



SRS Citizen's Advisory Board

Recommendation No. 66

September 29, 1998

DOE Order 435.1 - Radioactive Waste Management

Background:

DOE Orders and Manuals are part of the DOE Directives System. This System is the means by which DOE policies, requirements, and responsibilities are developed and communicated throughout the Department. Orders establish management objectives and responsibilities and Manuals establish detailed requirements on how the responsibilities of the Order should be carried out.

In September 1988, DOE Order 5820.2A on Radioactive Waste Management was issued. This Order is still in effect. In 1991, the DOE initiated efforts to revise it. During this revision effort, the Defense Nuclear Facilities Safety Board (DNFSB) began to examine low-level waste management at DOE's defense nuclear facilities. The DNFSB is a Congressional chartered independent review board for DOE's defense sites. In September 1994, the DNFSB issued Recommendation 94-2, Conformance with Safety Standards at Department of Energy Low-Level Nuclear Waste and Disposal Sites, which identified problems with DOE's low-level waste management system. (DNFSB92-2 can be viewed at <http://www.dnfsb.gov>.)

In May 1995, a revision to DOE Order 5820.2A (draft DOE 5820.2B) was reviewed by DOE and the DNFSB staff. Based upon comments received from these reviews, the DOE committed in 1996 to a new approach for revising the Order on Radioactive Waste Management. The revised Order and Manual is now out in draft form as DOE Order 435.1, Radioactive Waste Management and DOE Manual 435.1, Radioactive Waste Management Manual.

Recommendations:

The Savannah River Site Citizens Advisory Board has reviewed draft Order 435.1 and Manual 435.1 and has the following recommendations:

General

- G-1 The Savannah River Site (SRS) Citizens Advisory Board (CAB) believes that the public review of the draft order and manual is a positive step. We encourage this open public review process for the revision of all future orders.
- G-2 The Order and Manual should address the processes necessary to consolidate radioactive waste consistent with goals of the Environmental Management Integration Plan and the Waste Management Programmatic Environmental Impact Statement (WMPEIS). Processes such as shipping (facilities and casks), transportation permits, receiving, treating, storing, disposing and waste acceptance criteria should be considered. A specific example for SRS is the possible receipt of West Valley High Level Waste (HLW) canisters for storage at SRS until shipment to a geologic repository. The SRS CAB supported the

storage of West Valley HLW canisters at SRS and the Environmental Management Integration with Recommendations 47, 48 and 51 (copies attached).

- G-3 DOE Order and Manual 435.1 should make it clear that Pu-238 is Transuranic waste headed for disposal in the Waste Isolation Pilot Plan (WIPP) and that DOE is working with the Nuclear Regulatory Commission (NRC) to modify transportation regulations for shipment to WIPP. The SRS CAB is quite concerned that the removal of this high activity Transuranic waste from SRS be done expeditiously. The SRS CAB has passed five motions on Transuranic waste (Numbers 4, 11, 18, 27 and 32) and Pu-238 was always a focal point.
- G-4 Waste Minimization should be included along with the roles of Beneficial Reuse and Below Regulatory Concern. We do not believe that the brief mention in Manual Chapter I is sufficient (see pages I-4 and I-7).
- G-5 Under the Atomic Energy Act of 1954 (as revised), and as specified by this Order and Manual, DOE has the authority to regulate its operational facilities. However, this self regulation cannot be adequately ended by replacing DOE regulatory oversight with the NRC, Environmental Protection Agency (EPA), or state regulatory oversight. Instead, we believe that the only adequate oversight to counter regulation by administrators is to use independent scientific review. (The SRS CAB has strongly supported outside independent scientific review with many motions starting with the first motion that the SRS CAB passed (copy attached)). We understand that DNFSB is reviewing the new Order and Manual. We recommend that DNFSB also provide regular reviews of the radioactive waste management procedures and facilities for all DOE operational sites.
- G-6 The Order and Manual should include a glossary of terms.
- G-7 It is not clear what is to be done with Waste With No Identified Path To Disposal for old or new waste. We believe that action should be taken on these items in a reasonable time frame.

Specific

- S-1 Page 1 of the Order - In the definition of High Level Waste (HLW), "in sufficient concentrations" should be amplified so as to clearly exclude from HLW the residual waste left in HLW tanks as they are cleaned and closed and the HLW cleaned supernate being placed in Saltcrete at SRS. The definition of Incidental Waste should be included on this page.
- S-2 Pages I-9 and II-1 of the Manual - The SRS CAB was very pleased to see the Incidental Wastes being explicitly addressed, but we believe it can be further strengthened by indicating that the approach has been reviewed by the Nuclear Regulatory Commission and by the Defense Nuclear Facilities Safety Board.
- S-3 Pages I-7 and IV-9 to 11 of the Manual - Page I-7 addresses how Order and Manual 435.1 can be satisfied by an application of the CERCLA process to assessing the impact on restoration activities involving low level waste. Pages IV-9 to 11 addresses the Performance Assessment as a tool to assess the risk of low level waste and to set Waste Acceptance Criteria. The SRS CAB commends the use of Performance Assessments (PA) and Composite Analyses (CA) and recommends that the Manual address working with the CERCLA regulators to gain acceptance of the PA and CA fate and transport models as the basis for the CERCLA risk analysis process. At SRS the PA and CA exist for the SRS Low Level Waste Disposal Facility; a CERCLA risk analyses does not. It would save money and time to have the PA and CA accepted for the CERCLA risk analysis. It would

improve confidence between DOE and its regulators by having them address the fate and transport models (differences, similarities, accuracy's, scenario assumptions, etc.) being used for the PA, CA and CERCLA risk analyses.

- S-4 Pages II-5, III-3 and IV-4 of the Manual - Data Quality Objectives are mentioned but a definition should be provided and it should be stated that application of Data Quality Objectives are not retroactive.
- S-5 Pages II-10, III-6 and IV-7 of the Manual - The use of the word "rapid" in the paragraphs on Monitoring should be clarified. Is rapid measured in seconds, minutes, hours or a day? The costs vary widely among the different definitions.

Agency Responses

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