

Rulemaking Comments

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Docket ID NRC-2011-0012

Thank you for the opportunity to provide comments on the US Nuclear Regulatory Commission's proposed changes to 10 CFR Part 61: Site Specific Analysis for Demonstrating Compliance with Subpart C Performance Objectives. These comments are similar in scope to the ones I offered verbally during the May 18, 2011 Public Meeting. I provide the following comments related to the period of compliance and the regulatory standards:

Period of compliance

The waste classification tables in Part 61.55 were developed during the original promulgation of Part 61 and are appropriate for the majority of commercial low-level radioactive waste generated in the nation. While there is the "new" commercial waste stream of depleted uranium resulting from the enrichment process, this waste stream will not be disposed at all LLRW disposal facilities. The closed sites of West Valley, NY; Maxey Flats, KY; Sheffield, IL; and Beatty, NV did not receive these wastes. The currently operating LLRW disposal facilities at Barnwell, SC and Richland, WA are not accepting these waste streams. This waste stream is only proposed for disposal at the Clive, UT LLRW disposal facility owned and operated by EnergySolutions.

A graph presented by the NRC at the May 18, 2011 public meeting indicated that commercial LLRW decays to 1% of its original activity within a 500 year period while the decay curve for DU remains constant until 50,000 years before it appears to begin to increase. It doesn't make sense to burden the entire LLRW waste classification system and resulting disposal facility performance assessment requirements with a 20,000 year period of compliance when most facilities will not receive significant quantities of DU and will not experience the in-growth of daughter products from DU.

It also appears that the 20,000 year period of compliance is intended to include the extreme climate variations, i.e. glaciation. If the intent is to preserve the disposal facility and waste forms in a post-glacial environment, then that can only be accomplished using geologic disposal since any surface facility would be ground up by ice sheets (along with the rest of civilization in its path). For non-DU LLRW, this extended period of compliance is unnecessary since the waste will have decayed to a fraction of a percent of its original concentration and no longer presents an unacceptable hazard. Only facilities that receive significant quantities of DU should have a long period of compliance.

Regulatory Standard

It is unclear as to how the proposed 20,000 year period of compliance will work in the revised sections 61.13, 61.41 and 61.42. Section 61.13 states that the analysis of long-lived waste must calculate the peak dose that would occur 20,000 years or more after site closure. It then states that no dose limit applies to the results of this analysis. What is the point of performing the analysis if there are no criteria to determine whether the results are acceptable?

Sections 61.41 and 61.42 pertain to the protection of the general public and inadvertent intruders. Both of these sections have dose limits (25 and 500 mrem/y TEDE) and a requirement that compliance with these standards be demonstrated through a performance assessment that evaluates peak annual dose up to 20,000 following closure of the facility. A slide presented at the May 18, 2011 indicates that there is no dose limit for these peak annual dose calculations. What period of time does the dose limits (25 and 500 mrem/y TEDE) apply to? If they don't apply to the 20,000 year period, than what standard is used to demonstrate compliance with these 2 sections.

Thank you again for the opportunity to provide these comments. If you have any questions or need additional information please feel free to contact me at the address or phone numbers below.

Thank you,
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