
SAFE DRINKING WATER ACT AMENDMENTS

25 PA CODE CHAPTER 109

RADIONUCLIDES RULE

COMMENT AND RESPONSE DOCUMENT

List of Commentators

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COMMENTS AND RESPONSES

Monitoring

1. PADEP has left out the sentence stating that when a community water supply (CWS) substitutes gross alpha for radium-226 or uranium, the gross alpha result will be used to determine the future monitoring frequency for radium-226 or uranium. This omission could leave a reader unclear about how to determine when next to sample for radium-226 or uranium. (1) (2)

Response: The proposed regulation has been reviewed by regional Department staff, the Water Resources Advisory Committee, and the Small Drinking Water Systems Technical Assistance Center Board. None of the reviewers expressed any uncertainty concerning future sampling frequency based on the exclusion of this sentence. The proposed regulation was published for public comment, with no concerns received from the public expressing uncertainty about this language. When the alpha result is substituted for the radium-226 or uranium analysis, the substituted value becomes the result for that parameter. The radium-226 or uranium value (even if it is the same as the alpha result) is the result that will be used to determine the date of the next sample. Since no other similar concerns were raised, the change has not been made.

2. Clause D uses the phrases “historical monitoring data,” “monitoring data,” “appropriate historical monitoring data,” and “appropriate historical data.” Do these terms have the same meaning? If so, we recommend that one term be used consistently. (2)

Response: These phrases were taken directly from EPA’s regulation; however, the language has been changed in the final rulemaking to the use of one term, “appropriate historical data.”

3. Subclause (D)(III) states: “...the historical data satisfactorily demonstrate that each entry point is expected to be in compliance based upon the historical data and reasonable assumptions about the variability...”

We have two concerns. First, what happens if the entry point is tested and the results do not comply with the requirements? What are the consequences for the community water system? (2)

Response: Subclause (D)(III) does not apply where entry points are tested. It applies where entry points are NOT tested, and the system has only distribution system samples. The system would have to make “reasonable assumptions about the variability of the radionuclide levels between entry points,” and supply data that support these “reasonable assumptions.” If the system cannot supply data to support these “reasonable assumptions” or if the Department determines that the assumptions are not reasonable, the data will not be considered to be valid for the purposes of grandfathering, and the system must then take the required initial monitoring samples.

Second, the phrase “reasonable assumptions” is vague. What sort of assumptions would be considered reasonable? (2)

Response: The language was taken directly from EPA’s regulation. In order to make a “reasonable assumption about the variability of radionuclides between entry points,” a system must be able to show that all of the water in the distribution system comes from the same source (i.e. aquifer, river, or lake). If the water is not from the same source, there can be no connection in the variabilities of the radionuclides levels between the entry points. In addition, the system must be able to show that, for any combination of flows between the entry points, there is no possibility that ANY of the entry points will exceed the MCL.

4. Clause (A) states: “Systems designated by the Department as vulnerable to beta-particle or photon radioactivity or both shall sample for beta particle or photon radioactivity.”

We have two concerns. First, how will the Department determine if a community water system is vulnerable? (2)

Response: As noted in Section E of the preamble, the Department is proposing to use a watershed-based approach to determining vulnerability. Systems lying in the same watershed as a nuclear facility will be considered to be vulnerable to contamination.

Second, please explain what a watershed-based approach is and how it would be implemented. Is this approach more or less stringent than the federal requirements? (2)

Response: Systems lying in the same watershed as a nuclear facility will be considered to be vulnerable to contamination. The EPA has given the states the discretion to determine which systems are vulnerable. There are no federal requirements for this determination, only guidelines and recommendations. EPA recommends the use of a 15-mile radius around nuclear facilities as the designation for vulnerability. The Department used this recommendation as a starting point, and has compiled a list of all systems within 15 miles of each nuclear facility. The watershed approach proposed by the Department will encompass a smaller geographic area around a nuclear facility, unless geologic conditions require that a larger area be designated for vulnerability. This approach is considered to be more realistic than a 15-mile radius for conditions except for a release of radionuclides to the atmosphere. In the event of an atmospheric release from a nuclear facility, the Department may require all systems within a 15-mile radius to conduct monitoring for beta particle and photon radioactivity, as recommended by EPA.

5. Subclause (A)(II) states, “For systems in the vicinity of a nuclear facility, the system may utilize environmental surveillance data collected by the nuclear facility in lieu of monitoring at the system’s entry points...”

We have three concerns. First, what criteria will the Department use to determine if a community water system is in the vicinity of a nuclear facility? (2)

Response: The language was taken directly from EPA’s regulation. The only place in the regulation where the term “vicinity of a nuclear facility” is used is in the utilization of environmental surveillance data. Therefore, if the environmental surveillance data is applicable to the system, it will be considered to be in the “vicinity of a nuclear facility.” If the environmental surveillance data are not applicable to the system, it is not considered to be in the “vicinity.”

Second, the proposed regulation does not contain a definition of a nuclear facility. However, the term is defined in the Preamble. What is the Department’s rationale for not including the definition of nuclear facility in the regulation? (2)

Response: EPA does not include a definition of nuclear facility in its regulation. The definition is included in the guidance documents. The Department believes that it is in the best interest of the Commonwealth to define a term in the same manner that EPA does. If the Department put the definition in the regulation, any change that EPA may make to the definition in their guidance may cause the Department’s regulation to be more stringent than the federal requirements. Therefore, where EPA defines a term in guidance, the Department will also define the term in guidance.

Third, the term “environmental surveillance data” needs to be clarified. It is our understanding that the U. S. Nuclear Regulatory Commission (NRC) requires routine monitoring of release points of power plants. If these NRC requirements are contained in federal regulations, this subclause should contain a specific reference to those federal rules. (2)

Response: The term “environmental surveillance data” is not defined in the federal regulation. Nuclear facilities may be required to take environmental surveillance samples to document any impacts of the facility on the environment in general, but not specifically on drinking water sources. Environmental surveillance data typically include surface water samples downstream of the facility, air samples, milk samples, and sediment samples. Several of the nuclear facilities in Pennsylvania (Susquehanna, Three Mile Island, and Limerick) also collect samples at nearby water treatment plants. The water system will have access to this data. The Department plans on using surface water samples downstream of the nuclear facility or samples collected at the water treatment plants as the environmental surveillance data under this section. Systems using environmental surveillance data will receive training from the Department on the scope of appropriate data to be collected under this section.

Clause (B) states, “Systems designated by the Department as utilizing waters contaminated by effluents from nuclear facilities shall sample...” How will the Department notify a system that it is designated as using waters contaminated by a nuclear facility?

Response: The Department is not currently considering any facilities to be “utilizing waters contaminated by effluents by nuclear facilities,” because there is insufficient evidence to make such a determination. This determination will probably be made on a case-by-case basis as information becomes available. Although a final determination has not been made

pertaining to the method of notification, it is likely that the water system will be notified directly and individually.

6. Clause (A) states, “The Department may require more frequent monitoring than specified...”

We have two concerns. First, when would the Department require more frequent monitoring? (2)

Response: This language is required for the Department’s regulation to be as stringent as the federal regulation. More frequent monitoring may be required where analytical results are near the MCL. More frequent monitoring may also be required where analytical results show levels well above or below the historical monitoring results.

Second, monitoring refers to all of the responsibilities of a community water system. Sampling is a specific action. This provision would be clearer if it stated, “The Department may require more frequent *sampling*...” (2)

Response: The Department agrees and has made the change.

7. Clause (B) states the following: “Each system shall monitor at the time designated by the Department during each compliance period.” How will a system be notified of the time designated by the Department? (2)

Response: The monitoring schedule will be established prior to the commencement of the compliance period and shared with the system in writing to allow each community water system to know when it will be required to monitor. Advanced notice will aid the system in planning accordingly, as well as avoid overloading the laboratories with samples.

Compliance Dates

8. EPA does not see any provisions consistent with 40 C.F.R. § 141.66(f), which lists compliance dates. (1) (2)

Response: 40 CFR 141.66(f) states: “Community water systems must comply with the MCLs listed in paragraphs (b), (c), (d), and (e) of this section beginning December 8, 2003 ... Compliance with the reporting requirements ... is required on December 8, 2003.” Section 109.202(a)(2) incorporates the MCLs by reference, and Sections 109.407(b) and 109.411(d) incorporate the public notification requirements by reference. None of these section were amended by this rulemaking.

Best Available Technology

9. EPA did not find any provisions in the new regulations consistent with 40 C.F.R. §141.66(g), which lists best available technologies (BAT). (1) (2)

Response: Pennsylvania does not list BAT for any contaminant in the regulations. Treatment technologies that are used to comply with the MCLs are addressed in the Department’s permitting program, which EPA’s regulations do not reflect. BAT technologies are used only for the purposes of granting variances and exemptions. §109.901(a)(1), which applies to the granting of variances, requires the public water system to have installed and to be currently using the best treatment technology that the Department in concurrence with the Administrator finds are generally available to reduce the level of the contaminant.

Sampling Requirements

10. Subsection (j) states: “Performance samples required under §109.301(14)(i)(B)(V) (relating to general monitoring requirements) shall be taken immediately following treatment for the radionuclide, or at another location approved by the Department.”

We have two concerns. First, the use of the phrase “immediately following treatment” is unclear. It is our understanding that the phrase related to a location or place where sampling may occur. That location is downstream from the radionuclide treatment area. The final-form regulation should be revised to indicate that the phrase “immediately following” refers to a place and not a time. (2)

Second, if a system opts to use another location, how would they apply for approval of the Department? (2)

Response: Subsection (j) has been deleted in the final regulation because the Department believes that this issue will be best addressed in the permitting process, rather than through regulations.

ONE PAGE SUMMARIES

The following is a summary of the comments submitted by the U.S. Environmental Protection Agency (EPA) in response to the Board's request for comments on the Proposed amendments to Chapter 109, Safe Drinking Water as published in the Pennsylvania Bulletin (vol.33, No.10, page 1239) on March 7, 2003. These amendments consist of new and modified requirements for the regulation of radionuclides.

EPA appreciates the opportunity to comment on these proposed regulations. The Drinking Water Branch and Office of Regional Counsel of EPA, Region III reviewed the proposed rule in comparison to the Federal regulations to insure that the rules to be adopted by Pennsylvania are no less stringent than the Federal regulations in order for the PA Department of Environmental Protection (PADEP) to maintain Primacy for the drinking water program. EPA recognizes the importance of PADEP maintaining primacy for these regulations.

- In Section 109.301(14)(i)(C), PADEP has restated the federal regulation, but has left out the sentence stating that when a community water supply (CWS) substitutes gross alpha for radium-226 or uranium, the gross alpha result will be used to determine the future monitoring frequency for radium-226 or uranium. This omission could leave a reader unclear about how to determine when next to sample for radium-226 or uranium. EPA recommends that the omitted sentence be returned to the paragraph.
- EPA does not see any provisions consistent with 40 C.F.R. § 141.66(f), which lists compliance dates. Information supplied by PADEP in their “Crosswalk”, which compares the Federal Radionuclides rule with the PADEP regulation, states that this C.F.R. section is incorporated into the PADEP regulation by reference. EPA cannot find such a reference. The PADEP regulations under consideration specifically concern themselves with monitoring requirements (§109.301) and sampling requirements (§109.303). However, since 40 C.F.R. § 141.66(f) contains neither monitoring requirements nor sampling requirements, this section does not appear to be included in the PADEP regulations. It is strongly recommended that PADEP revise the regulations to include these requirements.

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