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Secretary, U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
Attn: Rulemakings and Adjudications Staff

Subject: Docket ID NRC-2011-0012
Proposed Amendments to 10 CFR Part 61

I have some concerns regarding the proposed Part 61 rulemaking, as it would apply to the disposal of large quantities of depleted uranium (DU) in near-surface, low-level disposal facilities. My concerns do not extend to the analyses conducted by the NRC technical staff, which has conducted a conscientious, scholarly and detailed study of the issues. Nor do I have a quarrel with the proposal to require site-specific performance analyses for disposal of DU or the proposed 500 mrem/y intruder dose limit. Rather, my concerns center on the policy decision rendered by NRC management (evidently supported by the Commission) that (1) has prevented the technical staff from proposing a minimum depth of disposal (or thickness of cover) for DU in the rulemaking, and (2) forces the staff to place the details on how to conduct a site-specific performance assessment in guidance documents instead of putting adequately detailed information (such as specific requirements for site characteristics that must be met as well as other site characteristics that must be avoided) in the rule where they can be enforced. The proposed changes to Part 61 paragraphs 61.12 Specific technical information, and 61.13 Technical analyses are simply too general to ensure long-term adequate protection of inadvertent intruders.

In analyzing the disposal of large quantities of DU in near-surface facilities the staff concluded (as stated in SECY-08-0147) that such disposal may be appropriate in some circumstances, but not under all site conditions. In conducting their analyses, the staff determined that a minimum depth of disposal (or thickness of cover) on the order of 7 to 10 meters was needed to provide adequate protection of the inadvertent intruder. Logically then, the simple and straightforward thing to do would be to insert a requirement in Part 61 that states that **a site-specific performance assessment shall be conducted to demonstrate that the waste will continue to be covered to a depth of 10 meters for the time period of concern** (whether it be 20,000 years or some longer period). It is especially odd that this approach has not been taken, given the fact that the current rule states (in 61.52(a)(2)) "**wastes classified as Class C... must be disposed of so that the top of the waste is a minimum of 5 meters below the top surface of the cover...**" As stated in the "Concepts" subsection of Part 61, "a maximum concentration of radionuclides is specified for all wastes so that at the end of the 500 year period

[assumed to be the effective life of intruder barriers for Class C waste that can not be disposed where site conditions prevent disposal deeper than 5 meters], remaining radioactivity will be at a level that does not pose an unacceptable hazard to an intruder...." Thus, it seems reasonable to ask, how can disposal of large quantities of DU, which will pose a hazard to inadvertent intruders for hundreds of thousands of years, not be required to be disposed of at a specified minimum depth for the length of time the material poses a hazard, when Part 61 has such a requirement for other waste such as Class C material, which poses a hazard for only 500 years?

The reason behind the approach not to include a depth of disposal requirement in the proposed 61 amendments appears to be a concern, held by some officials at DOE and NRC, that DU could become an orphan waste if it cannot be disposed at an existing site such as the one at Clive, Utah. For, if large quantities of DU were required to be disposed at depths greater than 10 meters, and if licensees were also required to demonstrate with a site-specific analysis that the waste would continue to have a minimum of 10 meters of cover after 20,000 years (or some longer time period that would include more than one potential interglacial period), it seems very unlikely that the Clive site would qualify, because of its relatively high water table that limits the depth at which waste can be disposed and which therefore requires waste to be disposed in tumulus-covered disposal units. Thus, if the Clive site was deemed unsuitable, it would not be possible to dispose of large quantities of DU in the near-surface, unless and until some other near-surface sites were found qualified. It might then become necessary to use some more expensive disposal method such as deep boreholes or geological caverns, or alternatively, to continue to store the waste above ground. Of course, if disposal deeper than 30 meters were to be selected as the chosen alternative, it would not be possible to regulate such disposal under Part 61.

In addition to the problems associated with the lack of a disposal depth requirement in the proposed rule changes, there is another shortcoming that concerns the fact that the details for how to conduct the site-specific performance assessment are going to be in a guidance document and not in the rule itself. As anyone with any regulatory experience knows full well, guidance documents, by definition, only contain guidance. They do not contain requirements, for only the regulations carry the force of law. Therefore, both the State regulatory authorities and their applicants and licensees can selectively ignore the NRC staff's guidance if they so choose. It stands to reason that if the proposed regulations do not contain specific requirements on how to conduct the performance assessments, including requirements for, and instructions on, the types of parameters and ranges of values to use in the analyses, it opens the door to those, who might be so inclined, to "cook the books" and conduct analyses that will result in a desired outcome rather than one based on sound science.

I retired from the NRC in 2003, after spending almost 30 years with the agency (many of those years in the Division of Low Level Waste), and I then returned after a few months and spent another 5 & ½ years as a retired annuitant/consultant working on matters related to LLW disposal, including the disposal of DU. So, it saddens me to have to be so critical of the actions being taken by the agency where I spent so many years of my professional life and which I held in high regard. I believe that most of the technical staff, if they had their druthers, would prefer the approach I have outlined above rather than the one currently being considered.



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