



FACT SHEET

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Depleted Uranium and Other Waste Disposal

The Nuclear Regulatory Commission is in the early stages of amending its regulations to establish new requirements for the disposal of some low-level radioactive wastes. The new regulation would require a site-specific analysis to determine if a proposed disposal site is appropriate and adequate for safely disposing of wastes that were not considered when current NRC regulations were developed.

Such “unique waste streams” would include primarily large quantities of depleted uranium from uranium enrichment operations. They could also include wastes from future spent-fuel reprocessing facilities or other fuel cycle wastes that were not considered when the current regulations were developed.

To help the staff develop a technical basis for these new regulations, the agency is holding two public workshops to solicit input from the public on how to ensure safe land disposal of these unique waste streams. The workshops are being held in Bethesda, Md., on Sept. 2-3, and Salt Lake City, Utah, on Sept. 23-24, 2009.

Background

The NRC issued licenses in 2006 and 2007 for two commercial uranium enrichment facilities,¹ and is reviewing license applications for two more.² Those facilities are expected to generate significant quantities of depleted uranium, which is the primary byproduct of the enrichment process. Depleted uranium is a source material as defined by the Atomic Energy Act of 1954, as amended, and if treated as a waste would fall under the definition of low-level waste. The Commission reaffirmed this waste classification in 2005.

One of the NRC’s responsibilities is to ensure the safe disposal of commercially generated low-level radioactive waste in the United States. NRC regulations establish minimum performance standards for managing waste to protect public health and the environment, while providing for flexibility in technological approaches to meeting those performance standards.

When NRC regulations on low-level waste disposal were developed, there were no commercial facilities generating significant quantities of depleted uranium waste. Therefore, the impacts of depleted uranium disposal were not explicitly considered.

Anticipating the need to dispose of significant quantities of depleted uranium from new enrichment facilities, the NRC staff prepared a technical analysis that concluded disposal could be safely accomplished depending on the specific geological, geographical and climate characteristics of the disposal site. The Commission subsequently directed the staff to amend NRC regulations to require a site-specific analysis for disposing of depleted uranium or other unique waste streams and to develop technical parameters for conducting those analyses.

Low-Level Radioactive Waste Disposal Sites

Low-level radioactive waste is disposed of by commercially operated facilities that must be licensed by either the NRC or an Agreement State (the 36 states that currently have agreements with the NRC to regulate radioactive materials). There are three active and one pending low-level waste disposal facilities in the United States that accept various classes of low-level waste. All are in Agreement States:

- EnergySolutions Barnwell Operations, Barnwell, S.C.
- U.S. Ecology, Richland, Wash.
- EnergySolutions Clive Operations, Clive, Utah
- Waste Control Specialists, Andrews, Texas (pending approval by the State of Texas)

Agreement States will be required to establish their own requirements and parameters for site-specific analyses within three years of a final NRC rule becoming effective.

Rulemaking Process

Development of the new NRC requirement will have several steps. The September 2009 workshops are intended to solicit early public input on issues associated with the rulemaking. After the workshops, the NRC will consider the public input as it develops a technical basis document to support a proposed rule. The technical basis is expected to be completed in 2010. After it is completed, the agency will develop a proposed rule, which should be published in the *Federal Register* in 2011, with additional public meetings and opportunities for the public to provide written comments. NRC will then analyze those comments, make any necessary changes and, with Commission approval, publish a final rule in the *Federal Register*, probably in late 2012. The regulation would typically become effective 30 days after publication.

Workshops

The workshops will use a roundtable format, with invited stakeholders participating. NRC staff will discuss with stakeholders the issues to be considered in developing a proposed rule and the technical parameters for a site-specific analysis associated with unique waste streams. Although the number of participants will be limited to ensure a manageable discussion, all members of the public are welcome to attend and will be offered an opportunity to provide feedback on each of the issues discussed by the roundtable. Those who cannot attend the workshops are welcome to provide written feedback. For information on submitting feedback, go to <http://www.nrc.gov/waste/llw-disposal.html> and click on "Unique Waste."

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¹ The National Enrichment Facility, in Eunice, N.M., and the American Centrifuge Plant, in Piketon, Ohio.

² AREVA Enrichment Services near Idaho Falls, Idaho, and GE-Hitachi Global Laser Enrichment in Wilmington, N.C.