



Fact Sheet – Radionuclide Monitoring

(Ver 1.0, December 2020)

Introduction:

Radionuclide maximum contaminant levels (MCLs) have been set to protect public health. The MCLs offer protection from the toxic kidney effects of uranium and reduce cancer risk. New Jersey has made several discretionary changes to the Federal regulations including:

- The 48-hour Rapid Gross Alpha test must be used;
- All analytes must be sampled at the same frequency; and
- Beginning in 2019, non-transient noncommunity water systems must begin monitoring

General Requirements:

- Samples are collected at each point of entry (POE) to the distribution system
- For systems sampling quarterly, compliance with the MCL is based on a Running Annual Average (RAA)
- For systems sampling less often than quarterly, the results will determine the future monitoring frequency
- Required analytes:
 - Gross alpha
 - Radium 228
 - Radium 226
 - Uranium
- Substitutions are allowed for Radium 226 and uranium (see below for details)

Maximum Contaminant Levels (MCLs) & Regulatory Detection Levels (RDLs)

	MCL	RDL
Adjusted Gross Alpha (excluding radon & uranium)	15 pCi/L	3 pCi/L
Combined Radium (the sum of Ra226 + Ra228)	5 pCi/L	--
Radium 226		1 pCi/L
Radium 228		1 pCi/L
Uranium	30 µg/L	1 µg/L

Substitutions

If your Gross Alpha value is:	<RDL	≥RDL & <5	≥5 & ≤15	>15
Radium 226 substituted value	1.5 pCi/l	Entire gross alpha result	Must analyze	Must analyze
Uranium substituted value	1.5 pCi/L (2.24 µg/l)	Entire gross alpha result	Entire gross alpha result	Must analyze

Monitoring Requirements:

Initial: Four consecutive quarters of monitoring at each POE (Future monitoring based on the RAA)

Reduced:

RAA for each contaminant	Monitoring frequency
< RDL	One sample every 9 yrs
≥ to the RDL, but ≤ to 1/2 the MCL	One sample every 6 yrs
> 1/2 the MCL, but ≤ to the MCL	One sample every 3 yrs

Increased:

Future monitoring frequency is based on a system's previous set of sample results. A system with any individual analyte result above the MCL, must monitor quarterly until all analytes are below the MCL for 4 consecutive quarters.

Additional Resources:

EPA: <https://www.epa.gov/dwreginfo/radionuclides-rule>

For further assistance, please contact the Bureau of Safe Drinking Water at 609-292-5550 or watersupply@dep.nj.gov