

September 2024 (Twelfth 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 <sup>1</sup>	MW-HS	MW-IS	MW-JS	MW-KS <sup>1,2</sup>	MW-LS <sup>2</sup>	MW-MS <sup>2</sup>	MW-NS <sup>2,3</sup>	MW-OS <sup>2</sup>
	Sample Date:	9/18/2024	9/18/2024	9/18/2024	9/18/2024	9/17/2024	9/17/2024	9/18/2024	9/18/2024	9/17/2024	9/18/2024	9/18/2024	9/17/2024	9/17/2024	9/17/2024	9/18/2024	9/18/2024
Unit																	
Antimony, Total <sup>4</sup>	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	ND
Arsenic, Total <sup>4</sup>	mg/L	ND	ND	ND	ND	ND	0.0018	0.0014	0.0101	0.0075	ND	0.0045	0.0092	ND	0.0020	NT	0.0183
Barium, Total <sup>4</sup>	mg/L	0.117	0.0176	0.0181	0.0146	0.0182	0.0256	0.0289	0.0690	0.0508	0.0181	0.118	0.0736	0.0285	0.0377	NT	0.134
Beryllium, Total <sup>4</sup>	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00020	ND	ND	NT	0.00036
Boron, Total	mg/L	0.193	11.1	11.2	2.03	4.49	3.24	5.81	5.67	1.62	1.88	1.64	9.94	4.99	2.97	NT	2.47
Cadmium, Total <sup>4</sup>	mg/L	ND	ND	ND	0.00024	ND	ND	ND	ND	0.00037	ND	0.00026	0.00026	ND	ND	NT	0.00030
Calcium, Total	mg/L	113	375	362	607	305	278	411	395	261	288	240	480	370	304	NT	287
Chloride	mg/L	205	35.9	36.3	47.6	162	78.7	167	NT	243	500	367	NT	138	103	NT	89.0
Chromium, Total <sup>4</sup>	mg/L	ND	ND	ND	ND	ND	ND	ND	0.0119	ND	ND	0.0031	0.0084	ND	0.0027	NT	0.0101
Cobalt, Total <sup>4</sup>	mg/L	ND	0.0012	0.0014	0.0179	0.0011	0.0011	ND	0.0067	0.0024	0.0099	0.006	0.0048	0.0010	0.0032	NT	0.0095
Fluoride <sup>4</sup>	mg/L	0.18	ND	ND	0.13	0.12	0.19	ND	NT	0.29	0.32	0.23	NT	ND	ND	NT	ND
Lead, Total <sup>4</sup>	mg/L	ND	ND	ND	ND	ND	ND	ND	0.0094	ND	ND	0.0019	0.0083	ND	0.0016	NT	0.0116
Lithium, Total <sup>4</sup>	mg/L	ND	0.213	0.214	0.175	0.0722	0.0678	0.0561	0.113	0.0541	0.0268	0.0403	0.228	0.0717	0.0475	NT	0.0312
Mercury, Total <sup>4</sup>	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	ND
Molybdenum, Total <sup>4</sup>	mg/L	0.0045	0.0624	0.0598	ND	0.114	0.0656	0.0096	0.0228	0.0489	0.0130	0.0469	0.0434	0.0101	0.0053	NT	0.0158
pH, Lab	s.u.	7.3	7.3	7.3	6.7	7.6	7.4	7.2	NT	7.0	7.4	7.1	NT	7.4	7.3	NT	7.1
Radium-226 <sup>4</sup>	pCi/L	0.270	-0.0669	0.461	-0.346	0.580	0.000	0.195	NT	0.8230	-0.397	0.449	NT	0.479	-0.0688	NT	0.820
Radium-228 <sup>4</sup>	pCi/L	0.245	0.545	0.587	0.386	0.459	0.761	0.972	NT	0.486	0.617	0.705	NT	0.304	0.820	NT	0.0767
Total Radium <sup>4</sup>	pCi/L	0.515	0.545	1.05	0.386	1.04	0.761	1.17	NT	1.31	0.617	1.15	NT	0.783	0.820	NT	0.897
Selenium, Total <sup>4</sup>	mg/L	ND	ND	ND	ND	ND	0.0052	ND	ND	0.0038	ND	0.0016	0.0022	ND	ND	NT	0.0036
Sulfate	mg/L	87.5	989	927	2190	932	740	962	NT	611	802	706	NT	882	599	NT	548
Thallium, Total <sup>4</sup>	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	ND
Total Dissolved Solids, Lab	mg/L	680	1640	1690	3750	1890	1520	2090	NT	1590	2220	1980	NT	1850	1400	NT	1280
<b>Field Parameters<sup>5</sup></b>																	
Temperature	°C	16.47	17.57	17.57	18.89	16.38	17.75	18.01	17.41	17.53	21.69	20.58	16.75	18.44	17.03	NT	17.55
Conductivity	mS/cm	1.38	2.20	2.20	4.03	2.51	2.13	2.82	2.23	2.49	3.27	3.00	2.92	2.44	2.08	NT	1.76
pH	s.u.	7.13	6.94	6.94	6.42	7.34	7.10	6.84	6.70	6.72	7.20	7.13	6.95	6.94	6.97	NT	6.96
Turbidity	NTU	12.4	2.42	2.42	2.43	0.77	3.96	2.52	80.2	0.58	4.2	25.1	57.3	23.2	47.3	NT	237
Total Dissolved Solids	g/L	0.885	1.41	1.41	2.58	0.00	1.36	1.80	1.43	NT	2.09	1.92	1.87	1.56	1.33	NT	1.13
Dissolved Oxygen	mg/L	0.36	15.19	15.19	0.96	0.37	1.83	1.36	6.71	0.51	10.62	136	6.65	5.29	3.50	NT	17.78
Oxygen-Reduction Potential	mV	-49	157	157	NT	53	159	-75	215	43	-18	195	190	140	79	NT	125

Notes:

- 1 Due to insufficient water in the wells after purging, a partial bottle set was collected, and therefore, some constituents were unable to be analyzed.
- 2 MW-KS, MW-LS, MW-MS, MW-NS, and MW-OS were installed in July 2020.
- 3 MW-NS was not sampled due to slow well recharge.
- 4 Shading of the chemical name indicates that the parameter is included in "Appendix IV to Part 257-Constituents for Assessment Monitoring" of the CCR Rule.
- 5 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