.1                 | 575                   | 0.04              | 7.8             | 8.47 | 330                  | 222      | 4               |  |
| Rhyolite-SMZ-GAC-PM       | 7.3                  | 625                   | 0.09              | 15.3            | 8.01 | 330                  | 231      | 6               |  |
| Rhyolite-SMZ              | 10.1                 | 580                   | 0.06              | 10.2            | 7.84 | 350                  | 241      | 32              |  |
| MWH Sand-Site Zeolite-GAC | 30.8                 | 540                   | 0.02              | 3.1             | 8.38 | 370                  | 231      | 11              |  |

**Table A2-10. Grab Sample Results from March 27, 2009**

| Test Day                  | 10.0                 | 3/27/2009             |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.71 | 360                  | 197      | 59              |
| MWH Sand                  | 14.5                 | 122                   | 0.01              | 1.5             | 7.32 | 360                  | 204      | 9               |
| Rhyolite Sand             | 4.4                  | 750                   | 0.17              | 30.2            | 7.8  | 360                  | 204      | 8               |
| GAC                       | 6.0                  | 750                   | 0.13              | 22.3            | 8.48 | 310                  | 154      | 3               |
| Peat Moss                 | 5.4                  | 755                   | 0.14              | 24.8            | 4.45 | 270                  | 290      | 10              |
| Site Zeolite              | 6.3                  | 500                   | 0.08              | 14.1            | 7.37 | 400                  | 216      | 4               |
| Surface Modified Zeolite  | 5.2                  | 725                   | 0.14              | 24.6            | 7.68 | 340                  | 205      | 11              |
| Rhyolite-SMZ-GAC          | 14.7                 | 575                   | 0.04              | 7.0             | 8.46 | 370                  | 159      | 11              |
| Rhyolite-SMZ-GAC-PM       | 17.2                 | 575                   | 0.03              | 5.9             | 7.98 | 360                  | 172      | 11              |
| Rhyolite-SMZ              | 6.2                  | 600                   | 0.10              | 17.2            | 7.79 | 320                  | 202      | 10              |
| MWH Sand-Site Zeolite-GAC | 3.8                  | 675                   | 0.18              | 31.8            | 8.37 | 350                  | 203      | 8               |



**Table A2-11. Grab Sample Results from March 30, 2009**

| Test Day                  | 11.0                 | 3/30/2009             |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.63 | 360                  | 225      | 39              |
| MWH Sand                  | 4.2                  | 710                   | 0.17              | 29.8            | 7.47 | 330                  | 226      | 16              |
| Rhyolite Sand             | 106.4                | 794                   | 0.01              | 1.3             | 8.1  | 430                  | 213      | 2               |
| GAC                       | 9.4                  | 675                   | 0.07              | 12.8            | 8.34 | 380                  | 193      | 2               |
| Peat Moss                 | 17.7                 | 600                   | 0.03              | 6.0             | 4.54 | 310                  | 311      | 13              |
| Site Zeolite              | 4.9                  | 725                   | 0.15              | 26.3            | 7.6  | 400                  | 227      | 4               |
| Surface Modified Zeolite  | 7.7                  | 700                   | 0.09              | 16.2            | 7.83 | 360                  | 201      | 6               |
| Rhyolite-SMZ-GAC          | 50.7                 | 650                   | 0.01              | 2.3             | 8.14 | 450                  | 207      | 3               |
| Rhyolite-SMZ-GAC-PM       | 3.9                  | 800                   | 0.21              | 36.8            | 7.9  | 380                  | 222      | 11              |
| Rhyolite-SMZ              | 8.4                  | 640                   | 0.08              | 13.6            | 7.78 | 360                  | 217      | 6               |
| MWH Sand-Site Zeolite-GAC | 39.5                 | 500                   | 0.01              | 2.3             | 8.5  | 550                  | 205      | 1               |

**Table A2-12. Grab Sample Results from April 1, 2009**

| Test Day                  | 12.0                 | 4/1/2009              |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.63 | 450                  | 215      | 80              |
| MWH Sand                  | 36.4                 | 160                   | 0.00              | 0.8             | 7.37 | 340                  | 214      | 89              |
| Rhyolite Sand             | 3.2                  | 813                   | 0.25              | 44.9            | 7.93 | 430                  | 205      | 9               |
| GAC                       | 36.9                 | 160                   | 0.00              | 0.8             | 8.29 | 380                  | 197      | 2               |
| Peat Moss                 | 6.2                  | 730                   | 0.12              | 20.9            | 4.49 | 360                  | 304      | 5               |
| Site Zeolite              | 10.1                 | 740                   | 0.07              | 13.0            | 7.76 | 530                  | 221      | 5               |
| Surface Modified Zeolite  | 87.4                 | 350                   | 0.00              | 0.7             | 7.78 | 330                  | 214      | 42              |
| Rhyolite-SMZ-GAC          | 3.3                  | 750                   | 0.23              | 40.2            | 8.43 | 460                  | 215      | 9               |
| Rhyolite-SMZ-GAC-PM       | 8.8                  | 650                   | 0.07              | 13.2            | 7.9  | 430                  | 208      | 11              |
| Rhyolite-SMZ              | 94.2                 | 725                   | 0.01              | 1.4             | 8.14 | 380                  | 210      | 2               |
| MWH Sand-Site Zeolite-GAC | 3.7                  | 645                   | 0.17              | 30.8            | 8.34 | 530                  | 201      | 4               |

**Table A2-13. Grab Sample Results from April 3, 2009**

| Test Day                  | 13.0                 | 4/3/2009              |                   |                 |      |                      |          |                 |  |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|--|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |  |
| Influent                  |                      |                       |                   |                 | 7.76 | 340                  | 197      | 47              |  |
| MWH Sand                  | 5.6                  | 650                   | 0.12              | 20.7            | 7.56 | 350                  | 200      | 24              |  |
| Rhyolite Sand             | 34.2                 | 615                   | 0.02              | 3.2             | 8.06 | 380                  | 196      | 6               |  |
| GAC                       | 12.4                 | 650                   | 0.05              | 9.3             | 8.43 | 350                  | 188      | 1               |  |
| Peat Moss                 | 71.7                 | 650                   | 0.01              | 1.6             | 4.61 | 270                  | 305      | 6               |  |
| Site Zeolite              | 49.3                 | 575                   | 0.01              | 2.1             | 7.38 | 510                  | 208      | 7               |  |
| Surface Modified Zeolite  | 8.4                  | 840                   | 0.10              | 17.7            | 7.86 | 380                  | 198      | 5               |  |
| Rhyolite-SMZ-GAC          | 23.5                 | 650                   | 0.03              | 4.9             | 7.88 | 350                  | 211      | 3               |  |
| Rhyolite-SMZ-GAC-PM       | 9.8                  | 750                   | 0.08              | 13.6            | 8.55 | 330                  | 222      | 2               |  |
| Rhyolite-SMZ              | 7.4                  | 650                   | 0.09              | 15.7            | 7.88 | 330                  | 208      | 22              |  |
| MWH Sand-Site Zeolite-GAC | 18.1                 | 675                   | 0.04              | 6.6             | 8.27 | 450                  | 224      | 1               |  |

**Table A2-14. Grab Sample Results from April 6, 2009**

| Test Day                  | 14.0                 | 4/6/2009              |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.71 | 340                  | 209      | 48              |
| MWH Sand                  | 16.1                 | 600                   | 0.04              | 6.6             | 7.49 | 340                  | 208      | 39              |
| Rhyolite Sand             | 4.5                  | 1000                  | 0.22              | 39.3            | 7.88 | 350                  | 206      | 25              |
| GAC                       | 12.4                 | 650                   | 0.05              | 9.3             | 8.53 | 410                  | 173      | 8               |
| Peat Moss                 | 5.2                  | 750                   | 0.15              | 25.8            | 4.55 | 290                  | 289      | 6               |
| Site Zeolite              | 5.8                  | 625                   | 0.11              | 19.2            | 7.03 | 380                  | 220      | 13              |
| Surface Modified Zeolite  | 6.2                  | 600                   | 0.10              | 17.3            | 7.79 | 370                  | 182      | 8               |
| Rhyolite-SMZ-GAC          | 4.4                  | 500                   | 0.11              | 20.4            | 7.58 | 640                  | 217      | 2               |
| Rhyolite-SMZ-GAC-PM       | 13.0                 | 500                   | 0.04              | 6.8             | 8.26 | 350                  | 197      | 20              |
| Rhyolite-SMZ              | 4.1                  | 525                   | 0.13              | 22.9            | 7.83 | 340                  | 207      | 17              |
| MWH Sand-Site Zeolite-GAC | 4.0                  | 700                   | 0.17              | 30.8            | 7.84 | 370                  | 204      | 6               |

**Table A2-15. Grab Sample Results from April 8, 2009**

| Test Day                  | 15.0                 | 4/8/2009              |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.86 | 370                  | 216      | 27              |
| MWH Sand                  | 58.9                 | 250                   | 0.00              | 0.8             | 7.78 | 350                  | 238      | 2               |
| Rhyolite Sand             | 8.2                  | 1000                  | 0.12              | 21.7            | 7.9  | 360                  | 236      | 53              |
| GAC                       | 11.2                 | 500                   | 0.04              | 7.9             | 8.51 | 410                  | 220      | 1               |
| Peat Moss                 | 8.1                  | 625                   | 0.08              | 13.7            | 4.58 | 280                  | 309      | 12              |
| Site Zeolite              | 6.6                  | 525                   | 0.08              | 14.1            | 7.15 | 370                  | 217      | 6               |
| Surface Modified Zeolite  | 4.5                  | 500                   | 0.11              | 19.7            | 7.74 | 390                  | 208      | 15              |
| Rhyolite-SMZ-GAC          | 4.8                  | 750                   | 0.16              | 27.9            | 7.85 | 380                  | 221      | 75              |
| Rhyolite-SMZ-GAC-PM       | 10.3                 | 650                   | 0.06              | 11.2            | 8.31 | 370                  | 196      | 8               |
| Rhyolite-SMZ              | 4.0                  | 770                   | 0.19              | 34.6            | 7.53 | 330                  | 219      | 21              |
| MWH Sand-Site Zeolite-GAC | 9.4                  | 500                   | 0.05              | 9.4             | 7.89 | 520                  | 223      | 3               |

**Table A2-16. Grab Sample Results from April 10, 2009**

| Test Day                  | 16.0                 | 4/10/2009             |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.78 | 370                  | 217      | 55              |
| MWH Sand                  | 5.5                  | 650                   | 0.12              | 21.1            | 7.64 | 400                  | 237      | 56              |
| Rhyolite Sand             | 18.5                 | 650                   | 0.04              | 6.2             | 7.88 | 410                  | 207      | 3               |
| GAC                       | 17.2                 | 650                   | 0.04              | 6.7             | 8.41 | 440                  | 205      | 1               |
| Peat Moss                 | 34.1                 | 250                   | 0.01              | 1.3             | 4.68 | 340                  | 313      | 7               |
| Site Zeolite              | 7.3                  | 500                   | 0.07              | 12.2            | 7.04 | 420                  | 230      | 5               |
| Surface Modified Zeolite  | 7.8                  | 500                   | 0.06              | 11.4            | 7.81 | 420                  | 210      | 4               |
| Rhyolite-SMZ-GAC          | 7.6                  | 650                   | 0.09              | 15.2            | 7.72 | 420                  | 238      | 6               |
| Rhyolite-SMZ-GAC-PM       | 12.5                 | 500                   | 0.04              | 7.1             | 8.23 | 440                  | 239      | 16              |
| Rhyolite-SMZ              | 6.6                  | 500                   | 0.08              | 13.4            | 7.95 | 400                  | 234      | 24              |
| MWH Sand-Site Zeolite-GAC | 18.8                 | 150                   | 0.01              | 1.4             | 8.23 | 590                  | 228      | 1               |

**Table A2-17. Grab Sample Results from April 13, 2009**

| Test Day                  | 17.0                 | 4/13/2009             |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.8  | 410                  | 245      | 81              |
| Rhyolite Sand             | 3.8                  | 745                   | 0.19              | 34.5            | 7.51 | 430                  | 251      | 32              |
| GAC                       | 7.0                  | 868                   | 0.12              | 22.0            | 8.07 | 360                  | 253      | 3               |
| Peat Moss                 | 4.4                  | 750                   | 0.17              | 30.2            | 4.48 | 340                  | 331      | 4               |
| Site Zeolite              | 32.5                 | 650                   | 0.02              | 3.6             | 7.34 | 440                  | 256      | 5               |
| Surface Modified Zeolite  | 39.5                 | 505                   | 0.01              | 2.3             | 7.96 | 470                  | 240      | 4               |
| Rhyolite-SMZ-GAC          | 3.7                  | 650                   | 0.18              | 31.2            | 7.2  | 390                  | 261      | 7               |
| Rhyolite-SMZ-GAC-PM       | 4.1                  | 655                   | 0.16              | 28.6            | 8.03 | 410                  | 247      | 5               |
| Rhyolite-SMZ              | 6.3                  | 650                   | 0.10              | 18.3            | 7.87 | 380                  | 245      | 9               |
| MWH Sand-Site Zeolite-GAC | 2.6                  | 500                   | 0.19              | 34.4            | 7.52 | 380                  | 257      | 4               |

**Table A2-18. Grab Sample Results from April 15, 2009**

| Test Day                  | 18.0                 | 4/15/2009             |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.74 | 430                  | 233      | 28              |
| Rhyolite Sand             | 8.3                  | 500                   | 0.06              | 10.7            | 7.94 | 450                  | 254      | 8               |
| GAC                       | 10.8                 | 500                   | 0.05              | 8.3             | 8.21 | 430                  | 231      | 2               |
| Peat Moss                 | 8.4                  | 500                   | 0.06              | 10.6            | 4.56 | 340                  | 317      | 6               |
| Site Zeolite              | 22.5                 | 250                   | 0.01              | 2.0             | 6.76 | 410                  | 251      | 22              |
| Surface Modified Zeolite  | 9.1                  | 50                    | 0.01              | 1.0             | 7.7  | 410                  | 234      | 29              |
| Rhyolite-SMZ-GAC          | 14.7                 | 950                   | 0.06              | 11.5            | 7.28 | 380                  | 257      | 9               |
| Rhyolite-SMZ-GAC-PM       | 14.2                 | 1000                  | 0.07              | 12.5            | 7.97 | 470                  | 239      | 5               |
| Rhyolite-SMZ              | 20.5                 | 150                   | 0.01              | 1.3             | 8    | 500                  | 239      | 3               |
| MWH Sand-Site Zeolite-GAC | 13.8                 | 250                   | 0.02              | 3.2             | 7.64 | 530                  | 242      | 1               |

**Table A2-19. Grab Sample Results from April 17, 2009**

| Test Day                  | 19.0                 | 4/17/2009             |                   |                 |      |                      |          |                 |  |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|--|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |  |
| Influent                  |                      |                       |                   |                 | 7.5  | 370                  | 231      | 72              |  |
| Rhyolite Sand             | 2.5                  | 500                   | 0.20              | 35.8            | 7.87 | 370                  | 219      | 8               |  |
| GAC                       | 5.1                  | 250                   | 0.05              | 8.7             | 8.19 | 460                  | 220      | 2               |  |
| Peat Moss                 | 11.4                 | 570                   | 0.05              | 8.9             | 4.56 | 290                  | 315      | 12              |  |
| Site Zeolite              | 2.9                  | 355                   | 0.12              | 22.1            | 7.09 | 390                  | 250      | 6               |  |
| Surface Modified Zeolite  | 3.6                  | 500                   | 0.14              | 24.7            | 7.77 | 390                  | 236      | 19              |  |
| Rhyolite-SMZ-GAC          | 9.2                  | 625                   | 0.07              | 12.1            | 7.18 | 490                  | 249      | 28              |  |
| Rhyolite-SMZ-GAC-PM       | 6.2                  | 490                   | 0.08              | 14.0            | 8    | 510                  | 245      | 11              |  |
| Rhyolite-SMZ              | 3.4                  | 650                   | 0.19              | 34.0            | 7.76 | 370                  | 234      | 35              |  |
| MWH Sand-Site Zeolite-GAC | 1.3                  | 325                   | 0.25              | 44.4            | 7.53 | 370                  | 233      | 9               |  |

**Table A2-20. Grab Sample Results from April 20, 2009**

| Test Day                  | 20.0                 | 4/20/2009             |                   |                 |      |                      |          |                 |  |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|--|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |  |
| Influent                  |                      |                       |                   |                 | 7.77 | 430                  | 203      | 44              |  |
| Rhyolite Sand             | 5.2                  | 650                   | 0.13              | 22.2            | 7.8  | 430                  | 232      | 12              |  |
| GAC                       | 4.2                  | 350                   | 0.08              | 15.0            | 7.63 | 510                  | 206      | 3               |  |
| Peat Moss                 | 3.5                  | 500                   | 0.14              | 25.5            | 4.58 | 360                  | 305      | 4               |  |
| Site Zeolite              | 5.1                  | 500                   | 0.10              | 17.6            | 6.91 | 450                  | 2218     | 5               |  |
| Surface Modified Zeolite  | 5.2                  | 650                   | 0.12              | 22.1            | 7.67 | 430                  | 225      | 6               |  |
| Rhyolite-SMZ-GAC          | 3.9                  | 350                   | 0.09              | 16.0            | 7.04 | 510                  | 221      | 8               |  |
| Rhyolite-SMZ-GAC-PM       | 6.8                  | 500                   | 0.07              | 13.1            | 7.54 | 540                  | 209      | 22              |  |
| Rhyolite-SMZ              | 4.3                  | 650                   | 0.15              | 26.6            | 7.8  | 430                  | 201      | 17              |  |
| MWH Sand-Site Zeolite-GAC | 4.3                  | 650                   | 0.15              | 26.9            | 7.12 | 440                  | 219      | 6               |  |

**Table A2-21. Grab Sample Results from April 22, 2009**

| Test Day                  | 21.0                 | 4/22/2009             |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.77 | 400                  | 198      | 79              |
| Rhyolite Sand             | 6.0                  | 650                   | 0.11              | 19.1            | 7.94 | 380                  | 210      | 14              |
| GAC                       | 17.1                 | 750                   | 0.04              | 7.8             | 7.9  | 310                  | 214      | 3               |
| Peat Moss                 | 62.8                 | 730                   | 0.01              | 2.1             | 4.98 | 300                  | 278      | 11              |
| Site Zeolite              | 12.9                 | 777                   | 0.06              | 10.7            | 6.91 | 380                  | 228      | 3               |
| Surface Modified Zeolite  | 5.9                  | 740                   | 0.13              | 22.3            | 7.9  | 410                  | 200      | 7               |
| Rhyolite-SMZ-GAC          | 14.9                 | 650                   | 0.04              | 7.7             | 7.34 | 400                  | 235      | 10              |
| Rhyolite-SMZ-GAC-PM       | 14.5                 | 750                   | 0.05              | 9.2             | 8.06 | 430                  | 202      | 10              |
| Rhyolite-SMZ              | 8.5                  | 812                   | 0.10              | 17.0            | 7.91 | 380                  | 217      | 11              |
| MWH Sand-Site Zeolite-GAC | 16.0                 | 650                   | 0.04              | 7.2             | 7.31 | 410                  | 221      | 4               |

**Table A2-22. Grab Sample Results from April 24, 2009**

| Test Day                  | 22.0                 | 4/24/2009             |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.76 | 380                  | 205      | 101             |
| Rhyolite Sand             | n/a                  | n/a                   | n/a               | n/a             | 7.81 | 400                  | 201      | 17              |
| GAC                       | n/a                  | n/a                   | n/a               | n/a             | 8.08 | 420                  | 206      | 1               |
| Peat Moss                 | n/a                  | n/a                   | n/a               | n/a             | 4.79 | 300                  | 281      | 9               |
| Site Zeolite              | n/a                  | n/a                   | n/a               | n/a             | 7.26 | 400                  | 213      | 9               |
| Surface Modified Zeolite  | n/a                  | n/a                   | n/a               | n/a             | 7.61 | 370                  | 204      | 10              |
| Rhyolite-SMZ-GAC          | n/a                  | n/a                   | n/a               | n/a             | 7.44 | 380                  | 218      | 10              |
| Rhyolite-SMZ-GAC-PM       | n/a                  | n/a                   | n/a               | n/a             | 7.72 | 400                  | 208      | 9               |
| Rhyolite-SMZ              | n/a                  | n/a                   | n/a               | n/a             | 7.83 | 400                  | 215      | 7               |
| MWH Sand-Site Zeolite-GAC | n/a                  | n/a                   | n/a               | n/a             | 7.36 | 370                  | 213      | 4               |

**Table A2-23. Grab Sample Results from April 27, 2009**

| Test Day                  | 23.0                 | 4/27/2009             |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.73 | 400                  | 201      | 87              |
| Rhyolite Sand             | n/a                  | n/a                   | n/a               | n/a             | 7.65 | 420                  | 177      | 9               |
| GAC                       | n/a                  | n/a                   | n/a               | n/a             | 7.9  | 510                  | 207      | 1               |
| Peat Moss                 | n/a                  | n/a                   | n/a               | n/a             | 4.68 | 330                  | 276      | 6               |
| Site Zeolite              | n/a                  | n/a                   | n/a               | n/a             | 6.97 | 400                  | 229      | 6               |
| Surface Modified Zeolite  | n/a                  | n/a                   | n/a               | n/a             | 7.6  | 400                  | 211      | 6               |
| Rhyolite-SMZ-GAC          | n/a                  | n/a                   | n/a               | n/a             | 6.87 | 480                  | 216      | 7               |
| Rhyolite-SMZ-GAC-PM       | n/a                  | n/a                   | n/a               | n/a             | 7.62 | 570                  | 211      | 5               |
| Rhyolite-SMZ              | n/a                  | n/a                   | n/a               | n/a             | 7.7  | 390                  | 202      | 12              |
| MWH Sand-Site Zeolite-GAC | n/a                  | n/a                   | n/a               | n/a             | 7    | 420                  | 220      | 4               |

**Table A2-24. Grab Sample Results from April 29, 2009**

| Test Day                  | 24.0                 | 4/29/2009             |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.43 | 370                  | 182      | 95              |
| Rhyolite Sand             | n/a                  | n/a                   | n/a               | n/a             | 7.78 | 350                  | 178      | 15              |
| GAC                       | n/a                  | n/a                   | n/a               | n/a             | 7.54 | 420                  | 203      | 1               |
| Peat Moss                 | n/a                  | n/a                   | n/a               | n/a             | 4.81 | 300                  | 265      | 6               |
| Site Zeolite              | n/a                  | n/a                   | n/a               | n/a             | 6.95 | 360                  | 199      | 7               |
| Surface Modified Zeolite  | n/a                  | n/a                   | n/a               | n/a             | 7.71 | 350                  | 188      | 8               |
| Rhyolite-SMZ-GAC          | n/a                  | n/a                   | n/a               | n/a             | 6.92 | 380                  | 218      | 7               |
| Rhyolite-SMZ-GAC-PM       | n/a                  | n/a                   | n/a               | n/a             | 7.63 | 430                  | 206      | 4               |
| Rhyolite-SMZ              | n/a                  | n/a                   | n/a               | n/a             | 7.79 | 370                  | 198      | 6               |
| MWH Sand-Site Zeolite-GAC | n/a                  | n/a                   | n/a               | n/a             | 7.13 | 360                  | 213      | 4               |

**Table A2-25. Grab Sample Results from May 1, 2009**

| Test Day                  | 25.0                 | 5/1/2009              |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.76 | 370                  | 196      | 106             |
| Rhyolite Sand             | 3.1                  | 36                    | 0.01              | 2.0             | 7.75 | 370                  | 195      | 63              |
| GAC                       | 6.7                  | 750                   | 0.11              | 20.0            | 7.06 | 340                  | 208      | 8               |
| Peat Moss                 | 5.2                  | 750                   | 0.15              | 25.8            | 4.82 | 320                  | 267      | 15              |
| Site Zeolite              | 4.3                  | 650                   | 0.15              | 27.1            | 7.09 | 360                  | 207      | 10              |
| Surface Modified Zeolite  | 5.8                  | 650                   | 0.11              | 19.9            | 7.62 | 360                  | 194      | 25              |
| Rhyolite-SMZ-GAC          | 4.9                  | 650                   | 0.13              | 23.6            | 6.88 | 380                  | 217      | 10              |
| Rhyolite-SMZ-GAC-PM       | 4.5                  | 500                   | 0.11              | 20.0            | 7.16 | 360                  | 212      | 12              |
| Rhyolite-SMZ              | 3.8                  | 650                   | 0.17              | 30.8            | 7.72 | 360                  | 191      | 13              |
| MWH Sand-Site Zeolite-GAC | 7.5                  | 750                   | 0.10              | 17.8            | 6.95 | 360                  | 210      | 6               |

**Table A2-26. Grab Sample Results from May 4, 2009**

| Test Day                  | 26.0                 | 5/4/2009              |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.65 | 390                  | 160      | 81              |
| Rhyolite Sand             | 3.8                  | 500                   | 0.13              | 23.5            | 7.73 | 370                  | 185      | 17              |
| GAC                       | 5.9                  | 500                   | 0.08              | 15.0            | 7.04 | 370                  | 185      | 5               |
| Peat Moss                 | 4.4                  | 500                   | 0.11              | 20.3            | 5.14 | 300                  | 234      | 9               |
| Site Zeolite              | 5.0                  | 500                   | 0.10              | 17.8            | 6.78 | 370                  | 188      | 9               |
| Surface Modified Zeolite  | 4.8                  | 550                   | 0.12              | 20.6            | 7.53 | 370                  | 156      | 6               |
| Rhyolite-SMZ-GAC          | 4.3                  | 500                   | 0.12              | 20.7            | 6.94 | 440                  | 190      | 18              |
| Rhyolite-SMZ-GAC-PM       | 6.9                  | 500                   | 0.07              | 12.9            | 7.18 | 420                  | 187      | 11              |
| Rhyolite-SMZ              | 3.6                  | 500                   | 0.14              | 24.9            | 7.6  | 370                  | 176      | 13              |
| MWH Sand-Site Zeolite-GAC | 6.3                  | 500                   | 0.08              | 14.1            | 7.01 | 390                  | 186      | 7               |



**Table A2-27. Grab Sample Results from May 6, 2009**

| Test Day                  | 27.0                 | 5/6/2009              |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.73 | 390                  | 168      | 146             |
| Rhyolite Sand             | 4.5                  | 500                   | 0.11              | 19.7            | 7.82 | 390                  | 175      | 11              |
| GAC                       | 5.0                  | 650                   | 0.13              | 23.1            | 7.19 | 390                  | 159      | 10              |
| Peat Moss                 | 3.8                  | 500                   | 0.13              | 23.4            | 5.39 | 320                  | 223      | 10              |
| Site Zeolite              | 5.3                  | 500                   | 0.09              | 16.7            | 7.22 | 390                  | 165      | 11              |
| Surface Modified Zeolite  | 3.9                  | 570                   | 0.14              | 25.7            | 7.65 | 390                  | 165      | 9               |
| Rhyolite-SMZ-GAC          | 3.8                  | 650                   | 0.17              | 30.3            | 7.41 | 390                  | 170      | 20              |
| Rhyolite-SMZ-GAC-PM       | 4.9                  | 650                   | 0.13              | 23.6            | 7.06 | 390                  | 171      | 22              |
| Rhyolite-SMZ              | 3.7                  | 650                   | 0.17              | 30.9            | 7.77 | 390                  | 150      | 34              |
| MWH Sand-Site Zeolite-GAC | 3.2                  | 500                   | 0.15              | 27.5            | 7.43 | 390                  | 168      | 12              |

**Table A2-28. Grab Sample Results from May 7, 2009**

| Test Day                  | 28.0                 | 5/7/2009              |                   |                 |      |                      |          |                 |
|---------------------------|----------------------|-----------------------|-------------------|-----------------|------|----------------------|----------|-----------------|
| Media                     | Filtering Time (min) | Filtering Volume (mL) | Flow Rate (L/min) | Flow Rate (m/d) | pH   | Conductivity (mS/cm) | ORP (mV) | Turbidity (NTU) |
| Influent                  |                      |                       |                   |                 | 7.55 | 400                  | 172      | 143             |
| Rhyolite Sand             | n/a                  | n/a                   | n/a               | n/a             | 7.78 | 390                  | 156      | 9               |
| GAC                       | n/a                  | n/a                   | n/a               | n/a             | 7.02 | 370                  | 164      | 7               |
| Peat Moss                 | n/a                  | n/a                   | n/a               | n/a             | 5.53 | 330                  | 213      | 7               |
| Site Zeolite              | n/a                  | n/a                   | n/a               | n/a             | 7.26 | 400                  | 157      | 11              |
| Surface Modified Zeolite  | n/a                  | n/a                   | n/a               | n/a             | 7.71 | 370                  | 157      | 6               |
| Rhyolite-SMZ-GAC          | n/a                  | n/a                   | n/a               | n/a             | 7.14 | 380                  | 214      | 10              |
| Rhyolite-SMZ-GAC-PM       | n/a                  | n/a                   | n/a               | n/a             | 7.41 | 380                  | 207      | 16              |
| Rhyolite-SMZ              | n/a                  | n/a                   | n/a               | n/a             | 7.83 | 380                  | 161      | 6               |
| MWH Sand-Site Zeolite-GAC | n/a                  | n/a                   | n/a               | n/a             | 7.09 | 380                  | 211      | 3               |

**Table A2-29. Arsenic (unfiltered) Column Influent and Effluent Concentrations (µg/L)**

Arsenic, unfiltered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | < LOD          | <LOD | 61        | 24            | <LOD      | 24           | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 18-Mar | 23.7                | 13             | <LOD | 9         | 11            | 11        | 12           | <LOD | 9     | <LOD      | <LOD         | <LOD                               |
| 25-Mar | 36.6                | 25             | 11   | 10        | <LOD          | <LOD      | 17           | 35   | 34    | 25        | 17           | 19                                 |
| 3-Apr  | 52.2                | 34             | 6    | 7         | 11            | 10        | 8            | 20   | 22    | 11        | 33           | 22                                 |
| 10-Apr | 63.6                | 94             | 15   | 9         | 28            | 22        | 21           | 30   | 33    | 20        | 25           | 23                                 |
| 22-Apr | 85.5                | 42             | 22   | 6         | 20            | n/a       | 16           | 29   | 51    | 16        | 18           | 16                                 |
| 29-Apr | 96.5                | 178            | 24   | 23        | 55            | n/a       | 30           | 54   | 66    | 30        | 47           | 25                                 |
| 7-May  | 109.4               | 63             | 18   | 18        | 25            | n/a       | 30           | 27   | 18    | 19        | 17           | 19                                 |

**Table A2-30. Arsenic (filtered) Column Influent and Effluent Concentrations (µg/L)**

Arsenic, filtered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | < LOD          | <LOD | 51        | 22            | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 18-Mar | 23.7                | <LOD           | <LOD | 9         | <LOD          | <LOD      | <LOD         | 9    | 11    | <LOD      | <LOD         | <LOD                               |
| 25-Mar | 36.6                | 13             | <LOD | <LOD      | 8             | <LOD      | <LOD         | 31   | 29    | 23        | <LOD         | 21                                 |
| 3-Apr  | 52.2                | 16             | <LOD | <LOD      | 9             | 9         | 5            | 18   | 16    | 10        | 12           | 5                                  |
| 10-Apr | 63.6                | 43             | 12   | 8         | 26            | 36        | 19           | 20   | 29    | 18        | 28           | 22                                 |
| 22-Apr | 85.5                | 44             | 13   | 8         | 21            | n/a       | 22           | 23   | 46    | 12        | 23           | 13                                 |
| 29-Apr | 96.5                | 109            | 22   | 20        | 35            | n/a       | 25           | 30   | 61    | 25        | 31           | 22                                 |
| 7-May  | 109.4               | 29             | 21   | 19        | 24            | n/a       | 24           | 28   | 20    | 17        | 16           | 18                                 |

**Table A2-31. Aluminum (unfiltered) Column Influent and Effluent Concentrations (µg/L)**

Aluminum, unfiltered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 7275           | <LOD | 23982     | 9856          | 296       | 446          | <LOD | 2014  | 2434      | 1015         | 385                                |
| 18-Mar | 23.7                | 2155           | 132  | 684       | 243           | 284       | 371          | 157  | 240   | 361       | 274          | 128                                |
| 25-Mar | 36.6                | 2909           | 56   | 1870      | 43            | 1086      | 255          | 237  | 552   | 36        | 433          | 27                                 |
| 3-Apr  | 52.2                | 4731           | 141  | 1784      | 166           | 1171      | 229          | 391  | 1171  | 176       | 213          | 75                                 |
| 10-Apr | 63.6                | 10037          | 43   | 1393      | 198           | 907       | 322          | 280  | 713   | 925       | 383          | 35                                 |
| 22-Apr | 85.5                | 5046           | 69   | 1660      | 1034          | n/a       | 152          | 303  | 2365  | 328       | 396          | 124                                |
| 29-Apr | 96.5                | 7982           | 32   | 1126      | 959           | n/a       | 59           | 503  | 562   | 219       | 262          | 41                                 |
| 7-May  | 109.4               | 8778           | 364  | 711       | 530           | n/a       | 615          | 321  | 921   | 433       | 517          | 235                                |

**Table A2-32. Aluminum (filtered) Column Influent and Effluent Concentrations (µg/L)**

Aluminum, filtered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | < LOD          | <LOD | 343       | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 18-Mar | 23.7                | 121            | 43   | 553       | 68            | 36        | 115          | 74   | 92    | 65        | 84           | 117                                |
| 25-Mar | 36.6                | 84             | 42   | 1170      | 364           | 62        | 49           | 64   | 101   | 27        | 59           | 32                                 |
| 3-Apr  | 52.2                | 68             | 33   | 1215      | 32            | 81        | 18           | 49   | 80    | 31        | 28           | 26                                 |
| 10-Apr | 63.6                | 82             | 39   | 813       | 73            | 81        | 54           | 39   | 79    | 48        | 43           | 22                                 |
| 22-Apr | 85.5                | 81             | 42   | 1099      | 1131          | n/a       | 85           | 52   | 91    | 70        | 70           | 26                                 |
| 29-Apr | 96.5                | 73             | 17   | 785       | 99            | n/a       | 40           | 46   | 69    | 27        | 54           | 36                                 |
| 7-May  | 109.4               | 72             | 55   | 253       | 91            | n/a       | 89           | 57   | 79    | 46        | 61           | 43                                 |

**Table A2-33. Boron (unfiltered) Column Influent and Effluent Concentrations (µg/L)****Boron, unfiltered (µg/L)**

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 198            | 232  | <LOD      | 309           | 156       | 239          | <LOD | 210   | <LOD      | <LOD         | <LOD                               |
| 18-Mar | 23.7                | 187            | <LOD | <LOD      | 217           | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 25-Mar | 36.6                | 205            | <LOD | <LOD      | 160           | 171       | 180          | 493  | 272   | <LOD      | <LOD         | <LOD                               |
| 3-Apr  | 52.2                | 509            | <LOD | 1200      | 773           | 646       | 1346         | 484  | 544   | <LOD      | 348          | 260                                |
| 10-Apr | 63.6                | <LOD           | <LOD | 147       | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 22-Apr | 85.5                | 128            | <LOD | <LOD      | <LOD          | n/a       | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 29-Apr | 96.5                | <LOD           | <LOD | <LOD      | <LOD          | n/a       | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 7-May  | 109.4               | <LOD           | <LOD | <LOD      | 154           | n/a       | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |

**Table A2-34. Boron (filtered) Column Influent and Effluent Concentrations (µg/L)****Boron, filtered (µg/L)**

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 166            | <LOD | <LOD      | 212           | <LOD      | <LOD         | 334  | 188   | <LOD      | <LOD         | <LOD                               |
| 18-Mar | 23.7                | 300            | <LOD | <LOD      | <LOD          | <LOD      | 201          | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 25-Mar | 36.6                | 219            | <LOD | <LOD      | 293           | 171       | 182          | 262  | 172   | <LOD      | <LOD         | <LOD                               |
| 3-Apr  | 52.2                | 472            | <LOD | 1085      | 734           | 618       | 1253         | 458  | 456   | <LOD      | <LOD         | <LOD                               |
| 10-Apr | 63.6                | <LOD           | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 22-Apr | 85.5                | 127            | <LOD | <LOD      | <LOD          | n/a       | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 29-Apr | 96.5                | <LOD           | <LOD | <LOD      | <LOD          | n/a       | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 7-May  | 109.4               | <LOD           | <LOD | <LOD      | <LOD          | n/a       | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |

**Table A2-35. Calcium (unfiltered) Column Influent and Effluent Concentrations (µg/L)**

Calcium, unfiltered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC   | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ   | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-------|-----------|---------------|-----------|--------------|-------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 28421          | 4184  | 4731      | 20024         | 23529     | 27266        | 22519 | 19264 | 20272     | 13490        | 24345                              |
| 18-Mar | 23.7                | 30210          | 24260 | 7721      | 25235         | 25918     | 19115        | 28207 | 25182 | 26085     | 21755        | 21762                              |
| 25-Mar | 36.6                | 32638          | 32185 | 9014      | 41133         | 29981     | 30343        | 51323 | 33044 | 62371     | 27549        | 65601                              |
| 3-Apr  | 52.2                | 23481          | 25094 | 9879      | 26075         | 24191     | 39606        | 24673 | 28855 | 29147     | 24355        | 33427                              |
| 10-Apr | 63.6                | 24866          | 29324 | 11641     | 25279         | 24667     | 21103        | 25804 | 25671 | 27516     | 31347        | 40595                              |
| 22-Apr | 85.5                | 29660          | 64580 | 16411     | 30730         | n/a       | 29510        | 32430 | 31810 | 39000     | 32458        | 34910                              |
| 29-Apr | 96.5                | 35600          | 47670 | 17113     | 49720         | n/a       | 32540        | 58800 | 34730 | 57810     | 59040        | 33990                              |
| 7-May  | 109.4               | 36267          | 32493 | 17178     | 31755         | n/a       | 38072        | 34343 | 36617 | 33690     | 33574        | 32727                              |

**Table A2-36. Calcium (filtered) Column Influent and Effluent Concentrations (µg/L)**

Calcium, filtered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC   | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ   | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-------|-----------|---------------|-----------|--------------|-------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 25501          | 4710  | 3394      | 18199         | 22393     | 14359        | 21855 | 18916 | 19266     | 13788        | 18163                              |
| 18-Mar | 23.7                | 29983          | 23658 | 7838      | 24517         | 23390     | 18417        | 25276 | 22224 | 25611     | 20087        | 20098                              |
| 25-Mar | 36.6                | 30265          | 32940 | 10953     | 40870         | 29794     | 30340        | 49097 | 31814 | 56283     | 28158        | 64709                              |
| 3-Apr  | 52.2                | 22147          | 23218 | 10439     | 24511         | 24123     | 36699        | 23060 | 22438 | 27076     | 22583        | 30911                              |
| 10-Apr | 63.6                | 28969          | 36185 | 11888     | 30997         | 54653     | 26951        | 47628 | 31645 | 33141     | 31761        | 35260                              |
| 22-Apr | 85.5                | 42410          | 46860 | 16942     | 30500         | n/a       | 40880        | 30570 | 30090 | 36040     | 46700        | 30370                              |
| 29-Apr | 96.5                | 32630          | 46600 | 16219     | 35510         | n/a       | 31340        | 35190 | 33920 | 51230     | 38280        | 32980                              |
| 7-May  | 109.4               | 31520          | 30700 | 17220     | 29340         | n/a       | 31840        | 31330 | 32050 | 31270     | 30630        | 29850                              |

**Table A2-37. Cadmium (unfiltered) Column Influent and Effluent Concentrations (µg/L)**

Cadmium, unfiltered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 53             | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 18-Mar | 23.7                | 45             | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 25-Mar | 36.6                | 43             | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 3-Apr  | 52.2                | 100            | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | 12           | 6                                  |
| 10-Apr | 63.6                | 109            | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 22-Apr | 85.5                | 48             | <LOD | <LOD      | <LOD          | n/a       | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 29-Apr | 96.5                | 65             | <LOD | <LOD      | 5             | n/a       | 4            | 3    | 3     | 1         | 2            | 1                                  |
| 7-May  | 109.4               | 59             | <LOD | <LOD      | <LOD          | n/a       | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |

**Table A2-38. Cadmium (filtered) Column Influent and Effluent Concentrations (µg/L)**

Cadmium, filtered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 24             | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 18-Mar | 23.7                | 31             | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 25-Mar | 36.6                | 26             | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | 4    | <LOD  | <LOD      | <LOD         | <LOD                               |
| 3-Apr  | 52.2                | 54             | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 10-Apr | 63.6                | 44             | <LOD | <LOD      | <LOD          | 5         | 3            | <LOD | 3     | <LOD      | <LOD         | <LOD                               |
| 22-Apr | 85.5                | 27             | <LOD | <LOD      | <LOD          | n/a       | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 29-Apr | 96.5                | <LOD           | <LOD | <LOD      | <LOD          | n/a       | 4            | <LOD | 4     | <LOD      | <LOD         | <LOD                               |
| 7-May  | 109.4               | 14             | 1    | 1         | 3             | n/a       | 6            | 2    | 2     | 1         | 1            | 1                                  |

**Table A2-39. Copper (unfiltered) Column Influent and Effluent Concentrations (µg/L)****Copper, unfiltered (µg/L)**

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 146            | 11   | 43        | 56            | 14        | 77           | 33  | 57    | 15        | 28           | 13                                 |
| 18-Mar | 23.7                | 98             | 5    | 8         | 46            | 30        | 42           | 29  | 51    | 14        | 29           | 14                                 |
| 25-Mar | 36.6                | 102            | 3    | 7         | 22            | 38        | 36           | 58  | 46    | 5         | 23           | 4                                  |
| 3-Apr  | 52.2                | 112            | <LOD | 7         | 25            | 33        | 16           | 36  | 48    | <LOD      | 21           | 8                                  |
| 10-Apr | 63.6                | 115            | 3    | <LOD      | 37            | 41        | 41           | 37  | 50    | 15        | 23           | <LOD                               |
| 22-Apr | 85.5                | 76             | <LOD | 5         | 46            | n/a       | 26           | 37  | 60    | <LOD      | 7            | 8                                  |
| 29-Apr | 96.5                | 106            | 0    | 13        | 62            | n/a       | 23           | 48  | 34    | <LOD      | 12           | 4                                  |
| 7-May  | 109.4               | 244            | 5    | 18        | 45            | n/a       | 67           | 37  | 40    | 6         | 13           | 8                                  |

**Table A2-40. Copper (filtered) Column Influent and Effluent Concentrations (µg/L)****Copper, filtered (µg/L)**

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 69             | <LOD | 21        | 35            | 14        | 37           | 50  | 42    | 13        | 21           | <LOD                               |
| 18-Mar | 23.7                | 51             | 6    | 24        | 40            | 31        | 31           | 31  | 62    | 17        | 37           | 12                                 |
| 25-Mar | 36.6                | 46             | 13   | 20        | 30            | 25        | 34           | 63  | 46    | 18        | 22           | 28                                 |
| 3-Apr  | 52.2                | 41             | <LOD | 20        | 37            | 37        | 16           | 31  | 42    | <LOD      | 12           | 12                                 |
| 10-Apr | 63.6                | 39             | 5    | 11        | 37            | 64        | 33           | 13  | 40    | 12        | 34           | 8                                  |
| 22-Apr | 85.5                | 40             | <LOD | 12        | 48            | n/a       | 36           | 29  | 36    | <LOD      | 8            | 4                                  |
| 29-Apr | 96.5                | 23             | <LOD | 15        | 30            | n/a       | 22           | 23  | 22    | <LOD      | <LOD         | 4                                  |
| 7-May  | 109.4               | 28             | 3    | 21        | 35            | n/a       | 41           | 36  | 27    | 5         | 11           | 8                                  |

**Table A2-41. Iron (unfiltered) Column Influent and Effluent Concentrations (µg/L)**

Iron, unfiltered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 4811           | 173  | 20286     | 6164          | 228       | 541          | 107 | 612   | 686       | 422          | 295                                |
| 18-Mar | 23.7                | 1820           | 39   | 105       | 135           | 198       | 234          | 94  | 141   | 151       | 147          | 88                                 |
| 25-Mar | 36.6                | 2048           | 19   | 376       | 17            | 863       | 159          | 163 | 227   | 15        | 201          | 13                                 |
| 3-Apr  | 52.2                | 3558           | 25   | 286       | 93            | 844       | 117          | 196 | 492   | 65        | 98           | 47                                 |
| 10-Apr | 63.6                | 6684           | <LOD | 248       | 115           | 671       | 188          | 141 | 298   | 314       | 123          | 18                                 |
| 22-Apr | 85.5                | 3750           | 36   | 420       | 690           | n/a       | 99           | 180 | 1088  | 122       | 162          | 90                                 |
| 29-Apr | 96.5                | 7392           | 14   | 293       | 1042          | n/a       | 34           | 379 | 306   | 86        | 164          | 21                                 |
| 7-May  | 109.4               | 8615           | 259  | 404       | 376           | n/a       | 454          | 211 | 507   | 211       | 276          | 164                                |

**Table A2-42. Iron (filtered) Column Influent and Effluent Concentrations (µg/L)**

Iron, filtered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 109            | 33   | 394       | 114           | 29        | 86           | 35  | 85    | 32        | 100          | 51                                 |
| 18-Mar | 23.7                | 86             | 10   | 43        | 51            | 27        | 75           | 55  | 69    | 45        | 67           | 44                                 |
| 25-Mar | 36.6                | 59             | 6    | 47        | 37            | 44        | 34           | 47  | 45    | 11        | 38           | 10                                 |
| 3-Apr  | 52.2                | 50             | <LOD | 44        | <LOD          | 46        | <LOD         | 32  | 33    | 23        | 11           | <LOD                               |
| 10-Apr | 63.6                | 60             | 5    | 48        | 27            | 58        | 39           | 23  | 51    | 26        | 33           | 6                                  |
| 22-Apr | 85.5                | 50             | <LOD | 104       | 814           | n/a       | 33           | 34  | 50    | 18        | 17           | 7                                  |
| 29-Apr | 96.5                | 47             | <LOD | 71        | 56            | n/a       | 15           | 26  | 29    | <LOD      | 45           | 6                                  |
| 7-May  | 109.4               | 44             | 14   | 102       | 67            | n/a       | 61           | 32  | 34    | 13        | 22           | 9                                  |



**Table A2-43. Magnesium (unfiltered) Column Influent and Effluent Concentrations (µg/L)**

Magnesium, unfiltered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 3179           | 2368 | 7945      | 5746          | 4394      | 736          | 3447 | 3500  | 3112      | 2671         | 2321                               |
| 18-Mar | 23.7                | 2705           | 3761 | 6553      | 3022          | 4914      | 551          | 4560 | 4601  | 3861      | 5302         | 1618                               |
| 25-Mar | 36.6                | 2789           | 3363 | 7620      | 3644          | 3197      | 1211         | 7427 | 3696  | 8740      | 5395         | 5384                               |
| 3-Apr  | 52.2                | 2744           | 3350 | 7373      | 2622          | 2538      | 1870         | 3890 | 3430  | 4890      | 4262         | 2550                               |
| 10-Apr | 63.6                | 3590           | 4130 | 5727      | 2445          | 2549      | 1160         | 3235 | 2805  | 4084      | 4375         | 3616                               |
| 22-Apr | 85.5                | 3099           | 7081 | 2733      | 2408          | n/a       | 1214         | 2420 | 2635  | 3706      | 3125         | 2314                               |
| 29-Apr | 96.5                | 3773           | 6151 | 2436      | 4183          | n/a       | 1519         | 4205 | 2581  | 5236      | 4656         | 2098                               |
| 7-May  | 109.4               | 4139           | 2760 | 2038      | 2347          | n/a       | 1993         | 2422 | 2610  | 2969      | 2552         | 2051                               |

**Table A2-44. Magnesium (filtered) Column Influent and Effluent Concentrations (µg/L)**

Magnesium, filtered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 2144           | 2247 | 1914      | 3241          | 4045      | 434          | 3280 | 3123  | 2661      | 2576         | 1683                               |
| 18-Mar | 23.7                | 2404           | 3881 | 5861      | 2925          | 4490      | 667          | 3957 | 3931  | 3836      | 4585         | 1646                               |
| 25-Mar | 36.6                | 2463           | 3478 | 7128      | 3470          | 3044      | 1319         | 6713 | 3700  | 7778      | 5213         | 5785                               |
| 3-Apr  | 52.2                | 2327           | 3318 | 6976      | 2647          | 2677      | 1997         | 3645 | 3078  | 4482      | 3815         | 2565                               |
| 10-Apr | 63.6                | 2221           | 3368 | 5122      | 2469          | 3679      | 1549         | 3557 | 2458  | 3787      | 2945         | 3345                               |
| 22-Apr | 85.5                | 3517           | 5229 | 2641      | 2444          | n/a       | 1858         | 2308 | 2455  | 3596      | 4187         | 2111                               |
| 29-Apr | 96.5                | 2335           | 6286 | 2318      | 2653          | n/a       | 1555         | 2628 | 2462  | 5523      | 3403         | 2101                               |
| 7-May  | 109.4               | 2457           | 2775 | 2054      | 2320          | n/a       | 1830         | 2436 | 2553  | 2851      | 2556         | 1948                               |

**Table A2-45. Manganese (unfiltered) Column Influent and Effluent Concentrations (µg/L)**

Manganese, unfiltered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 66             | 4    | 341       | 189           | 7         | 12           | 13   | 24    | 15        | 16           | 6                                  |
| 18-Mar | 23.7                | 36             | 1    | 367       | 4             | 5         | 5            | 7    | 5     | 4         | 15           | 2                                  |
| 25-Mar | 36.6                | 33             | <LOD | 427       | 1             | 35        | 8            | 8    | 9     | <LOD      | 10           | 1                                  |
| 3-Apr  | 52.2                | 49             | <LOD | 420       | <LOD          | 26        | 20           | <LOD | 9     | <LOD      | 15           | <LOD                               |
| 10-Apr | 63.6                | 89             | <LOD | 450       | 6             | 18        | 7            | <LOD | 6     | <LOD      | 16           | <LOD                               |
| 22-Apr | 85.5                | 40             | <LOD | 188       | 11            | n/a       | <LOD         | <LOD | 17    | 2         | 8            | <LOD                               |
| 29-Apr | 96.5                | 96             | 4    | 101       | 27            | n/a       | 1            | 9    | 5     | 14        | 25           | <LOD                               |
| 7-May  | 109.4               | 119            | 14   | 28        | 4             | n/a       | 6            | 0    | 6     | 6         | 19           | 2                                  |

**Table A2-46. Manganese (filtered) Column Influent and Effluent Concentrations (µg/L)**

Manganese, filtered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 13             | <LOD | 116       | 6             | 4         | <LOD         | 11   | 8     | <LOD      | 7            | <LOD                               |
| 18-Mar | 23.7                | 1              | 0    | 316       | 5             | <LOD      | 1            | 5    | 1     | 1         | 7            | 1                                  |
| 25-Mar | 36.6                | <LOD           | 0    | 373       | 4             | <LOD      | 1            | 5    | 15    | <LOD      | <LOD         | <LOD                               |
| 3-Apr  | 52.2                | <LOD           | <LOD | 373       | <LOD          | <LOD      | <LOD         | <LOD | 9     | <LOD      | <LOD         | <LOD                               |
| 10-Apr | 63.6                | 4              | 1    | 386       | 5             | 1         | 4            | 1    | 1     | 1         | 1            | 1                                  |
| 22-Apr | 85.5                | <LOD           | <LOD | 169       | 14            | n/a       | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 29-Apr | 96.5                | 7              | <LOD | 83        | <LOD          | n/a       | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 7-May  | 109.4               | <LOD           | <LOD | 30        | 1             | n/a       | 1            | 1    | <LOD  | <LOD      | <LOD         | <LOD                               |

**Table A2-47. Nickel (unfiltered) Column Influent and Effluent Concentrations (µg/L)**

Nickel, unfiltered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 53             | <LOD | 21        | 15            | <LOD      | 14           | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 18-Mar | 23.7                | 35             | 2    | 3         | 6             | 4         | 6            | 2    | 4     | 2         | 2            | 1                                  |
| 25-Mar | 36.6                | 51             | 2    | 3         | 2             | 8         | 6            | 2    | 5     | 2         | 3            | 2                                  |
| 3-Apr  | 52.2                | 55             | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | 9            | <LOD                               |
| 10-Apr | 63.6                | 62             | <LOD | <LOD      | <LOD          | <LOD      | 7            | <LOD | 6     | <LOD      | 16           | <LOD                               |
| 22-Apr | 85.5                | 37             | <LOD | <LOD      | 5             | n/a       | 4            | 2    | 7     | <LOD      | <LOD         | <LOD                               |
| 29-Apr | 96.5                | 54             | <LOD | 1         | 11            | n/a       | 7            | 4    | 5     | 0         | <LOD         | <LOD                               |
| 7-May  | 109.4               | 57             | <LOD | <LOD      | 6             | n/a       | 14           | 1    | 6     | <LOD      | <LOD         | <LOD                               |

**Table A2-48. Nickel (filtered) Column Influent and Effluent Concentrations (µg/L)**

Nickel, filtered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 32             | <LOD | <LOD      | 11            | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 18-Mar | 23.7                | 22             | 2    | 4         | 5             | 13        | 5            | 3    | 6     | 18        | 9            | 3                                  |
| 25-Mar | 36.6                | 32             | 3    | 1         | 4             | 8         | 22           | 2    | 4     | 9         | 2            | 6                                  |
| 3-Apr  | 52.2                | 68             | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | 6     | <LOD      | 7            | <LOD                               |
| 10-Apr | 63.6                | 26             | 3    | 5         | 7             | 56        | 13           | 5    | 8     | 15        | 6            | 20                                 |
| 22-Apr | 85.5                | 17             | <LOD | 2         | 5             | n/a       | 11           | <LOD | 24    | 3         | <LOD         | <LOD                               |
| 29-Apr | 96.5                | 9              | <LOD | <LOD      | 3             | n/a       | 15           | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 7-May  | 109.4               | 7              | 3    | 11        | 8             | n/a       | 13           | 8    | 6     | 1         | 2            | 2                                  |

**Table A2-49. Lead (unfiltered) Column Influent and Effluent Concentrations (µg/L)**

Lead, unfiltered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | < LOD          | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 18-Mar | 23.7                | 3              | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 25-Mar | 36.6                | <LOD           | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 3-Apr  | 52.2                | <LOD           | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | 6                                  |
| 10-Apr | 63.6                | 11             | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 22-Apr | 85.5                | <LOD           | <LOD | <LOD      | <LOD          | n/a       | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 29-Apr | 96.5                | 23             | <LOD | <LOD      | 3             | n/a       | <LOD         | 4    | <LOD  | <LOD      | 2            | <LOD                               |
| 7-May  | 109.4               | 55             | <LOD | <LOD      | <LOD          | n/a       | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |

**Table A2-50. Lead (filtered) Column Influent and Effluent Concentrations (µg/L)**

Lead, filtered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | < LOD          | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 18-Mar | 23.7                | <LOD           | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 25-Mar | 36.6                | <LOD           | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 3-Apr  | 52.2                | <LOD           | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 10-Apr | 63.6                | <LOD           | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | 19           | <LOD                               |
| 22-Apr | 85.5                | <LOD           | <LOD | <LOD      | <LOD          | n/a       | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 29-Apr | 96.5                | <LOD           | <LOD | <LOD      | <LOD          | n/a       | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 7-May  | 109.4               | 2              | <LOD | <LOD      | 2             | n/a       | <LOD         | <LOD | 2     | <LOD      | <LOD         | <LOD                               |

**Table A2-51. Zinc (unfiltered) Column Influent and Effluent Concentrations (µg/L)**

Zinc, unfiltered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-----|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 70             | 86  | 123       | 81            | 52        | 76           | 36  | 53    | 77        | 59           | 69                                 |
| 18-Mar | 23.7                | 77             | 39  | 48        | 44            | 43        | 48           | 35  | 34    | 39        | 39           | 41                                 |
| 25-Mar | 36.6                | 62             | 36  | 40        | 39            | 41        | 37           | 50  | 36    | 50        | 41           | 48                                 |
| 3-Apr  | 52.2                | 84             | 44  | 46        | 33            | 43        | 36           | 41  | 44    | 51        | 61           | 67                                 |
| 10-Apr | 63.6                | 67             | 33  | 40        | 41            | 36        | 34           | 32  | 33    | 39        | 73           | 29                                 |
| 22-Apr | 85.5                | 75             | 66  | 74        | 57            | n/a       | 60           | 55  | 69    | 52        | 92           | 71                                 |
| 29-Apr | 96.5                | 88             | 49  | 52        | 52            | n/a       | 38           | 62  | 48    | 53        | 72           | 51                                 |
| 7-May  | 109.4               | 92             | 31  | 33        | 43            | n/a       | 46           | 37  | 35    | 26        | 37           | 39                                 |

**Table A2-52. Zinc (filtered) Column Influent and Effluent Concentrations (µg/L)**

Zinc, filtered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-----|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 87             | 62  | 77        | 72            | 80        | 65           | 54  | 60    | 49        | 63           | 47                                 |
| 18-Mar | 23.7                | 71             | 45  | 60        | 46            | 49        | 44           | 48  | 40    | 54        | 37           | 40                                 |
| 25-Mar | 36.6                | 58             | 49  | 59        | 42            | 53        | 64           | 56  | 52    | 64        | 40           | 52                                 |
| 3-Apr  | 52.2                | 46             | 44  | 64        | 61            | 64        | 49           | 46  | 59    | 44        | 90           | 62                                 |
| 10-Apr | 63.6                | 45             | 48  | 50        | 46            | 78        | 45           | 47  | 38    | 39        | 43           | 35                                 |
| 22-Apr | 85.5                | 33             | 48  | 54        | 36            | n/a       | 100          | 30  | 42    | 34        | 41           | 33                                 |
| 29-Apr | 96.5                | 32             | 36  | 33        | 38            | n/a       | 39           | 31  | 43    | 37        | 41           | 39                                 |
| 7-May  | 109.4               | 43             | 39  | 63        | 47            | n/a       | 56           | 54  | 39    | 34        | 55           | 43                                 |

**Table A2-53. Potassium (unfiltered) Column Influent and Effluent Concentrations (µg/L)****Potassium, unfiltered (µg/L)**

| Date   | Influent Volume (m) | Influent Conc. | GAC   | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 3919           | 54522 | 8085      | 6929          | 2476      | 5828         | 3716 | 4343  | 9653      | 8245         | 14672                              |
| 18-Mar | 23.7                | 2651           | 10216 | 3753      | 4366          | 3296      | 3662         | 3767 | 4014  | 8627      | 7478         | 5282                               |
| 25-Mar | 36.6                | 2916           | 4608  | 2593      | 5595          | 2570      | 4276         | 5741 | 4436  | 13444     | 7319         | 11606                              |
| 3-Apr  | 52.2                | 2901           | 4261  | 2585      | 5144          | 2663      | 5826         | 3578 | 4783  | 8450      | 7498         | 5324                               |
| 10-Apr | 63.6                | 4239           | 3753  | 2583      | 5448          | 2533      | 4074         | 3292 | 4007  | 7683      | 7970         | 5512                               |
| 22-Apr | 85.5                | 3314           | 5349  | 2476      | 6579          | n/a       | 4241         | 3098 | 4371  | 7456      | 7155         | 5273                               |
| 29-Apr | 96.5                | 3898           | 4134  | 2464      | 11269         | n/a       | 5179         | 5975 | 4778  | 9772      | 11836        | 5513                               |
| 7-May  | 109.4               | 3791           | 2206  | 2334      | 6862          | n/a       | 5221         | 3255 | 4270  | 6866      | 6493         | 4762                               |

**Table A2-54. Potassium (filtered) Column Influent and Effluent Concentrations (µg/L)****Potassium, filtered (µg/L)**

| Date   | Influent Volume (m) | Influent Conc. | GAC   | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 2956           | 50981 | 2256      | 4078          | 2223      | 3032         | 3457 | 3714  | 8217      | 7742         | 10509                              |
| 18-Mar | 23.7                | 2304           | 9072  | 3328      | 4146          | 2815      | 3350         | 3286 | 3504  | 8035      | 6716         | 4664                               |
| 25-Mar | 36.6                | 2368           | 4473  | 2633      | 4812          | 2222      | 3973         | 5335 | 4015  | 11772     | 6798         | 11296                              |
| 3-Apr  | 52.2                | 2162           | 3994  | 2551      | 4842          | 2540      | 5381         | 3238 | 3699  | 7716      | 6506         | 4895                               |
| 10-Apr | 63.6                | 1960           | 3382  | 2303      | 4698          | 3967      | 3781         | 6622 | 3492  | 6215      | 3021         | 4842                               |
| 22-Apr | 85.5                | 3254           | 3928  | 2448      | 6546          | n/a       | 5949         | 3056 | 3805  | 6897      | 9179         | 4382                               |
| 29-Apr | 96.5                | 2081           | 4038  | 2119      | 7578          | n/a       | 4865         | 3716 | 4613  | 9084      | 7846         | 5200                               |
| 7-May  | 109.4               | 2170           | 2205  | 2215      | 6137          | n/a       | 4506         | 3168 | 3995  | 6022      | 5774         | 4268                               |

**Table A2-55. Sodium (unfiltered) Column Influent and Effluent Concentrations (µg/L)**

Sodium, unfiltered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC   | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ   | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-------|-----------|---------------|-----------|--------------|-------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 15877          | 17119 | 34420     | 26569         | 17299     | 69575        | 16276 | 21434 | 24372     | 25715        | 45976                              |
| 18-Mar | 23.7                | 16909          | 18167 | 17056     | 21764         | 17531     | 40887        | 16668 | 20434 | 20512     | 19927        | 33373                              |
| 25-Mar | 36.6                | 17684          | 22722 | 19421     | 25085         | 16557     | 36589        | 28194 | 21478 | 32786     | 18300        | 73747                              |
| 3-Apr  | 52.2                | 15365          | 19164 | 17212     | 20095         | 16492     | 46287        | 16709 | 20656 | 18685     | 16669        | 31604                              |
| 10-Apr | 63.6                | 15939          | 18831 | 17401     | 18532         | 16600     | 27374        | 16528 | 17956 | 16946     | 17764        | 31567                              |
| 22-Apr | 85.5                | 17116          | 35170 | 17729     | 17413         | n/a       | 28750        | 16866 | 18080 | 16988     | 16781        | 29200                              |
| 29-Apr | 96.5                | 17822          | 21878 | 18051     | 27330         | n/a       | 25620        | 30620 | 20518 | 22481     | 27610        | 25337                              |
| 7-May  | 109.4               | 19044          | 19382 | 18130     | 19292         | n/a       | 26046        | 19544 | 20170 | 18325     | 17864        | 22945                              |

**Table A2-56. Sodium (filtered) Column Influent and Effluent Concentrations (µg/L)**

Sodium, filtered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC   | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ   | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-------|-----------|---------------|-----------|--------------|-------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 14171          | 16147 | 32014     | 24249         | 15663     | 34476        | 15212 | 20502 | 22732     | 24716        | 33033                              |
| 18-Mar | 23.7                | 16531          | 16014 | 15135     | 20239         | 14930     | 37289        | 15148 | 18074 | 19285     | 18304        | 29483                              |
| 25-Mar | 36.6                | 15955          | 20747 | 18086     | 22120         | 15583     | 32720        | 26135 | 19907 | 29435     | 17424        | 69244                              |
| 3-Apr  | 52.2                | 15267          | 18378 | 16314     | 19310         | 16726     | 42069        | 15260 | 17013 | 17767     | 15179        | 28907                              |
| 10-Apr | 63.6                | 15003          | 18394 | 17068     | 17719         | 29373     | 26248        | 16543 | 17315 | 15807     | 16632        | 29794                              |
| 22-Apr | 85.5                | 27330          | 25610 | 17233     | 17208         | n/a       | 38160        | 16395 | 17008 | 15815     | 21991        | 21974                              |
| 29-Apr | 96.5                | 16828          | 20097 | 16392     | 18743         | n/a       | 24950        | 17997 | 19560 | 19942     | 18528        | 24960                              |
| 7-May  | 109.4               | 16615          | 17582 | 17377     | 17060         | n/a       | 21090        | 17544 | 18105 | 16185     | 15971        | 20195                              |

**Table A2-57. Chromium (unfiltered) Column Influent and Effluent Concentrations (µg/L)**

Chromium, unfiltered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 56             | <LOD | 26        | 25            | 8         | 39           | 13  | 22    | 8         | 14           | 9                                  |
| 18-Mar | 23.7                | 48             | 4    | 5         | 18            | 15        | 21           | 15  | 22    | 11        | 16           | 9                                  |
| 25-Mar | 36.6                | 59             | 4    | 5         | 61            | 23        | 24           | 46  | 65    | 4         | 13           | 4                                  |
| 3-Apr  | 52.2                | 61             | <LOD | <LOD      | 19            | 26        | 6            | 16  | 22    | <LOD      | 13           | 5                                  |
| 10-Apr | 63.6                | 81             | <LOD | <LOD      | 18            | 24        | 24           | 20  | 28    | 12        | 6            | <LOD                               |
| 22-Apr | 85.5                | 52             | 2    | 4         | 23            | n/a       | 12           | 16  | 27    | 3         | 4            | 5                                  |
| 29-Apr | 96.5                | 79             | 0    | 9         | 31            | n/a       | 10           | 22  | 16    | 1         | 8            | 2                                  |
| 7-May  | 109.4               | 75             | 4    | 12        | 19            | n/a       | 28           | 14  | 17    | 4         | 8            | 4                                  |

**Table A2-58. Chromium (filtered) Column Influent and Effluent Concentrations (µg/L)**

Chromium, filtered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 17             | <LOD | <LOD      | 9             | 7         | 14           | 11  | 14    | 4         | 9            | <LOD                               |
| 18-Mar | 23.7                | 19             | 2    | 5         | 13            | 10        | 14           | 12  | 17    | 7         | 11           | 7                                  |
| 25-Mar | 36.6                | 17             | 2    | 2         | 54            | 14        | 16           | 36  | 53    | 4         | 6            | 4                                  |
| 3-Apr  | 52.2                | 14             | <LOD | <LOD      | 16            | 16        | <LOD         | 9   | 9     | <LOD      | <LOD         | <LOD                               |
| 10-Apr | 63.6                | 17             | 1    | 2         | 11            | 23        | 14           | 4   | 15    | 4         | 14           | 1                                  |
| 22-Apr | 85.5                | 15             | <LOD | 3         | 25            | n/a       | 12           | 9   | 8     | <LOD      | <LOD         | <LOD                               |
| 29-Apr | 96.5                | 7              | <LOD | 7         | 8             | n/a       | 6            | 5   | 6     | <LOD      | <LOD         | <LOD                               |
| 7-May  | 109.4               | 9              | 1    | 10        | 11            | n/a       | 14           | 8   | 7     | 2         | 4            | 2                                  |



**Table A2-59. Thallium (unfiltered) Column Influent and Effluent Concentrations (µg/L)**

Thallium, unfiltered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 46             | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 18-Mar | 23.7                | 70             | <LOD | <LOD      | 18            | <LOD      | 11           | <LOD | 15    | <LOD      | 16           | <LOD                               |
| 25-Mar | 36.6                | 125            | <LOD | <LOD      | 12            | 22        | 21           | 15   | 15    | <LOD      | <LOD         | <LOD                               |
| 3-Apr  | 52.2                | 99             | <LOD | <LOD      | <LOD          | 7         | <LOD         | 7    | 9     | <LOD      | 11           | <LOD                               |
| 10-Apr | 63.6                | 81             | <LOD | 15        | 8             | 13        | 9            | 9    | 13    | 7         | <LOD         | <LOD                               |
| 22-Apr | 85.5                | 78             | <LOD | <LOD      | <LOD          | n/a       | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 29-Apr | 96.5                | 64             | <LOD | 26        | <LOD          | n/a       | <LOD         | <LOD | 1     | <LOD      | <LOD         | <LOD                               |
| 7-May  | 109.4               | 67             | <LOD | 15        | <LOD          | n/a       | 11           | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |

**Table A2-60. Thallium (filtered) Column Influent and Effluent Concentrations (µg/L)**

Thallium, filtered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 27             | <LOD | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 18-Mar | 23.7                | 55             | <LOD | <LOD      | <LOD          | <LOD      | 16           | <LOD | 16    | 13        | 16           | <LOD                               |
| 25-Mar | 36.6                | 94             | 14   | 11        | <LOD          | 21        | 13           | 16   | 17    | <LOD      | 14           | <LOD                               |
| 3-Apr  | 52.2                | 79             | <LOD | 9         | <LOD          | 9         | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 10-Apr | 63.6                | 60             | 7    | 13        | 16            | 40        | 14           | 10   | 17    | 13        | 14           | 8                                  |
| 22-Apr | 85.5                | 93             | <LOD | 22        | <LOD          | n/a       | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 29-Apr | 96.5                | 52             | <LOD | 25        | <LOD          | n/a       | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |
| 7-May  | 109.4               | 57             | <LOD | 17        | 4             | n/a       | 5            | <LOD | <LOD  | <LOD      | <LOD         | <LOD                               |

**Table A2-61. Antimony (unfiltered) Column Influent and Effluent Concentrations (µg/L)**

Antimony, unfiltered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-----|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 50             | 24  | <LOD      | 26            | <LOD      | 22           | 20  | <LOD  | <LOD      | <LOD         | 19                                 |
| 18-Mar | 23.7                | 47             | 26  | <LOD      | 15            | 10        | 17           | 25  | 18    | 31        | 27           | 21                                 |
| 25-Mar | 36.6                | 84             | 30  | <LOD      | 81            | 26        | 28           | 79  | 100   | 52        | 28           | 44                                 |
| 3-Apr  | 52.2                | 77             | 46  | <LOD      | 143           | 64        | 63           | 48  | 64    | 62        | 69           | 72                                 |
| 10-Apr | 63.6                | 67             | 35  | <LOD      | 54            | 32        | 44           | 47  | 37    | 33        | 28           | 35                                 |
| 22-Apr | 85.5                | 69             | 28  | <LOD      | 33            | n/a       | 50           | 26  | 42    | 16        | 13           | 30                                 |
| 29-Apr | 96.5                | 87             | 6   | 23        | 60            | n/a       | 40           | 67  | 56    | 16        | 33           | 34                                 |
| 7-May  | 109.4               | 64             | 25  | 36        | 20            | n/a       | 33           | 31  | 39    | 33        | 25           | 30                                 |

**Table A2-62. Antimony (filtered) Column Influent and Effluent Concentrations (µg/L)**

Antimony, filtered (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 39             | 23   | <LOD      | <LOD          | <LOD      | <LOD         | <LOD | <LOD  | <LOD      | <LOD         | 19                                 |
| 18-Mar | 23.7                | 42             | 28   | <LOD      | 19            | 7         | 8            | 20   | 8     | 28        | 18           | 14                                 |
| 25-Mar | 36.6                | 68             | 31   | <LOD      | 76            | 28        | 33           | 68   | 86    | 38        | 28           | 44                                 |
| 3-Apr  | 52.2                | 60             | 48   | <LOD      | 135           | 62        | 64           | 46   | 51    | 61        | 50           | 55                                 |
| 10-Apr | 63.6                | 47             | 31   | <LOD      | 43            | 48        | 41           | 23   | 34    | 28        | 50           | 28                                 |
| 22-Apr | 85.5                | 86             | 24   | <LOD      | 34            | n/a       | 67           | 34   | 43    | 23        | 26           | 29                                 |
| 29-Apr | 96.5                | 62             | <LOD | 16        | 37            | n/a       | 45           | 47   | 70    | 25        | 34           | 43                                 |
| 7-May  | 109.4               | 49             | 31   | 40        | 26            | n/a       | 37           | 35   | 39    | 33        | 25           | 28                                 |

**Table A2-63. Nitrite Column Influent and Effluent Concentrations (mg/L)**

Nitrite (mg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC   | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ   | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-------|-----------|---------------|-----------|--------------|-------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 0.02           | 0.028 | 0.103     | 0.049         | 0.018     | 0.017        | 0.013 | 0.025 | 0.01      | 0.023        | 0.023                              |
| 20-Mar | 27.7                | 0.046          | 0.019 | 0.021     | 0.028         | 0.13      | 0.027        | 0.027 | 0.031 | 0.02      | 0.022        | 0.015                              |
| 25-Mar | 36.6                | 0.044          | 0.194 | 0.022     | 0.063         | 0.158     | 0.025        | 0.029 | 0.064 | 0.165     | 0.201        | 0.023                              |
| 1-Apr  | 48.6                | 0.034          | 0.418 | 0.038     | 0.019         | 0.114     | 0.034        | 0.07  | 0.055 | 0.349     | 0.592        | 0.015                              |
| 13-Apr | 67.5                | 0.027          | 0.013 | 0.022     | 0.026         | n/a       | 0.02         | 0.052 | 0.047 | 0.017     | 0.013        | 0.007                              |
| 24-Apr | 89.1                | 0.021          | 0.028 | 0.01      | 0.004         | n/a       | 0.003        | 0.007 | 0.007 | 0.005     | 0.016        | 0.011                              |
| 7-May  | 109.4               | 0.015          | 0.036 | 0.007     | 0.015         | n/a       | 0.006        | 0.014 | 0.016 | 0.01      | 0.01         | 0.052                              |

**Table A2-64. Nitrate Column Influent and Effluent Concentrations (mg/L)**

Nitrate (mg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-----|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 5              | 0.2 | 5.2       | 4.8           | 4.9       | 4.9          | 4.5 | 4.6   | 0.3       | 0.3          | 0.3                                |
| 20-Mar | 27.7                | 6.6            | 0.3 | 6.5       | 5.5           | 4.9       | 6.1          | 6.1 | 5.8   | 1.1       | 0.4          | 1.4                                |
| 25-Mar | 36.6                | 7.1            | 0.3 | 6.8       | 6.1           | 5.4       | 6.3          | 6.3 | 6.1   | 1.7       | 0.5          | 1                                  |
| 1-Apr  | 48.6                | 4.9            | 0.3 | 6         | 5.2           | 5.8       | 5.9          | 5.3 | 5.7   | 1.7       | 1.5          | 0.6                                |
| 13-Apr | 67.5                | 5.5            | 0.4 | 6.3       | 5.6           | n/a       | 5.8          | 5.7 | 5.6   | 3.8       | 5.4          | 0.6                                |
| 24-Apr | 89.1                | 5.7            | 1   | 5.5       | 5.8           | n/a       | 6.4          | 5.2 | 4.8   | 4.2       | 6.8          | 2.9                                |
| 7-May  | 109.4               | 7.1            | 0.7 | 6.6       | 4.5           | n/a       | 6.7          | 5.8 | 5.9   | 7.9       | 9.1          | 4.8                                |

**Table A2-65. Ammonia Column Influent and Effluent Concentrations (mg/L)****Ammonia (mg/L)**

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 0.32           | 0    | 1.13      | 0.1           | 0         | 0            | 0    | 0     | 0.01      | 0.07         | 0                                  |
| 20-Mar | 27.7                | 3.12           | 1.57 | 2.92      | 0.05          | 1.93      | 0            | 0.08 | 0.03  | 0.02      | 0.05         | 0.01                               |
| 25-Mar | 36.6                | 3              | 0.28 | 4         | 0.07          | 1.04      | 0.13         | 0.2  | 0.08  | 0         | 0.01         | 0                                  |
| 1-Apr  | 48.6                | 3.32           | 0    | 4.48      | 0.05          | 2.09      | 0.1          | 0.12 | 0.08  | 0.05      | 0            | 0.11                               |
| 13-Apr | 67.5                | 3.88           | 0    | 4.52      | 0.51          | n/a       | 0.14         | 0.09 | 0.11  | 0         | 0.02         | 0.48                               |
| 24-Apr | 89.1                | 2.82           | 0.01 | 3.28      | 0.78          | n/a       | 0.41         | 0.13 | 0.1   | 0.01      | 0.01         | 0.3                                |
| 7-May  | 109.4               | 2.71           | 0.04 | 3.24      | 1.08          | n/a       | 0.45         | 0.11 | 0.1   | 0         | 0.1          | 0.34                               |

**Table A2-66. Total Phosphorus Column Influent and Effluent Concentrations (mg/L)****Total Phosphorus (mg/L)**

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 0.42           | 2.36 | 9.1       | 0.32          | 0.11      | 0.39         | 0.33 | 0.33  | 1.6       | 1.09         | 1.04                               |
| 20-Mar | 27.7                | 0.75           | 1.03 | 0.58      | 0.22          | 0.19      | 0.15         | 0.42 | 0.28  | 0.76      | 1.02         | 1.08                               |
| 25-Mar | 36.6                | 0.67           | 1.2  | 0.99      | 0.27          | 0.16      | 0.08         | 0.3  | 0.31  | 0.81      | 0.74         | 1.2                                |
| 1-Apr  | 48.6                | 1.28           | 1.54 | 0.39      | 0.2           | 0.29      | 0.11         | 0.4  | 0.26  | 0.67      | 0.5          | 0.69                               |
| 13-Apr | 67.5                | 0.53           | 0.85 | 0.28      | 0.26          | n/a       | 0.14         | 0.32 | 0.32  | 0.22      | 0.49         | 0.48                               |
| 24-Apr | 89.1                | 0.43           | 0.77 | 0.32      | 0.20          | n/a       | 0.24         | 0.27 | 0.27  | 0.39      | 0.32         | 0.36                               |
| 7-May  | 109.4               | 0.46           | 0.41 | 0.23      | 0.20          | n/a       | 0.21         | 0.22 | 0.24  | 0.29      | 0.21         | 0.23                               |

**Table A2-67. COD Column Influent and Effluent Concentrations (mg/L)**

**COD (mg/L)**

| Date   | Influent Volume (m) | Influent Conc. | GAC | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-----|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 32             | 15  | 144       | 21            | 0         | 22           | 20  | 16    | 6         | 13           | 0                                  |
| 20-Mar | 27.7                | 75             | 0   | 11        | 7             | 17        | 17           | 22  | 19    | 0         | 0            | 2                                  |
| 25-Mar | 36.6                | 76             | 28  | 30        | 45            | 31        | 8            | 36  | 36    | 16        | 44           | 27                                 |
| 1-Apr  | 48.6                | 97             | 0   | 40        | 29            | 38        | 26           | 20  | 27    | 0         | 3            | 0                                  |
| 13-Apr | 67.5                | 44             | 0   | 0         | 11            | n/a       | 0            | 0   | 16    | 0         | 0            | 0                                  |
| 24-Apr | 89.1                | 108            | 0   | 18        | 0             | n/a       | 25           | 41  | 0     | 17        | 0            | 2                                  |
| 7-May  | 109.4               | 73             | 6   | 9         | 17            | n/a       | 0            | 51  | 36    | 0         | 0            | 0                                  |

**Table A2-68. pH Column Influent and Effluent Values**

**pH**

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 7.86           | 9.72 | 4.63      | 7.96          | 7.95      | 7.91         | 6.96 | 7.93  | 8.92      | 8.02         | 9.24                               |
| 20-Mar | 27.7                | 7.48           | 8.31 | 4.44      | 7.71          | 7.44      | 7.61         | 7.74 | 7.58  | 8.02      | 7.8          | 8.19                               |
| 25-Mar | 36.6                | 7.47           | 7.98 | 4.62      | 7.47          | 7.31      | 7.71         | 7.74 | 7.62  | 8.3       | 7.7          | 8.39                               |
| 1-Apr  | 48.6                | 7.37           | 8.25 | 4.53      | 7.64          | 7.43      | 7.05         | 7.42 | 7.79  | 8.27      | 7.79         | 8.11                               |
| 13-Apr | 67.5                | 7.32           | 7.75 | 3.74      | 6.99          | n/a       | 7.24         | 7.34 | 7.17  | 7.71      | 6.21         | 7                                  |
| 24-Apr | 89.1                | 8.17           | 9.09 | 4.9       | 8.58          | n/a       | 7.64         | 8.71 | 8.71  | 8.12      | 8.28         | 8.28                               |
| 7-May  | 109.4               | 8.07           | 8.06 | 5.92      | 8.44          | n/a       | 8.3          | 8.28 | 8.06  | 7.66      | 7.61         | 7.58                               |

**Table A2-69. Conductivity Column Influent and Effluent Values (µS/cm)**Conductivity  
(µS/cm)

| Date   | Influent Volume (m) | Influent Conc. | GAC | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-----|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 280            | 400 | 260       | 300           | 290       | 400          | 310 | 290   | 300       | 250          | 510                                |
| 20-Mar | 27.7                | 360            | 350 | 280       | 350           | 340       | 360          | 330 | 310   | 290       | 330          | 390                                |
| 25-Mar | 36.6                | 340            | 380 | 320       | 390           | 350       | 390          | 430 | 370   | 340       | 340          | 450                                |
| 1-Apr  | 48.6                | 380            | 450 | 320       | 380           | 360       | 450          | 390 | 440   | 350       | 360          | 410                                |
| 13-Apr | 67.5                | 360            | 370 | 370       | 320           | n/a       | 390          | 420 | 360   | 300       | 400          | 360                                |
| 24-Apr | 89.1                | 460            | 460 | 350       | 470           | n/a       | 450          | 410 | 450   | 430       | 430          | 430                                |
| 7-May  | 109.4               | 179            | 450 | 390       | 380           | n/a       | 470          | 470 | 500   | 490       | 480          | 510                                |

**Table A2-70. ORP Column Influent and Effluent Values (mV)**

ORP (mV)

| Date   | Influent Volume (m) | Influent Conc. | GAC | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-----|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 225            | 172 | 281       | 215           | 223       | 209          | 230 | 213   | 193       | 210          | 184                                |
| 20-Mar | 27.7                | 201            | 201 | 298       | 196           | 226       | 205          | 216 | 211   | 240       | 220          | 211                                |
| 25-Mar | 36.6                | 161            | 162 | 253       | 165           | 179       | 179          | 179 | 172   | 129       | 173          | 161                                |
| 1-Apr  | 48.6                | 185            | 174 | 260       | 175           | 190       | 192          | 182 | 138   | 182       | 171          | 181                                |
| 13-Apr | 67.5                | 188            | 187 | 323       | 200           | n/a       | 197          | 177 | 201   | 181       | 214          | 191                                |
| 24-Apr | 89.1                | 174            | 151 | 242       | 175           | n/a       | 183          | 170 | 158   | 182       | 166          | 173                                |
| 7-May  | 109.4               | 174            | 176 | 217       | 167           | n/a       | 170          | 181 | 176   | 181       | 149          | 160                                |

**Table A2-71. Color Column Influent and Effluent Values (Pt-Co)****Color (Pt-Co)**

| Date   | Influent Volume (m) | Influent Conc. | GAC | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-----|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 123            | 76  | 840       | 349           | 49        | 80           | 73  | 101   | 78        | 136          | 20                                 |
| 20-Mar | 27.7                | 201            | 10  | 60        | 74            | 19        | 23           | 11  | 60    | 16        | 27           | 1                                  |
| 25-Mar | 36.6                | 255            | 7   | 77        | 260           | 38        | 18           | 30  | 289   | 26        | 51           | 7                                  |
| 1-Apr  | 48.6                | 194            | 3   | 81        | 90            | 444       | 51           | 375 | 44    | 66        | 84           | 33                                 |
| 13-Apr | 67.5                | 453            | 6   | 104       | 205           | n/a       | 109          | 120 | 264   | 85        | 101          | 103                                |
| 24-Apr | 89.1                | 147            | 7   | 48        | 53            | n/a       | 49           | 40  | 20    | 38        | 43           | 2                                  |
| 7-May  | 109.4               | 108            | 30  | 40        | 36            | n/a       | 52           | 42  | 38    | 12        | 20           | 43                                 |

**Table A2-72. Fluoride Column Influent and Effluent Concentrations (mg/L)****Fluoride (mg/L)**

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 1.7            | 1.06 | 0.4       | 0.85          | 1.23      | 1.88         | 0.7  | 1.46  | 1.2       | 1.08         | 1.04                               |
| 20-Mar | 27.7                | 2.34           | 2.46 | 1.28      | 2.1           | 2         | 2.24         | 2.5  | 2.04  | 2.1       | 2.04         | 2.1                                |
| 25-Mar | 36.6                | 2.64           | 2.94 | 2.02      | 3.02          | 2.94      | 2.54         | 3.8  | 2.88  | 2.58      | 2.64         | 2.38                               |
| 1-Apr  | 48.6                | 3.02           | 2.4  | 2.1       | 3.24          | 3.38      | 1.76         | 2.86 | 2.16  | 2.78      | 2.44         | 2.52                               |
| 13-Apr | 67.5                | 3.12           | 2.1  | 1.62      | 2.88          | n/a       | 1.66         | 2.28 | 2.54  | 1.82      | 1.58         | 2.26                               |
| 24-Apr | 89.1                | 2.76           | 2.82 | 2.09      | 3.2           | n/a       | 2.64         | 2.84 | 2.7   | 2.38      | 2.38         | 2.94                               |
| 7-May  | 109.4               | 2.5            | 2.58 | 2.34      | 2.52          | n/a       | 2.78         | 2.64 | 2.54  | 2.68      | 2.82         | 2.7                                |

**Table A2-73. Sulfate Column Influent and Effluent Concentrations (mg/L)**

Sulfate (mg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-----|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 39             | 11  | 76        | 46            | 38        | 46           | 36  | 38    | 14        | 7            | 11                                 |
| 20-Mar | 27.7                | 42             | 33  | 42        | 41            | 44        | 43           | 42  | 42    | 43        | 57           | 38                                 |
| 25-Mar | 36.6                | 42             | 38  | 53        | 46            | 45        | 45           | 52  | 43    | 39        | 38           | 37                                 |
| 1-Apr  | 48.6                | 46             | 61  | 49        | 47            | 44        | 49           | 44  | 49    | 37        | 46           | 29                                 |
| 13-Apr | 67.5                | 51             | 33  | 44        | 47            | n/a       | 49           | 48  | 49    | 45        | 49           | 34                                 |
| 24-Apr | 89.1                | 46             | 61  | 49        | 47            | n/a       | 49           | 44  | 49    | 37        | 46           | 29                                 |
| 7-May  | 109.4               | 51             | 33  | 44        | 47            | n/a       | 49           | 48  | 49    | 45        | 49           | 34                                 |

**Table A2-74. Phosphate Column Influent and Effluent Concentrations (mg/L)**

Phosphate (mg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.128               | 0.74           | 8.12 | 22.9      | 0.99          | 0.23      | 0.74         | 0.55 | 0.78  | 4.64      | 3.34         | 3.22                               |
| 20-Mar | 27.676              | 0.45           | 3.64 | 0.8       | 0.53          | 0.3       | 0.18         | 0.91 | 0.96  | 2.58      | 3.64         | 2.94                               |
| 25-Mar | 36.633              | 1.21           | 3.66 | 2.64      | 0.73          | 0.55      | 0.27         | 0.85 | 1.09  | 2.66      | 2.54         | 3.74                               |
| 1-Apr  | 48.624              | 1.43           | 4.68 | 1.25      | 0.61          | 0.76      | 0.28         | 1.17 | 0.75  | 1.98      | 1.55         | 2.04                               |
| 13-Apr | 67.549              | 0.91           | 2.48 | 0.72      | 0.68          | n/a       | 0.22         | 0.55 | 0.84  | 1.41      | 1.25         | 1.36                               |
| 24-Apr | 89.08329            | 0.67           | 2.05 | 0.5       | 0.52          | n/a       | 0.3          | 0.43 | 0.33  | 0.65      | 0.7          | 0.92                               |
| 7-May  | 109.387             | 0.92           | 1.18 | 0.56      | 0.32          | n/a       | 0.23         | 0.28 | 0.42  | 0.59      | 0.55         | 0.35                               |



**Table A2-75. Total Nitrogen Column Influent and Effluent Concentrations (mg/L)****Total Nitrogen (mg/L)**

| Date   | Influent Volume (m) | Influent Conc. | GAC | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-----|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 5.2            | 0.4 | 6.3       | 4.2           | 3.9       | 4.3          | 5.5  | 12.7  | 3.1       | 1.1          | 19.8                               |
| 20-Mar | 27.7                | 17.7           | 6.5 | 26        | 19.8          | 21        | 14.3         | 17.1 | 18    | 8.2       | 4.8          | 4.5                                |
| 25-Mar | 36.6                | 17.1           | 2.9 | 15.1      | 9.7           | 11.6      | 6            | 13.5 | 6.7   | 1.7       | 0            | 1.8                                |
| 1-Apr  | 48.6                | 12.6           | 0   | 8.2       | 6.7           | 8.7       | 8.2          | 8.6  | 7.8   | 1.4       | 0.6          | 0                                  |
| 13-Apr | 67.5                | 14.3           | 1.5 | 11.1      | 9.3           | n/a       | 6.8          | 10.3 | 8.2   | 3.3       | 4.5          | 0.6                                |
| 24-Apr | 89.1                | 4              | 0   | 5.4       | 3.1           | n/a       | 2.5          | 2    | 3.2   | 1.1       | 3.3          | 5.7                                |
| 7-May  | 109.4               | 5.1            | 0   | 2.9       | 1.8           | n/a       | 3.1          | 2.3  | 1.4   | 1.2       | 1.5          | 0.1                                |

**Table A2-76. UV-254 Column Influent and Effluent Values (absorbance units)****UV-254 (absorbance units)**

| Date   | Influent Volume (m) | Influent Conc. | GAC   | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ   | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-------|-----------|---------------|-----------|--------------|-------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 0.23           | 0.108 | 2.408     | 0.452         | 0.145     | 0.182        | 0.212 | 0.195 | 0.9       | 0.182        | 0.058                              |
| 20-Mar | 27.7                | 0.395          | 0.016 | 0.252     | 0.207         | 0.199     | 0.141        | 0.163 | 0.212 | 0.024     | 0.071        | 0.01                               |
| 25-Mar | 36.6                | 0.285          | 0.001 | 0.316     | 0.402         | 0.143     | 0.118        | 0.183 | 0.403 | 0.028     | 0.068        | 0.012                              |
| 1-Apr  | 48.6                | 1.02           | 0.007 | 0.298     | 0.741         | 1.148     | 0.418        | 1.057 | 0.878 | 0.064     | 0.092        | 0.033                              |
| 13-Apr | 67.5                | 1.084          | 0.018 | 0.438     | 0.875         | n/a       | 0.464        | 0.825 | 0.892 | 0.071     | 0.106        | 0.058                              |
| 24-Apr | 89.1                | 0.904          | 0.001 | 0.544     | 0.637         | n/a       | 0.535        | 0.534 | 1.011 | 0.034     | 0.057        | 0.014                              |
| 7-May  | 109.4               | 0.696          | 0.041 | 0.736     | 0.421         | n/a       | 0.539        | 0.556 | 0.76  | 0.027     | 0.047        | 0.028                              |

**Table A2-77. Chloride Column Influent and Effluent Concentrations (mg/L)**

Chlorides (mg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 25             | 15.5 | 26.5      | 24.75         | 24.5      | 43           | 32   | 25    | 19.5      | 13           | 106                                |
| 20-Mar | 27.7                | 29.5           | 33   | 34.5      | 25.5          | 29.5      | 34           | 33   | 26    | 34.5      | 33           | 32.75                              |
| 25-Mar | 36.6                | 30             | 33.5 | 32.5      | 31            | 34.5      | 34           | 33.5 | 25.5  | 32        | 33.5         | 32                                 |
| 1-Apr  | 48.6                | 4              | 39.5 | 35.5      | 23.5          | 15.5      | 35.5         | 27   | 40    | 31        | 35           | 27.5                               |
| 13-Apr | 67.5                | 1              | 33   | 41.5      | 3             | n/a       | 38.5         | 22.5 | 1.5   | 34        | 57.5         | 41.5                               |
| 24-Apr | 89.1                | 1              | 27.5 | 29        | 1.5           | n/a       | 32           | 31   | 1     | 28        | 28           | 30.5                               |
| 7-May  | 109.4               | 33.5           | 38   | 33.5      | 2.5           | n/a       | 34.5         | 3.5  | 3     | 34        | 34           | 35.5                               |

**Table A2-78. Hardness Column Influent and Effluent Concentrations (mg/L)**

Hardness (mg/L)

| Date   | Influent Volume (m) | Influent Conc. | GAC | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-----|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|------------------------------------|
| 11-Mar | 4.1                 | 85             | 7   | 10        | 65            | 74        | 50           | 83  | 66    | 58        | 38           | 75                                 |
| 20-Mar | 27.7                | 80             | 97  | 50        | 91            | 97        | 60           | 109 | 92    | 94        | 89           | 81                                 |
| 25-Mar | 36.6                | 100            | 109 | 61        | 102           | 101       | 60           | 153 | 101   | 107       | 92           | 101                                |
| 1-Apr  | 48.6                | 106            | 159 | 55        | 105           | 104       | 92           | 117 | 134   | 105       | 108          | 113.5                              |
| 13-Apr | 67.5                | 50             | 106 | 50        | 100           | n/a       | 100          | 200 | 110   | 124       | 120          | 96                                 |
| 24-Apr | 89.1                | 93             | 113 | 55        | 86            | n/a       | 83           | 85  | 99    | 97        | 94           | 84                                 |
| 7-May  | 109.4               | 104            | 97  | 56        | 77            | n/a       | 92           | 90  | 105   | 105       | 99           | 99                                 |

**Table A2-79. Nitrite plus Nitrate Column Influent and Effluent Concentrations (mg/L)**

**Nitrite plus Nitrate (mg/L)**

| <b>Date</b> | <b>Influent Volume (m)</b> | <b>Influent Conc.</b> | <b>GAC</b> | <b>Peat Moss</b> | <b>Rhyolite Sand</b> | <b>Site Sand</b> | <b>Site Zeolite</b> | <b>SMZ</b> | <b>R-SMZ</b> | <b>R-SMZ-GAC</b> | <b>R-SMZ-GAC-PM</b> | <b>Site Sand-GAC-Site Zeolite Layered</b> |
|-------------|----------------------------|-----------------------|------------|------------------|----------------------|------------------|---------------------|------------|--------------|------------------|---------------------|---|
| 11-Mar      | 4.1                        | 5.02                  | 0.228      | 5.303            | 4.849                | 4.918            | 4.917               | 4.513      | 4.625        | 0.310            | 0.323               | 0.323                                     |
| 20-Mar      | 27.7                       | 6.646                 | 0.319      | 6.521            | 5.528                | 5.030            | 6.127               | 6.127      | 5.831        | 1.120            | 0.422               | 1.415                                     |
| 25-Mar      | 36.6                       | 7.144                 | 0.494      | 6.822            | 6.163                | 5.558            | 6.325               | 6.329      | 6.164        | 1.865            | 0.701               | 1.023                                     |
| 1-Apr       | 48.6                       | 4.934                 | 0.718      | 6.038            | 5.219                | 5.914            | 5.934               | 5.370      | 5.755        | 2.049            | 2.092               | 0.615                                     |
| 13-Apr      | 67.5                       | 5.527                 | 0.413      | 6.322            | 5.626                | n/a              | 5.820               | 5.752      | 5.647        | 3.817            | 5.413               | 0.607                                     |
| 24-Apr      | 89.1                       | 5.721                 | 1.028      | 5.510            | 5.804                | n/a              | 6.403               | 5.207      | 4.807        | 4.205            | 6.816               | 2.911                                     |
| 7-May       | 109.4                      | 7.115                 | 0.736      | 6.607            | 4.515                | n/a              | 6.703               | 5.814      | 5.916        | 7.910            | 9.110               | 4.852                                     |

**Table A2-80. Oil and Grease Column Influent and Effluent Concentrations (mg/L)**

Oil and Grease (mg/L)

| Date   | Influent Volume (m) | Influent Conc. | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-------|-----------|--------------|------------------------------------|
| 6-Apr  | 55.9                | <LOD           | <LOD  | <LOD      | <LOD         | 3.1                                |
| 24-Apr | 89.1                | 2.2            | 2.4   | <LOD      | <LOD         | <LOD                               |
| 7-May  | 109.4               | <LOD           | <LOD  | <LOD      | <LOD         | <LOD                               |

**Table A2-81. Perchlorate Column Influent and Effluent Concentrations (µg/L)**

Perchlorate (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-------|-----------|--------------|------------------------------------|
| 6-Apr  | 55.9                | <LOD           | <LOD  | <LOD      | <LOD         | <LOD                               |
| 24-Apr | 89.1                | <LOD           | <LOD  | <LOD      | <LOD         | <LOD                               |
| 7-May  | 109.4               | <LOD           | <LOD  | <LOD      | <LOD         | <LOD                               |

**Table A2-82. Mercury Column Influent and Effluent Concentrations (µg/L)**

Mercury (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-------|-----------|--------------|------------------------------------|
| 6-Apr  | 55.9                | 72             | 17    | 3.4       | 1.4          | 3                                  |
| 24-Apr | 89.1                | 76             | 15    | 2.2       | 3.2          | 3.4                                |
| 7-May  | 109.4               | 43             | 5.7   | 1.5       | 2.1          | 1.7                                |

**Table A2-83. Gross Alpha Radioactivity Column Influent and Effluent Values (pCi/L)**

Gross Alpha Radioactivity (pCi/L)

| Date   | Influent Volume (m) | Influent Conc. | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-------|-----------|--------------|------------------------------------|
| 6-Apr  | 55.9                | 5.18           | 1.46  | <LOD      | <LOD         | <LOD                               |
| 24-Apr | 89.1                | 3.88           | <LOD  | <LOD      | <LOD         | <LOD                               |
| 7-May  | 109.4               | 6.75           | <LOD  | <LOD      | <LOD         | <LOD                               |

**Table A2-84. Gross Beta Radioactivity Column Influent and Effluent Values (pCi/L)**

Gross Beta Radioactivity (pCi/L)

| Date   | Influent Volume (m) | Influent Conc. | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-------|-----------|--------------|------------------------------------|
| 6-Apr  | 55.9                | 10.1           | 6.56  | 8.13      | 5.68         | 4.61                               |
| 24-Apr | 89.1                | 8.11           | 4.93  | 9.65      | 7.76         | 3.82                               |
| 7-May  | 109.4               | 10.1           | 5.92  | 8.46      | 12.4         | 7.89                               |

**Table A2-85. Radium 228 Column Influent and Effluent Values (pCi/L)**

Radium 228 (pCi/L)

| Date   | Influent Volume (m) | Influent Conc. | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-------|-----------|--------------|------------------------------------|
| 6-Apr  | 55.92               | 0.392          | 0.572 | <LOD      | <LOD         | 0.791                              |
| 24-Apr | 89.08               | <LOD           | <LOD  | <LOD      | <LOD         | <LOD                               |
| 7-May  | 109.39              | 0.774          | 0.595 | 1.1       | <LOD         | 1.19                               |

**Table A2-86. Radium 226 Column Influent and Effluent Values (pCi/L)**

Radium 226 (pCi/L)

| Date   | Influent Volume (m) | Influent Conc. | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-------|-----------|--------------|------------------------------------|
| 6-Apr  | 55.9                | 0.802          | <LOD  | 0.502     | <LOD         | <LOD                               |
| 24-Apr | 89.1                | <LOD           | <LOD  | <LOD      | <LOD         | <LOD                               |
| 7-May  | 109.4               | <LOD           | 0.275 | <LOD      | <LOD         | 0.255                              |

**Table A2-87. Tritium Column Influent and Effluent Values (pCi/L)**

Tritium (pCi/L)

| Date   | Influent Volume (m) | Influent Conc. | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-------|-----------|--------------|------------------------------------|
| 6-Apr  | 55.9                | <LOD           | <LOD  | <LOD      | <LOD         | <LOD                               |
| 24-Apr | 89.1                | <LOD           | <LOD  | <LOD      | <LOD         | <LOD                               |
| 7-May  | 109.4               | <LOD           | <LOD  | <LOD      | <LOD         | <LOD                               |

**Table A2-88. Strontium 90 Column Influent and Effluent Values (pCi/L)**  
**Strontium 90 (pCi/L)**

| Date   | Influent Volume (m) | Influent Conc. | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-------|-----------|--------------|------------------------------------|
| 6-Apr  | 55.9                | <LOD           | <LOD  | <LOD      | <LOD         | <LOD                               |
| 24-Apr | 89.1                | <LOD           | 0.764 | <LOD      | <LOD         | <LOD                               |
| 7-May  | 109.4               | <LOD           | <LOD  | <LOD      | <LOD         | <LOD                               |

**Table A2-89. Alpha Radium Column Influent and Effluent Values (pCi/L)**  
**Alpha Radium (pCi/L)**

| Date   | Influent Volume (m) | Influent Conc. | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-------|-----------|--------------|------------------------------------|
| 6-Apr  | 55.9                | 1.19           | 0.23  | 0.738     | 0.365        | <LOD                               |
| 24-Apr | 89.1                | 0.909          | <LOD  | <LOD      | <LOD         | <LOD                               |
| 7-May  | 109.4               | 0.668          | <LOD  | <LOD      | <LOD         | <LOD                               |

**Table A2-90. Uranium Column Influent and Effluent Concentrations (µg/L)**  
**Uranium (µg/L)**

| Date   | Influent Volume (m) | Influent Conc. | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|-------|-----------|--------------|------------------------------------|
| 6-Apr  | 55.9                | 1.06           | 0.518 | <LOD      | <LOD         | 2.13                               |
| 24-Apr | 89.1                | 1.12           | <LOD  | <LOD      | <LOD         | <LOD                               |
| 7-May  | 109.4               | 1.49           | <LOD  | <LOD      | 9.32         | <LOD                               |

**Table A2-91. Dioxin (TCDD, no DNQ values) Column Influent and Effluent Concentrations (µg/L)**

Dioxin (TCDD no DNQ values) (µg/L)

| Date   | Influent Volume (m) | Influent Conc. | R-SMZ    | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|--------|---------------------|----------------|----------|-----------|--------------|------------------------------------|
| 16-Mar | 19.4                | 4.90E-07       | 3.37E-08 | ND        | 3.96E-08     | ND                                 |
| 13-Apr | 67.5                | ND             | ND       | ND        | ND           | ND                                 |
| 7-May  | 109.4               | 2.72E-08       | ND       | 8.24E-09  | ND           | 8.34E-09                           |

**Table A2-92. Copper Concentrations in Different Media Column Layers after Loading (mg/kg)**

Copper in media (mg/kg)

| media depth (in.) | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | media depth (in.) | Site Sand-GAC-Site Zeolite Layered |
|-------------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|-------------------|------------------------------------|
| 0-3               | 56.6 | 56.8      | 20.4          | 12.2      | 17.8         | 29.2 | 35.2  | 46.8      | 15.6         | 0-3               | 24.8                               |
| 3-10              | 12.2 | 13        | 9.4           | 9         | 15.6         | 17.6 | 23.8  | 14.8      | 9.2          | 3-4               | 42.4                               |
| 10-20             | 3    | 188.6     | 6.6           | 7.8       | 10.6         | 10.4 | 15.6  | 9.2       | 5            | 4-7               | 16.6                               |
| 20-30+            | 0.2  | 15.8      | 6.6           | 9.8       | 5.4          | 9.4  | 7.4   | 8         | 4.6          | 7-13              | 29.6                               |
|                   |      |           |               |           |              |      |       |           |              | 13-17             | 3                                  |
|                   |      |           |               |           |              |      |       |           |              | 17-30             | 3.4                                |
|                   |      |           |               |           |              |      |       |           |              | 30-39             | 13.6                               |

**Table A2-93. Arsenic Concentrations in Different Media Column Layers after Loading (mg/kg)**

Arsenic in media (mg/kg)

| media depth (in.) | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | media depth (in.) | Site Sand-GAC-Site Zeolite Layered |
|-------------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|-------------------|------------------------------------|
| 0-3               | 24.8 | 32.6      | 15.6          | 4.2       | 11.6         | 21.4 | 15.8  | 20.8      | 8.2          | 0-3               | 14.8                               |
| 3-10              | 8.2  | 2.8       | 3.6           | 2.2       | 6.2          | 8.4  | 5.4   | 3         | 4            | 3-4               | 29.6                               |
| 10-20             | 2.2  | 2.4       | 2             | 1.4       | 3.2          | 3    | 2.4   | 2.6       | 2            | 4-7               | 4.2                                |
| 20-30+            | 1    | 4.2       | 2.6           | 3         | 2.4          | 2.4  | 1.6   | 2         | 1.6          | 7-13              | 22                                 |
|                   |      |           |               |           |              |      |       |           |              | 13-17             | 4.6                                |
|                   |      |           |               |           |              |      |       |           |              | 17-30             | 5.2                                |
|                   |      |           |               |           |              |      |       |           |              | 30-39             | 1.6                                |

**Table A2-94. Aluminum Concentrations in Different Media Column Layers after Loading (mg/kg)**

Aluminum in media (mg/kg)

| media depth (in.) | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ   | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | media depth (in.) | Site Sand-GAC-Site Zeolite Layered |
|-------------------|------|-----------|---------------|-----------|--------------|-------|-------|-----------|--------------|-------------------|------------------------------------|
| 0-3               | 3168 | 5299      | 5134          | 3223      | 16133        | 13596 | 8423  | 9793      | 7490         | 0-3               | 5418                               |
| 3-10              | 2204 | 3809      | 4360          | 3141      | 11274        | 12046 | 8986  | 8300      | 8672         | 3-4               | 6808                               |
| 10-20             | 2033 | 3725      | 4251          | 3066      | 12141        | 11284 | 7385  | 9087      | 8210         | 4-7               | 4334                               |
| 20-30+            | 2218 | 4463      | 4410          | 3974      | 19096        | 12302 | 8579  | 7225      | 8748         | 7-13              | 6177                               |
|                   |      |           |               |           |              |       |       |           |              | 13-17             | 18212                              |
|                   |      |           |               |           |              |       |       |           |              | 17-30             | 17971                              |
|                   |      |           |               |           |              |       |       |           |              | 30-39             | 728                                |

**Table A2-95. Boron Concentrations in Different Media Column Layers after Loading (mg/kg)**

Boron in media (mg/kg)

| media depth (in.) | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | media depth (in.) | Site Sand-GAC-Site Zeolite Layered |
|-------------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|-------------------|------------------------------------|
| 0-3               | 79   | 48.4      | 23.2          | 54.2      | 42.6         | 35.8 | 41.2  | 41        | 18.2         | 0-3               | 48.4                               |
| 3-10              | 52.2 | 46.6      | 16.8          | 43.8      | 46.8         | 35.6 | 48.2  | 50.6      | 16.4         | 3-4               | 60.6                               |
| 10-20             | 32.6 | 36        | 16.8          | 39.8      | 50.6         | 31.6 | 66.6  | 45        | 13.2         | 4-7               | 39.6                               |
| 20-30+            | 27.8 | 50.8      | 20.8          | 37.8      | 39.8         | 29   | 30.2  | 29.2      | 13.6         | 7-13              | 71.8                               |
|                   |      |           |               |           |              |      |       |           |              | 13-17             | 31.2                               |
|                   |      |           |               |           |              |      |       |           |              | 17-30             | 39.8                               |
|                   |      |           |               |           |              |      |       |           |              | 30-39             | 18.4                               |



**Table A2-96. Calcium Concentrations in Different Media Column Layers after Loading (mg/kg)**

Calcium in media (mg/kg)

| media depth (in.) | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ   | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | media depth (in.) | Site Sand-GAC-Site Zeolite Layered |
|-------------------|------|-----------|---------------|-----------|--------------|-------|-------|-----------|--------------|-------------------|------------------------------------|
| 0-3               | 1575 | 4195      | 2765          | 1502      | 10376        | 11024 | 6962  | 8448      | 5572         | 0-3               | 2527                               |
| 3-10              | 1155 | 4303      | 2332          | 1480      | 6998         | 9916  | 7228  | 7642      | 7311         | 3-4               | 2559                               |
| 10-20             | 1044 | 2834      | 2586          | 1399      | 8351         | 9422  | 6282  | 8310      | 6054         | 4-7               | 2106                               |
| 20-30+            | 1066 | 3679      | 2401          | 2135      | 13695        | 10456 | 7106  | 6683      | 7326         | 7-13              | 2426                               |
|                   |      |           |               |           |              |       |       |           |              | 13-17             | 13613                              |
|                   |      |           |               |           |              |       |       |           |              | 17-30             | 12842                              |
|                   |      |           |               |           |              |       |       |           |              | 30-39             | 721                                |

**Table A2-97. Cadmium Concentrations in Different Media Column Layers after Loading (mg/kg)**

Cadmium in media (mg/kg)

| media depth (in.) | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | media depth (in.) | Site Sand-GAC-Site Zeolite Layered |
|-------------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|-------------------|------------------------------------|
| 0-3               | 25   | 32.8      | 11.8          | 5.8       | 11.8         | 16.4 | 15.2  | 21.6      | 11.2         | 0-3               | 10.2                               |
| 3-10              | 12.2 | 0.6       | 5.2           | 2.4       | 6.6          | 8.6  | 11.6  | 7.6       | 7.4          | 3-4               | 12.4                               |
| 10-20             | 3    | 0.2       | 4.6           | 0.4       | 3.8          | 2.4  | 8.4   | 1.8       | 3.4          | 4-7               | 5.8                                |
| 20-30+            | 0.2  | 0.2       | 0.8           | 0.2       | 3            | 0.2  | 0.4   | 0.2       | 0.6          | 7-13              | 11.6                               |
|                   |      |           |               |           |              |      |       |           |              | 13-17             | 0.6                                |
|                   |      |           |               |           |              |      |       |           |              | 17-30             | 0.4                                |
|                   |      |           |               |           |              |      |       |           |              | 30-39             | 0.2                                |

**Table A2-98. Iron Concentrations in Different Media Column Layers after Loading (mg/kg)**

Iron in media (mg/kg)

| media depth (in.) | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | media depth (in.) | Site Sand-GAC-Site Zeolite Layered |
|-------------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|-------------------|------------------------------------|
| 0-3               | 5518 | 9538      | 5800          | 6728      | 5392         | 9116 | 3991  | 5524      | 3857         | 0-3               | 11520                              |
| 3-10              | 3164 | 8656      | 4173          | 6132      | 6966         | 9838 | 3828  | 3534      | 3612         | 3-4               | 12104                              |
| 10-20             | 3066 | 7430      | 3837          | 6236      | 5565         | 8156 | 2837  | 3840      | 2234         | 4-7               | 9400                               |
| 20-30+            | 3687 | 11284     | 4784          | 8912      | 3039         | 7708 | 3024  | 2806      | 3207         | 7-13              | 12478                              |
|                   |      |           |               |           |              |      |       |           |              | 13-17             | 2284                               |
|                   |      |           |               |           |              |      |       |           |              | 17-30             | 2909                               |
|                   |      |           |               |           |              |      |       |           |              | 30-39             | 367                                |

**Table A2-99. Magnesium Concentrations in Different Media Column Layers after Loading (mg/kg)**

Magnesium in media (mg/kg)

| media depth (in.) | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | media depth (in.) | Site Sand-GAC-Site Zeolite Layered |
|-------------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|-------------------|------------------------------------|
| 0-3               | 1314 | 2658      | 1851          | 1805      | 1661         | 3663 | 2070  | 2548      | 1866         | 0-3               | 2792                               |
| 3-10              | 964  | 2121      | 1497          | 2410      | 1966         | 3352 | 2319  | 2282      | 2202         | 3-4               | 3713                               |
| 10-20             | 1086 | 2236      | 1630          | 1854      | 1785         | 3202 | 1872  | 2508      | 1612         | 4-7               | 2645                               |
| 20-30+            | 1493 | 2629      | 1857          | 2272      | 1383         | 3223 | 2155  | 1884      | 1981         | 7-13              | 2559                               |
|                   |      |           |               |           |              |      |       |           |              | 13-17             | 1191                               |
|                   |      |           |               |           |              |      |       |           |              | 17-30             | 1262                               |
|                   |      |           |               |           |              |      |       |           |              | 30-39             | 227                                |

**Table A2-100. Manganese Concentrations in Different Media Column Layers after Loading (mg/kg)**

Manganese in media (mg/kg)

| media depth (in.) | GAC | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | media depth (in.) | Site Sand-GAC-Site Zeolite Layered |
|-------------------|-----|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|-------------------|------------------------------------|
| 0-3               | 77  | 155       | 150           | 104       | 58           | 300 | 235   | 207       | 179          | 0-3               | 151                                |
| 3-10              | 51  | 106       | 113           | 96        | 176          | 212 | 161   | 333       | 200          | 3-4               | 152                                |
| 10-20             | 55  | 109       | 132           | 101       | 96           | 496 | 105   | 330       | 117          | 4-7               | 134                                |
| 20-30+            | 65  | 125       | 116           | 121       | 229          | 288 | 270   | 178       | 179          | 7-13              | 151                                |
|                   |     |           |               |           |              |     |       |           |              | 13-17             | 45                                 |
|                   |     |           |               |           |              |     |       |           |              | 17-30             | 35                                 |
|                   |     |           |               |           |              |     |       |           |              | 30-39             | 15                                 |

**Table A2-101. Nickel Concentrations in Different Media Column Layers after Loading (mg/kg)**

Nickel in media (mg/kg)

| media depth (in.) | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | media depth (in.) | Site Sand-GAC-Site Zeolite Layered |
|-------------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|-------------------|------------------------------------|
| 0-3               | 24.4 | 32        | 13.2          | 7.2       | 8.8          | 16.6 | 13.6  | 20.8      | 9.6          | 0-3               | 14                                 |
| 3-10              | 13.6 | 5.4       | 6.6           | 10.2      | 8.4          | 11.8 | 12.2  | 9.2       | 7            | 3-4               | 19                                 |
| 10-20             | 5    | 4.6       | 5.6           | 4         | 6.2          | 7.4  | 11    | 5         | 4.4          | 4-7               | 10                                 |
| 20-30+            | 4.8  | 6.4       | 5             | 5.2       | 3.4          | 5.8  | 3.2   | 2.4       | 3.6          | 7-13              | 15.2                               |
|                   |      |           |               |           |              |      |       |           |              | 13-17             | 1.4                                |
|                   |      |           |               |           |              |      |       |           |              | 17-30             | 1.2                                |
|                   |      |           |               |           |              |      |       |           |              | 30-39             | 2.4                                |

**Table A2-102. Lead Concentrations in Different Media Column Layers after Loading (mg/kg)**

Lead in media (mg/kg)

| media depth (in.) | GAC | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | media depth (in.) | Site Sand-GAC-Site Zeolite Layered |
|-------------------|-----|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|-------------------|------------------------------------|
| 0-3               | 6   | 12.2      | 8.2           | 3.4       | 5.6          | 18.2 | 15.6  | 18        | 9.4          | 0-3               | 6.6                                |
| 3-10              | 2.4 | 3.2       | 3.4           | 1.8       | 5.2          | 9.2  | 8.4   | 12.2      | 10.2         | 3-4               | 12.2                               |
| 10-20             | 1.4 | 7.4       | 4             | 1.6       | 7.2          | 22.2 | 4     | 15.8      | 4.6          | 4-7               | 3                                  |
| 20-30+            | 1.2 | 2.4       | 2.8           | 2         | 31.8         | 8.8  | 15.6  | 7.4       | 7.2          | 7-13              | 8                                  |
|                   |     |           |               |           |              |      |       |           |              | 13-17             | 9                                  |
|                   |     |           |               |           |              |      |       |           |              | 17-30             | 8.6                                |
|                   |     |           |               |           |              |      |       |           |              | 30-39             | 0.3                                |

**Table A2-103. Zinc Concentrations in Different Media Column Layers after Loading (mg/kg)**

Zinc in media (mg/kg)

| media depth (in.) | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | media depth (in.) | Site Sand-GAC-Site Zeolite Layered |
|-------------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|-------------------|------------------------------------|
| 0-3               | 62.2 | 43.8      | 33            | 29.4      | 26           | 39.4 | 31.2  | 46.4      | 31.4         | 0-3               | 40                                 |
| 3-10              | 18.8 | 25.2      | 20.8          | 24.6      | 25.6         | 39.2 | 36.6  | 33.8      | 30.4         | 3-4               | 39.4                               |
| 10-20             | 20.8 | 156.6     | 24.6          | 20.2      | 22.2         | 34   | 34.4  | 30        | 20.4         | 4-7               | 33                                 |
| 20-30+            | 18   | 32.6      | 27            | 27.8      | 22           | 33.4 | 41.4  | 28        | 26.6         | 7-13              | 42.2                               |
|                   |      |           |               |           |              |      |       |           |              | 13-17             | 20.4                               |
|                   |      |           |               |           |              |      |       |           |              | 17-30             | 21.8                               |
|                   |      |           |               |           |              |      |       |           |              | 30-39             | 29.2                               |

**Table A2-104. Potassium Concentrations in Different Media Column Layers after Loading (mg/kg)**

Potassium in media (mg/kg)

| media depth (in.) | GAC | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | media depth (in.) | Site Sand-GAC-Site Zeolite Layered |
|-------------------|-----|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|-------------------|------------------------------------|
| 0-3               | 705 | 1028      | 1479          | 637       | 6048         | 3515 | 3362  | 3733      | 2981         | 0-3               | 1062                               |
| 3-10              | 499 | 707       | 1460          | 550       | 4007         | 3248 | 3950  | 4088      | 3987         | 3-4               | 742                                |
| 10-20             | 531 | 792       | 1680          | 635       | 5526         | 3707 | 3568  | 4744      | 3768         | 4-7               | 815                                |
| 20-30+            | 413 | 872       | 1819          | 824       | 9400         | 3986 | 4468  | 3988      | 4456         | 7-13              | 1083                               |
|                   |     |           |               |           |              |      |       |           |              | 13-17             | 9558                               |
|                   |     |           |               |           |              |      |       |           |              | 17-30             | 8656                               |
|                   |     |           |               |           |              |      |       |           |              | 30-39             | 639                                |

**Table A2-105. Sodium Concentrations in Different Media Column Layers after Loading (mg/kg)**

Sodium in media (mg/kg)

| media depth (in.) | GAC   | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ   | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | media depth (in.) | Site Sand-GAC-Site Zeolite Layered |
|-------------------|-------|-----------|---------------|-----------|--------------|-------|-------|-----------|--------------|-------------------|------------------------------------|
| 0-3               | 87    | 83.6      | 339.8         | 83.4      | 826.6        | 465.8 | 585.2 | 589.2     | 629.6        | 0-3               | 90.8                               |
| 3-10              | 127.6 | 93.6      | 308.2         | 75        | 621.8        | 363.4 | 654.6 | 603.8     | 639.8        | 3-4               | 70.8                               |
| 10-20             | 229   | 81        | 339.8         | 61.2      | 811.8        | 405.4 | 454.8 | 646.6     | 534.6        | 4-7               | 76.6                               |
| 20-30+            | 64.4  | 106.8     | 279.8         | 76.6      | 1506.2       | 501   | 710   | 553.4     | 750.2        | 7-13              | 93.4                               |
|                   |       |           |               |           |              |       |       |           |              | 13-17             | 1758.4                             |
|                   |       |           |               |           |              |       |       |           |              | 17-30             | 1745.4                             |
|                   |       |           |               |           |              |       |       |           |              | 30-39             | 196.8                              |

**Table A2-106. Chromium Concentrations in Different Media Column Layers after Loading (mg/kg)**

Chromium in media (mg/kg)

| media depth (in.) | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | media depth (in.) | Site Sand-GAC-Site Zeolite Layered |
|-------------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|-------------------|------------------------------------|
| 0-3               | 22.8 | 27.8      | 12.0          | 7.4       | 8.6          | 15.0 | 16.0  | 21.6      | 9.0          | 0-3               | 14.8                               |
| 3-10              | 10.4 | 7.8       | 6.4           | 20.8      | 9.8          | 11.0 | 10.6  | 7.6       | 5.6          | 3-4               | 20.6                               |
| 10-20             | 4.6  | 6.4       | 4.4           | 3.8       | 5.8          | 7.4  | 5.6   | 5.2       | 3.0          | 4-7               | 10.2                               |
| 20-30+            | 9.0  | 9.0       | 4.6           | 6.0       | 2.4          | 6.4  | 3.6   | 3.0       | 3.2          | 7-13              | 15.6                               |
|                   |      |           |               |           |              |      |       |           |              | 13-17             | 0.8                                |
|                   |      |           |               |           |              |      |       |           |              | 17-30             | 1.0                                |
|                   |      |           |               |           |              |      |       |           |              | 30-39             | 2.6                                |

**Table A2-107. Thallium Concentrations in Different Media Column Layers after Loading (mg/kg)**

Thallium in media (mg/kg)

| media depth (in.) | GAC  | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | media depth (in.) | Site Sand-GAC-Site Zeolite Layered |
|-------------------|------|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|-------------------|------------------------------------|
| 0-3               | 22.8 | 11.6      | 27.2          | 3.4       | 29.8         | 39.4 | 22    | 34.2      | 14.6         | 0-3               | 6.2                                |
| 3-10              | 15.4 | 6.4       | 4             | 1.4       | 4.8          | 7.6  | 3.8   | 0.8       | 5.2          | 3-4               | 7.2                                |
| 10-20             | 5.2  | 3.8       | 0.8           | 0.8       | 0.8          | 0.8  | 0.8   | 0.8       | 0.8          | 4-7               | 4.6                                |
| 20-30+            | 0.8  | 0.8       | 0.8           | 0.8       | 0.8          | 0.8  | 0.8   | 0.8       | 0.8          | 7-13              | 5.8                                |
|                   |      |           |               |           |              |      |       |           |              | 13-17             | 0.8                                |
|                   |      |           |               |           |              |      |       |           |              | 17-30             | 0.8                                |
|                   |      |           |               |           |              |      |       |           |              | 30-39             | 0.8                                |

**Table A2-108. Antimony Concentrations in Different Media Column Layers after Loading (mg/kg)**

Antimony in media (mg/kg)

| media depth (in.) | GAC | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | media depth (in.) | Site Sand-GAC-Site Zeolite Layered |
|-------------------|-----|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|-------------------|------------------------------------|
| 0-3               | 0.8 | 1.2       | 0.3           | 0.3       | 0.3          | 0.3 | 0.6   | 1         | 0.3          | 0-3               | 0.3                                |
| 3-10              | 0.3 | 0.3       | 0.3           | 0.3       | 0.3          | 0.3 | 0.6   | 0.3       | 0.3          | 3-4               | 0.3                                |
| 10-20             | 0.3 | 0.3       | 0.3           | 0.3       | 0.3          | 0.3 | 0.3   | 0.3       | 0.3          | 4-7               | 0.3                                |
| 20-30+            | 0.3 | 0.3       | 0.3           | 0.3       | 0.3          | 0.3 | 0.3   | 0.3       | 0.3          | 7-13              | 0.3                                |
|                   |     |           |               |           |              |     |       |           |              | 13-17             | 0.3                                |
|                   |     |           |               |           |              |     |       |           |              | 17-30             | 0.3                                |
|                   |     |           |               |           |              |     |       |           |              | 30-39             | 0.3                                |

**Table A2-109. pH Values in Different Media Column Layers after Loading**

pH of media layers

| media depth (in.) | GAC | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|-------------------|-----|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|------------------------------------|
| 0-3               | 6.1 | 6.9       | 7.2           | 7.2       | 7.2          | 7.3 | 6     | 6.1       | 7.5          | 7.2                                |
| 3-10              | 5.9 | 6.8       | 7.5           | 7.4       | 7.4          | 7.6 | 6.2   | 6.1       | 7.7          | 7.3                                |
| 10-20             | 5.9 | 6.6       | 7.3           | 7.2       | 7.1          | 7.4 | 6.3   | 6.2       | 7.9          | 7.2                                |
| 20+               | 6   | 5.7       | 7.4           | 7.2       | 7.1          | 7.6 | 6.5   | 6.3       | 7.4          | 5.8                                |

**Table A2-110. Acidity Values in Different Media Column Layers after Loading (meq/100 g)**

Acidity of media layers (meq/100 g)

| media depth (in.) | GAC | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|-------------------|-----|-----------|---------------|-----------|--------------|-----|-------|-----------|--------------|------------------------------------|
| 0-3               | 3.3 | 0         | 0             | 0         | 0            | 0   | 3.9   | 3.9       | 0            | 0                                  |
| 3-10              | 3.3 | 0         | 0             | 0         | 0            | 0   | 2.8   | 3.3       | 0            | 0                                  |
| 10-20             | 3.9 | 4.5       | 0             | 0         | 0            | 0   | 3.9   | 3.3       | 0            | 0                                  |
| 20+               | 2.8 | 5.7       | 0             | 0         | 0            | 0   | 2.2   | 2.8       | 0            | 2.8                                |

**Table A2-111. Cation Exchange Capacity Values in Different Media Column Layers after Loading (meq/100 g)**

Cation Exchange Capacity (CEC) (meq/100 g)

| media depth (in.) | GAC | Peat Moss | Rhyolite Sand | Site Sand | Site Zeolite | SMZ  | R-SMZ | R-SMZ-GAC | R-SMZ-GAC-PM | Site Sand-GAC-Site Zeolite Layered |
|-------------------|-----|-----------|---------------|-----------|--------------|------|-------|-----------|--------------|------------------------------------|
| 0-3               | 6.3 | 11.8      | 4.3           | 1.9       | 4.4          | 10.4 | 12.7  | 15.2      | 7.5          | 2.5                                |
| 3-10              | 5.3 | 9.2       | 3.5           | 1.6       | 3.2          | 10.4 | 13.5  | 14.5      | 7.6          | 2.3                                |
| 10-20             | 5.5 | 13.5      | 3             | 1.9       | 2.7          | 9.7  | 13.4  | 13.1      | 7.7          | 18                                 |
| 20+               | 4.3 | 14.4      | 3.4           | 2         | 2.8          | 9.9  | 11.9  | 13.3      | 9.4          | 5                                  |