

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 26, 1999

MEMORANDUM FOR: G. W. Cunningham, Technical Director
J. Kent Fortenberry, Deputy Technical Director

FROM: M. J. Merritt

SUBJECT: SRS Report for Week Ending February 26, 1999

Merritt, Hunt and R. West (OE) were on-site this week reviewing progress on Recommendation 94-1 activities in H-Canyon, HB-Line and HA-Line.

Recommendation 94-1- In developing a response to the Board's January 25, 1999 reporting requirement to evaluate the impact of delays in construction of the SRS Actinide Packaging and Storage Facility (APSF), DOE-SR appears to be limiting the scope and alternatives of the evaluation. Limitations of this evaluation may result in an inadequate response to the reporting requirement. The scope of the evaluation is being limited to the SRS stabilization activities impact and does not consider potential impacts at other DOE sites (e.g. PFP at Hanford). Additionally, because of perceived site limitations, DOE-SR is proposing alternatives which would result in extended storage of plutonium not in full compliance with DOE-STD-3013, due to the absence of an outer 3013 container. This type of package would also be noncompliant with DOE's Interim Safe Storage Criteria. The staff has discussed their concerns about the current approach with the SRS Manager and DOE Headquarters (EM-60) to ensure that the response to the reporting requirement will propose a resolution that is consistent with the goals of Recommendation 94-1 and represents a complex-wide solution.

Highly-Enriched Uranium Solutions - DOE-SR is developing a contingency plan for stabilization of highly-enriched uranium (HEU) solutions as requested by the Board on January 28, 1999. This plan would be implemented in the event that DOE's interagency agreement with Tennessee Valley Authority (TVA) to accept the material is not reached soon (now expected 7/99). According to DOE-SR, the contingency plan will be to blend down the HEU solution in HA-Line to about 1% U-235 enrichment, transport the low-enriched solution to FA-Line and process in FA-Line to produce an oxide for disposition. The details of the plan are expected to include identification of necessary safety upgrades to FA-Line and also establish schedules and conditions to begin initiation of the project. The staff considers development of the contingency plan to be essential since insufficient HEU solution storage capacity could result in curtailment of H-Canyon stabilization operations in early 2001.

Interim plans to increase storage capacity in HA-Line tanks will result in less desirable storage conditions. In the past, HEU solutions were stored in the EU-S tank, a large, robust stainless steel tank. Unlike the smaller tanks, now needed to increase storage capacity, the EU-S tank is seismically qualified and double-walled. The smaller, single-walled tanks are more susceptible to the effects of aging, degradation, natural phenomena, and equipment failures which could adversely affect barriers to release.