

March 2021 (Fifth Assessment) Semi-Annual Sampling Analytical Results  
RPL Whitewater Valley Station  
Richmond, Indiana

| Chemical Name                       | Location ID: | UPGRADIENT |           |           | DOWNGRADIENT |           |           |           |           |           |           |                    |                    |                    |                    |                    |
|-------------------------------------|--------------|------------|-----------|-----------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|
|                                     |              | MW-AS      | MW-FS     | MW-GSR    | MW-BS        | MW-CS     | MW-DS     | MW-ES     | MW-HS     | MW-IS     | MW-JS     | MW-KS <sup>1</sup> | MW-LS <sup>1</sup> | MW-MS <sup>1</sup> | MW-NS <sup>1</sup> | MW-OS <sup>1</sup> |
|                                     | Sample Date: | 3/16/2021  | 3/16/2021 | 3/16/2021 | 3/16/2021    | 3/16/2021 | 3/17/2021 | 3/17/2021 | 3/16/2021 | 3/17/2021 | 3/17/2021 | 3/18/2021          | 3/17/2021          | 3/17/2021          | 3/17/2021          | 3/17/2021          |
| Unit                                |              |            |           |           |              |           |           |           |           |           |           |                    |                    |                    |                    |                    |
| Antimony, Total <sup>2</sup>        | mg/L         | ND         | ND        | ND        | ND           | ND        | ND        | ND        | ND        | ND        | ND        | ND                 | ND                 | ND                 | ND                 | ND                 |
| Arsenic, Total <sup>2</sup>         | mg/L         | 0.0017     | ND        | ND        | ND           | 0.0015    | ND        | 0.0035    | 0.026     | ND        | 0.0016    | 0.0048             | 0.0023             | 0.0025             | 0.0042             | 0.0077             |
| Barium, Total <sup>2</sup>          | mg/L         | 0.0886     | 0.0176    | 0.0099    | 0.0173       | 0.0220    | 0.0206    | 0.0532    | 0.0379    | 0.0315    | 0.073     | 0.0449             | 0.048              | 0.0411             | 0.0552             | 0.090              |
| Beryllium, Total <sup>2</sup>       | mg/L         | ND         | ND        | ND        | ND           | ND        | ND        | ND        | ND        | ND        | ND        | ND                 | ND                 | ND                 | ND                 | ND                 |
| Boron, Total                        | mg/L         | 0.195      | 10.4      | 0.864     | 4            | 2.73      | 5.57      | 7.56      | 1.46      | 3.25      | 0.763     | 8.38               | 4.18               | 2.31               | 1.68               | 3.1                |
| Cadmium, Total <sup>2</sup>         | mg/L         | ND         | ND        | 0.00021   | ND           | ND        | ND        | 0.00025   | 0.00033   | 0.00030   | ND        | ND                 | ND                 | ND                 | ND                 | 0.00021            |
| Calcium, Total                      | mg/L         | 103.0      | 388.0     | 495       | 333          | 261       | 379       | 408       | 427       | 499       | 158       | 356                | 387                | 271                | 286                | 313                |
| Chloride                            | mg/L         | 138        | 80.9      | 43.2      | 188          | 89.6      | 144       | 48.7      | 543       | 801       | 34        | 92.3               | 119                | 88.3               | 53.4               | 112                |
| Chromium, Total <sup>2</sup>        | mg/L         | ND         | ND        | ND        | ND           | ND        | ND        | 0.0045    | ND        | ND        | ND        | 0.0053             | 0.0053             | 0.0046             | 0.005              | 0.0053             |
| Cobalt, Total <sup>2</sup>          | mg/L         | ND         | 0.0014    | 0.0105    | 0.0013       | 0.0015    | ND        | 0.0029    | 0.0040    | 0.0131    | 0.0016    | 0.0025             | 0.0024             | 0.0024             | 0.0034             | 0.0048             |
| Fluoride <sup>2</sup>               | mg/L         | 0.10       | ND        | 0.15      | 0.24         | 0.34      | ND        | 0.12      | 0.38      | 0.24      | 0.12      | 0.18               | ND                 | 0.11               | 0.16               | 0.15               |
| Lead, Total <sup>2</sup>            | mg/L         | ND         | ND        | ND        | ND           | ND        | ND        | 0.0042    | ND        | ND        | ND        | 0.0048             | 0.0035             | 0.0027             | 0.0045             | 0.0069             |
| Lithium, Total <sup>2</sup>         | mg/L         | ND         | 0.249     | 0.0612    | 0.0779       | 0.0603    | 0.0454    | 0.140     | 0.0766    | 0.0428    | 0.0258    | 0.150              | 0.0767             | 0.0444             | 0.0506             | 0.0423             |
| Mercury, Total <sup>2</sup>         | mg/L         | ND         | ND        | ND        | ND           | ND        | ND        | ND        | ND        | ND        | ND        | ND                 | ND                 | ND                 | ND                 | ND                 |
| Molybdenum, Total <sup>2</sup>      | mg/L         | 0.0037     | 0.0514    | ND        | 0.113        | 0.108     | 0.0058    | 0.0116    | 0.0489    | 0.0106    | 0.0109    | 0.0373             | 0.0092             | 0.0054             | 0.0215             | 0.015              |
| pH, Lab                             | s.u.         | 7.4        | 7.3       | 7.1       | 7.5          | 7.4       | 7.6       | 7.0       | 7.4       | 7.3       | 7.1       | 7.1                | 7.1                | 7.1                | 7.3                | 7.1                |
| Radium-226 <sup>2</sup>             | pCi/L        | 0.499      | 0.547     | 0.063     | 0.250        | -0.066    | -0.057    | 0.1       | 0.374     | 0.067     | 0.125     | 0.0543             | -0.1100            | 0                  | 0.489              | 1.590              |
| Radium-228 <sup>2</sup>             | pCi/L        | 0.194      | 1.100     | 0.16      | 0.12         | 0.875     | 0.809     | 0.1       | 1.110     | 0.73      | 0.50      | 0.682              | 0.26               | 0.3190             | 0.305              | 0.631              |
| Total Radium <sup>2</sup>           | pCi/L        | 0.693      | 1.650     | 0.23      | 0.37         | 0.875     | 0.809     | 0.2       | 1.48      | 0.80      | 0.62      | 0.736              | 0.260              | 0.319              | 0.794              | 2.22               |
| Selenium, Total <sup>2</sup>        | mg/L         | ND         | ND        | ND        | ND           | 0.0057    | ND        | ND        | 0.0049    | ND        | 0.0084    | ND                 | ND                 | 0.0012             | 0.0041             | 0.0033             |
| Sulfate                             | mg/L         | 82.6       | 1140      | 1780      | 1140         | 738       | 1000      | 1010      | 1200      | 1670      | 100       | 926                | 969                | 652                | 512                | 739                |
| Thallium, Total <sup>2</sup>        | mg/L         | ND         | ND        | ND        | ND           | ND        | ND        | ND        | ND        | ND        | ND        | ND                 | ND                 | ND                 | ND                 | ND                 |
| Total Dissolved Solids, Lab         | mg/L         | 624        | 1940      | 2910      | 2150         | 1550      | 2050      | 1870      | 2950      | 3780      | 498       | 1840               | 2020               | 1330               | 1120               | 1500               |
| <b>Field Parameters<sup>3</sup></b> |              |            |           |           |              |           |           |           |           |           |           |                    |                    |                    |                    |                    |
| Temperature                         | °C           | 12.53      | 12.89     | 12.64     | 11.94        | 9.77      | 11.16     | 11.5      | 11.22     | 12.44     | 10.81     | 9.48               | 8.54               | 7.97               | 8.24               | 10.5               |
| Conductivity                        | mS/cm        | 1.15       | 2.38      | 3.19      | 2.78         | 2.05      | 2.58      | 2.32      | 4.05      | 4.97      | 1.28      | 2.28               | 2.64               | 1.94               | 1.57               | 2.04               |
| pH                                  | s.u.         | 7.11       | 6.95      | 6.75      | 7.22         | 7.16      | 7.18      | 6.86      | 2.59      | 7.13      | 7.08      | 7.00               | 7.12               | 7.17               | 7.22               | 7.02               |
| Turbidity                           | NTU          | 3.36       | 1.50      | 1.26      | 1.51         | 1.06      | 2.02      | 242       | 0.46      | 26.6      | 32.6      | 187                | 199                | 187                | 118                | 461                |
| Total Dissolved Solids              | g/L          | 0.732      | 1.52      | 2.04      | 1.78         | 1.32      | 1.66      | 1.49      | 2.59      | 3.18      | 0.821     | 1.46               | 1.7                | 1.24               | 1.01               | 1.31               |
| Dissolved Oxygen                    | mg/L         | 1.50       | 0.40      | 0.53      | 0.09         | 7.38      | 9.12      | 4.22      | 9.26      | 2.99      | 2.8       | 6.61               | 7.01               | 5.61               | 5.21               | 4.50               |
| Oxygen-Reduction Potential          | mV           | -11        | 81        | 122       | 24           | 76        | 52        | 170       | 6         | 167       | 156       | 179                | 126                | 133                | 136                | 158                |

Notes:

- 1 MW-KS, MW-LS, MW-MS, MW-NS, and MW-OS were installed in July 2020.
- 2 Shading of the chemical name indicates that the parameter is included in "Appendix IV to Part 257-Consituents for Assessment Monitoring" of the CCR Rule.
- 3 Field measurements recorded when the readings stabilized during purging.

mg/L - milligrams per liter  
CaCO<sub>3</sub> - calcium carbonate  
s.u. - Standard Units  
pCi/L - Picocuries per liter  
°C - degrees Celsius  
NTU - Nephelometric Turbidity Unit  
g/L - grams per liter  
mV - millivolts  
NT - Analysis was not performed

