

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 26, 1998

MEMORANDUM FOR: G. W. Cunningham, Technical Director
FROM: J. Kent Fortenberry
SUBJECT: SRS Report for Week Ending November 26, 1998

Replacement High Level Waste Evaporator (RHLWE) - DOE-SR has pursued questions raised regarding RHLWE operator awareness and training on distributed control system (DCS) mis-operation (see 10/30/98 weekly report). As a result, WSRC has developed a training review package on DCS mis-operation with specific events from other high-level waste facilities. There have also been changes in the High-Level Waste division lessons learned program so that future operational events will be reviewed and screened for training needs.

Highly Enriched Uranium (HEU) Blend-Down - DOE plans to blend down HEU solutions to low enriched uranium (LEU) solutions for use by TVA as power reactor fuel. This material will be stored as HEU solution until the time for shipment in order to minimize storage space. Shipments of blended down solutions from SRS are planned to start by January 2001. If these shipments are delayed, H-Canyon operations may need to be suspended to prevent exceeding the site's HEU solution storage capacity. The potential to exceed the site's HEU solution storage capacity can be addressed by either ensuring the solutions are shipped on time, or by constructing a new HEU solution storage tank at SRS. DOE is not currently considering constructing a new HEU solution storage tank.

The determination that the blended-down uranium solution will require Type B shipping containers (see 10/23/98 weekly report) has resulted in the need to construct a loading facility at SRS to load Type B containers. Based on assumptions that this facility can be constructed and ready for use in 2 years, initial work would need to begin early 1999 to support the required shipping date. TVA has delayed its proposal to use the HEU blend-down material until January 1999. Even if this proposal is feasible, an inter-agency agreement might not be signed until April 1999. DOE-SR is hoping to be allowed to proceed with a project to construct a loading facility prior to the inter-agency agreement to support starting shipments by spring 2001 and so prevent exceeding the available HEU solution storage capacity. If DOE is delayed in starting work on a loading facility, then a delay in the start of shipments is likely.

The current critical path item for the HEU-LEU blend-down program is the delivery of four lead use assemblies (LUAs) to be loaded into TVA's Sequoyah Nuclear Plant Unit 2 in April 1999. Again, the transportation of these assemblies to the Sequoyah Nuclear Plant must be in Type B shipping containers. DOE will request approval for a one-time use of two MO-1 shipping containers owned by DOE and certified by the NRC (on a "grandfathered" basis) as Type B fissile packages. A delay in the delivery of the LUAs to TVA could result in missing the April 1999 refueling outage. This would significantly delay confirmation of the performance of the LUAs. Confirmation of the performance of LUAs in the Sequoyah Nuclear Plant will form the basis for TVA's application to the NRC for a reactor license amendment to use the HEU blend-down material.