

March 2024 (Eleventh Assessment) Semi-Annual Sampling Analytical Results
RPL Whitewater Valley Station
Richmond, Indiana

| Chemical Name | Location ID: | UPGRADIENT | | | | DOWNGRADIENT | | | | | | | | | | | | |
|--|--------------|------------|-----------|-----------|-----------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|-----------|
| | | MW-AS | MW-FS | MW-FS DUP | MW-GSR | MW-BS | MW-CS | MW-DS | MW-ES | MW-HS | MW-IS | MW-JS | MW-KS ¹ | MW-LS ¹ | MW-MS ¹ | MW-NS ¹ | MW-OS ¹ | |
| | Sample Date: | 3/13/2024 | 3/13/2024 | 3/13/2024 | 3/13/2024 | 3/12/2024 | 3/12/2024 | 3/12/2024 | 3/12/2024 | 3/13/2024 | 3/13/2024 | 3/13/2024 | 3/12/2024 | 3/12/2024 | 3/12/2024 | 3/12/2024 | 3/12/2024 | 3/13/2024 |
| Unit | | | | | | | | | | | | | | | | | | |
| Antimony, Total ² | mg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Arsenic, Total ² | mg/L | 0.0011 | ND | ND | ND | ND | 0.0014 | ND | 0.0039 | 0.0046 | 0.0023 | 0.0010 | 0.0049 | 0.0040 | 0.0026 | 0.0011 | 0.0019 | |
| Barium, Total ² | mg/L | 0.0976 | 0.0217 | 0.0210 | 0.0111 | 0.0180 | 0.0222 | 0.0212 | 0.0656 | 0.0384 | 0.0207 | 0.0724 | 0.0359 | 0.0457 | 0.0379 | 0.0352 | 0.0478 | |
| Beryllium, Total ² | mg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| Boron, Total | mg/L | 0.201 | 9.65 | 9.65 | 1.62 | 5.09 | 3.31 | 5.30 | 7.86 | 1.41 | 2.3 | 0.456 | 6.73 | 3.68 | 2.43 | 2.07 | 2.98 | |
| Cadmium, Total ² | mg/L | ND | ND | ND | ND | ND | ND | ND | 0.00023 | 0.00049 | ND | ND | ND | ND | ND | ND | ND | |
| Calcium, Total | mg/L | 103 | 422 | 428 | 515 | 330 | 276 | 392 | 441 | 278 | 379 | 109 | 328 | 337 | 314 | 221 | 293 | |
| Chloride | mg/L | 164 | 41.1 | 41.5 | 58.5 | 199 | 68.8 | 187 | 70.2 | 359 | 656 | 33.9 | 63.5 | 117 | 113 | 54.5 | 118 | |
| Chromium, Total ² | mg/L | ND | ND | ND | ND | ND | ND | ND | 0.0048 | ND | ND | ND | 0.0049 | 0.0064 | 0.0026 | ND | ND | |
| Cobalt, Total ² | mg/L | ND | 0.0018 | 0.0016 | 0.0116 | 0.0012 | ND | ND | 0.0029 | 0.0036 | 0.0082 | 0.0021 | 0.0023 | 0.0035 | 0.0029 | 0.0011 | 0.0013 | |
| Fluoride ² | mg/L | 0.12 | ND | ND | ND | 0.27 | 0.25 | 0.11 | 0.14 | 0.46 | 0.64 | ND | 0.20 | 0.110 | 0.12 | 0.19 | 0.19 | |
| Lead, Total ² | mg/L | ND | ND | ND | ND | ND | ND | ND | 0.0043 | ND | ND | ND | 0.0045 | 0.0050 | 0.0023 | 0.0010 | 0.0014 | |
| Lithium, Total ² | mg/L | ND | 0.244 | 0.245 | 0.166 | 0.0753 | 0.0717 | 0.0570 | 0.134 | 0.0533 | 0.0277 | ND | 0.128 | 0.0795 | 0.0555 | 0.0461 | 0.0361 | |
| Mercury, Total ² | mg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| Molybdenum, Total ² | mg/L | 0.0038 | 0.0557 | 0.0550 | ND | 0.110 | 0.0605 | 0.0073 | 0.0131 | 0.0442 | 0.0191 | 0.0074 | 0.0402 | 0.0150 | 0.0057 | 0.0189 | 0.0141 | |
| pH, Lab | s.u. | 7.3 | 7.2 | 7.3 | 7.0 | 7.1 | 7.1 | 7.0 | 7.0 | 6.7 | 7.3 | 7.8 | 8.0 | 6.8 | 7.8 | 7.2 | 7.0 | |
| Radium-226 ² | pCi/L | 0.645 | 0.285 | 0.831 | 0.577 | 0.296 | -0.137 | 0.635 | -0.144 | -0.0750 | 0.528 | 0.0592 | 0.236 | 0.863 | -0.315 | 0.0664 | 0.645 | |
| Radium-228 ² | pCi/L | 0.228 | 0.626 | 0.390 | 0.874 | 0.190 | 0.324 | 0.278 | 0.551 | 0.309 | 0.270 | 0.688 | 0.629 | 0.450 | 0.801 | 0.381 | 0.257 | |
| Total Radium ² | pCi/L | 0.873 | 0.911 | 1.22 | 1.45 | 0.486 | 0.324 | 0.913 | 0.551 | 0.309 | 0.798 | 0.747 | 0.865 | 1.31 | 0.801 | 0.447 | 0.902 | |
| Selenium, Total ² | mg/L | ND | ND | ND | ND | ND | 0.0098 | 0.0010 | 0.0016 | 0.0091 | ND | 0.0079 | 0.0013 | 0.0019 | 0.0014 | 0.0056 | 0.0075 | |
| Sulfate | mg/L | 68.3 | 1060 | 1040 | 1770 | 996 | 609 | 926 | 1040 | 687 | 1070 | 85.7 | 707 | 721 | 580 | 498 | 654 | |
| Thallium, Total ² | mg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| Total Dissolved Solids, Lab ³ | mg/L | NT | NT | NT | ND | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | |
| Field Parameters⁴ | | | | | | | | | | | | | | | | | | |
| Temperature | °C | 16.36 | 16.57 | 16.57 | 16.49 | 13.82 | 14.80 | 14.68 | 13.34 | 13.04 | 12.60 | 10.53 | 12.32 | 12.75 | 14.08 | 14.32 | 15.41 | |
| Conductivity | mS/cm | 1.16 | 2.21 | 2.21 | 3.40 | 2.63 | 1.77 | 2.58 | 2.43 | 2.91 | 3.86 | 1.60 | 1.70 | 1.85 | 1.90 | 1.28 | 0.851 | |
| pH | s.u. | 7.16 | 6.80 | 6.80 | 6.46 | 6.98 | 7.11 | 6.85 | 5.60 | 6.60 | 6.59 | 7.19 | 6.37 | 6.42 | 6.65 | 6.91 | 6.93 | |
| Turbidity | NTU | 0.80 | 0.99 | 0.99 | 0.75 | 0.77 | 118 | 0.40 | 38.1 | 0.40 | 18.1 | 15.9 | 181 | 134 | 168 | 381 | 210 | |
| Total Dissolved Solids | g/L | 0.778 | 1.48 | 1.48 | 2.28 | 1.76 | 1.19 | 1.73 | 1.62 | 1.95 | 2.59 | 1.07 | NT | 1.24 | 1.27 | 0.86 | 0.57 | |
| Dissolved Oxygen | mg/L | 11.00 | 7.67 | 7.67 | 13.28 | 12.72 | 10.4 | 13.92 | 8.11 | 12.60 | 11.71 | 13.01 | 10.45 | 1.42 | 9.90 | 20.68 | 17.24 | |
| Oxygen-Reduction Potential | mV | -27 | 88 | 88 | 156 | 31 | 182 | 25 | 2.14 | 39 | 151 | 137 | 187 | 182 | 183 | 132 | 113 | |

Notes:

- MW-KS, MW-LS, MW-MS, MW-NS, and MW-OS were installed in July 2020.
- 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.
- Due to a lab error with the bottlesets, Total Dissolved Solids, Lab was unable to be analyzed.
- Field measurements recorded when the readings stabilized during purging.

mg/L - milligrams per liter
CaCO₃ - 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