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Rulemaking Comments

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From: Roger Seitz [rogerseitz5@msn.com]
Sent: Friday, June 17, 2011 8:23 PM
To: Rulemaking Comments
Subject: Comments for consideration on Docket ID NRC-2011-0012
Attachments: Comments.pdf

Dear Sir/Madame,

Please find attached comments to be considered for the Part 61 preliminary proposed rule language (Docket ID NRC-2011-0012). Thank you for the opportunity to review and provide comments on your preliminary documentation.

Sincerely,

Roger Seitz
Aiken, SC

TEMPLATE = SECY-067 **DS 10**

COMMENTS ON 10 CFR PART 61 PRELIMINARY PROPOSED RULE LANGUAGE

DOCKET ID - NRC-2011-0012

Roger Seitz – Aiken, SC

June 17, 2011

I appreciate the opportunity to provide comments on the 10 CFR Part 61 preliminary proposed rule language. At this early stage in the process, I want to provide two higher-level recommendations for your consideration during development of the proposed rule. My suggestions are influenced by a combination of technical and public policy making considerations, including:

(1) maintaining perspective for decision making considering the increasingly speculative assumptions about human behavior and changes in the near-surface, natural environment associated with time frames of thousands of years,

(2) maintaining perspective for decision making considering the relatively small, localized impacts associated with a LLW disposal facility compared to overwhelming global, catastrophic natural events that will displace or impact many millions of people that are expected to occur over time frames of thousands of years (e.g., an ice age), and

(3) the importance of acknowledging precedents established in existing regulations and public policy that address near surface disposal of LLW and waste streams, which have been promulgated with technical and policy-related considerations in mind.

With these things in mind, I have two specific suggestions:

1. **Period of Performance**. I recommend that the NRC adopt a two step approach for period of performance in the update to 10 CFR Part 61 with the first step being a period of performance for compliance of 1,000 years. A second period should consider longer-term calculations beyond 1,000 years for sensitivity and uncertainty analysis in a less absolute and more qualitative context (not specific to compliance) to aid with decision-making regarding design and implementation of disposal for waste streams where the hazards associated with the waste may increase by orders of magnitude over the time frame after 1,000 years (e.g., depleted Uranium). I also recommend that the NRC further expand their discussion of precedents to summarize the period of performance that has been assumed for wastes historically disposed and currently being disposed at all existing commercial LLW disposal facilities as well as periods of performance promulgated for other near surface disposal facilities that are used for disposal of uranium-related wastes.

   Rationale. This approach for period of performance acknowledges the precedents for near-surface disposal facilities and the short-lived nature of most LLW, but also acknowledges the need to conduct longer-term calculations to support disposal decision making for unique waste streams like depleted Uranium which pose significantly increasing hazards over time frames beyond 1,000 years. However, the approach also enables the time frames after 1,000 years to be addressed from a less absolute perspective consistent with the increasingly speculative nature of assumptions on which calculations for those times are based as well as the perspective regarding the relative impacts of other global, catastrophic events expected to occur over thousands of years.

The period of performance for compliance of 1,000 years is consistent with precedents set in other promulgated rules and policies that address near-surface disposal and remediation of sites involving radioactive materials and/or waste. For example, the NRC in 10 CFR Part 20 (which includes provisions for disposal of radioactive material/waste, Paragraph 20.2002) and DOE in DOE Order 435.1 (DOE's directive that addresses disposal of LLW) both use a 1,000 year time of compliance. Likewise, the State of Idaho has also established a 1,000 year period of performance for the Grand View waste disposal facility, which is used for evaluations for disposal (at that facility) of depleted Uranium and other radioactive materials generated at NRC licensed facilities. The NRC has also specified a time frame of 1,000 years for near-surface disposal of by-product materials (10 CFR Part 40, Appendix A, criterion 6). Multiple time frames also have been and are being applied at commercial LLW disposal facilities that should be included in any discussion of precedents.

I also believe that the rule should emphasize the importance of conducting calculations beyond 1,000 years in order to provide an indication of the relative magnitude of potential longer term risks for wastes that pose significantly increasing hazards beyond that time. However, I believe that calculations based on such speculative assumptions and recognizing the major global consequences that are expected to occur should not be used in a compliance context, but should be used for information to support decision making regarding design and implementation of disposal actions. Such calculations can play a role for design and implementation of disposal for wastes such as depleted Uranium, which pose hazards that can increase by orders of magnitude over times longer than 1,000 years. However, for the vast majority of LLW, it is not likely to see such significant increases in potential peak hazards over time frames greater than 1,000 years.

2. **Performance Objective.** I suggest some modifications to the proposed text for 61.41 (a): "... must not result in an annual dose exceeding an equivalent of 25 millirems total effective dose equivalent, excluding radon, to a representative person." Consistent with other rules involving radon exposures, I suggest that radon should be addressed using an additional performance objective specific to radon flux from the surface of the facility similar to what has been promulgated in existing rules (e.g., 10 CFR Part 40, Appendix A, criterion 6).

   Rationale. The modification reflects two significant changes. One is a change from "any member of the public" to "a representative person". The ICRP is using the term "representative person" to reflect the receptor that is considered in a dose assessment. I suggest that the ICRP recommendation be considered for use in the language used for the performance objective, because the ICRP provides a framework to help with interpretation of what is meant by a representative person rather than leaving the term any member of the public open for interpretation. Furthermore, it is difficult to define what is meant by any member of the public when considering time frames of thousands of years.

   The second change is to add "excluding radon" from the total dose and adding an objective for radon flux. This is consistent with precedents in other promulgated rules that address situations that can lead to significant radon exposures [e.g., 40 CFR Part 190.10, 40 CFR Part 61 (subpart H), 40 CFR Part 61.192 (subpart Q), 10 CFR Part 40 (Appendix A, criterion 6)]. It is also consistent with not specifically considering the actual dose or risk from radon, when addressing the need for mitigation of radon in homes.