Savannah River Site
Citizens Advisory Board

Recommendation 304
Revising DOE Order 435.1

Background

Congress in 2005, decided its NDAA's section 3116 should be revised allowing reclassification of wastes to be made based on the risks posed by the wastes to the environment and to humans rather than the where it was generated. This reclassification must meet strict criteria (http://www.nrc.gov/waste/incidental-waste/wir-ndaa.html). Thus, the precedent has been set that DOE has the authority to reclassify its HLW. This precedent potentially allows vitrified HLW that meets WIPP WAC to be reclassified. Related to this revision, it has been proposed by Hanford to ship its tank wastes to WIPP.

DOE's Order 435.1 for the management of its nuclear wastes is that waste determinations for ultimate disposition/disposal are to be made based on the risks posed by the waste after it has been packaged for final disposal. Previously wastes were categorized based on their source rather than actual risks. This change in classification method may allow DOE to show that the canisters of vitrified tank wastes risk are within the WIPP performance assessment requirements and that WIPP would continue to meet its performance objectives.

The DOE's process of revising its Order 435.1, Radioactive Waste Management [1] was a topic of discussion at the WM 2013 Conference, as part of session EFCOG (Energy Facilities Contractors Group) Waste Management Working Group meetings [2].

In addition, an article in the Aiken Standard [3] (March 7, 2013, p. 13a), entitled "Feds look to ship radioactive waste from Hanford to New Mexico", addressed the shipment of waste from Hanford's leaking tanks to WIPP (Waste Isolation Pilot Plant).

Comments

The SRS CAB should encourage DOE to adopt this risk-based approach to disposition/disposal in its proposed new draft order. That is, if the canisters of vitrified sludge in the tanks at SRS have a risk equivalent to TRU wastes, they should be disposed of in the same way. To save funds, disposition of a nuclide should be based on its risk to the public and the environment, not based on the source of waste, which can be misleading. The precedence is WIR (waste incidental to reprocessing). WIR is reprocessing waste that has been reclassified to low-level waste in tanks 18 & 19. Adopting this sensible change for site cleanup will save scarce resources and time.

For example, it is not likely that the vitrified tank waste can be shown to be incidental to reprocessing, but it is likely that the vitrified tanks waste could be shown to meet the same performance objectives for disposal in WIPP as TRU waste. Already SRS is shipping unMOXable plutonium in special containers to WIPP; this Pu meets the WIPP-WAC, but it has likely a greater concentration of fissile material than does the vitrified high-level waste. The WIPP Waste Acceptance Criteria (WAC), as we understand it, is based on a performance assessment objective to protect human health and the environment. It is believed that criteria the can be met for glassified waste and thus disposed of at WIPP.

Recommendation:

The SRS CAB recommends that DOE:

1. Identify to the CAB by the September 2013 the proposed changes to DOE Order 435.1 that would help implement sensible change for site cleanup and waste disposition and will help save scarce resources and time at SRS.
2. Provide to the CAB by January 2014 a summary of the EFCOG Working Group decisions and recommendations concerning the proposed changes to DOE Order 435.1
3. This recommendation should be included in public comments on DOE Order 435.1

References:

1. DOE, 1999, Radioactive Waste Management, DOE Order 435.1-1, U.S. Department of Energy (also see the Manual, DOE M 435.1-1)
2. Reference WM 2013 meeting
3. Reference Aiken Article

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