



### Recommendation No. 100

September 28, 1999

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#### Canyon Utilization and Spent Nuclear Fuel Melt and Dilute Technology

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##### **Background**

Citizen Advisory Board Recommendation No. 92, adopted July 27, 1999, addressed the Defense Nuclear Facilities Safety Board (DNFSB) Tech-22 report, which cited uncertainties in the development of the melt and dilute technology for the treatment of spent nuclear fuel and which urged maximizing the use of SRS canyons until this new treatment process was operational. The CAB requested a presentation to its Nuclear Materials Management (NMM) subcommittee that responded to the issues raised in the DNFSB report.

On August 26, the subcommittee was given two presentations, one which covered the planned and possible schedules for stabilizing other nuclear materials in the canyons prior to decommissioning, and a second on the technical and timing issues in bringing the melt and dilute process to an operationally ready status.

##### **Comment**

The CAB acknowledges DOE's confidence on being successful in the development and design of the melt and dilute process. It is also aware that the SRS canyons may be required for stabilization activities for a number of years. However, CAB believes that it will be at least several years before there are clear assured answers to each of these issues.

##### **Recommendation**

The SRS CAB recommends that the Secretary of Energy provide a formal assurance that the site reprocessing capability, either F or H Canyon, will be retained in an operational status, suitable to process aluminum-based foreign and domestic research reactor spent nuclear fuel until at least the following events have occurred:

- The melt and dilute technology and engineering development program has successfully produced the planned waste form using actual irradiated SNF, and
- The Nuclear Regulatory Commission has formally stated that the melt and dilute waste form is acceptable in the national repository, and
- The melt and dilute processing facility has been constructed and is operational.

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##### **Agency Responses**

[\*Department of Energy-SR\*](#)