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Comment On: NRC-2011-0183-0004

Draft Policy Statement on Volume Reduction and Low-Level Radioactive Waste Management

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General Comment

See attached file(s)

Attachments

LLRW Blending - IEER comments 14 Oct 2011

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**Comments of the Institute for Energy and Environmental Research on the
Nuclear Regulatory Commission's
Draft Policy Statement on Volume Reduction and Low-Level Radioactive Waste
Management (76 FR 50500 (August 15, 2011))**

by Arjun Makhijani, Ph.D.
October 14, 2011

1. The proposal to allow dilution of Class B and C wastes with and to lower grades of waste, including Class A waste, would undermine the very basis of the low-level waste rule, which was to limit the concentrations of the waste. While the NRC calls the process "blending" it is in practice no different than dilution. For instance, Class A waste is typically thousands or tens of thousands of times less concentrated (in the sense of radioactivity per unit volume or weight) than Class C waste, which typically contains the vast majority of radioactivity in LLRW (apart from Greater-than-Class-C (GTCC) waste) but has a volume that is typically only a fraction of one percent of the total. Radionuclide concentrations per unit volume or weight were the key to limit damage to the environment and limit doses to the public and ensure compliance. Dilution would, in essence, allow large-scale changes in the waste classification in 10 CFR 61.55(a), Tables 1 and 2, making the rule meaningless. Those Tables distill the essence of critical parts of the NEPA analysis prepared for the LLRW regulation. . A case-by case performance assessment is completely inadequate to deal with the proposed changes. The very substantial change proposed by so-called "blending" would require a new NEPA document before it could be put into place.

2. "Blending" would allow vast amounts of total radioactivity to be deposited at any shallow land low-level waste facility, including a Class A facility. It opens the door in principle to "blending" down of GTCC waste as well. Yet, the performance and compliance of any facility with 10 CFR 61.41, where the dose limits are specified, depends not only on concentration but on total inventories of the various radionuclides that are disposed of there. The present classification system works to ensure that the largest amount of radioactivity in LLRW is dealt with in special ways. For instance special intruder barrier is required for Class C waste and deep disposal for Greater than Class C waste, unless a special variance is obtained. Since almost all the radioactivity in LLRW is in Class C and GTCC waste, the rule has worked so far to ensure stricter requirements for these categories of waste. Dilution would thoroughly undermine this protective feature, which figures into compliance not only with 10 CFR 61.41 but also with

other parts of the rule. A case-by case performance assessment is completely inadequate to deal with the proposed changes. Therefore, we have concluded that all presently licensed LLRW facilities would have to go through a relicensing process if dilution is allowed as proposed.

We recommend that before the “blending” proposal is put into effect that the NRC

- produce a revised LLRW EIS, and
- prohibit disposal of blended waste at current LLRW facilities until the NEPA process is complete.

Submitted to

US NRC Docket on NRC 2011-0183

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