DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 3, 1997

MEMORANDUM FOR: G. W. Cunningham, Technical Director
FROM: J. Kent Fortenberry / Joe Sanders
SUBJECT: SRS Report for Week Ending October 3, 1997

Americium-Curium Vitrification - The 94-1 milestone for vitrification of Am-Cm solution is September 1998. Last fall WSRC estimated a 15 month delay due primarily to unexpected development and testing difficulties. Recent completion of a project baseline review shows vitrification complete June 2000, a total schedule slip of 21 months. Also, the Am-Cm project cost estimate has increased from $40.5 to $60.3 million. These schedule and cost changes are driven primarily by additional development activities and pilot operations. Significant uncertainties still exist in the development of the offgas and liquid feed systems. Uncertainty also exists in the functional classification of safety controls for melter and pretreatment operations.

Mixed Oxide (MOX) Fuel Hot Demonstration - Oak Ridge is evaluating existing facilities to potentially fabricate MOX fuel lead assemblies. Lead assemblies would be used for a fuel irradiation test program. The facility would be sized for about three bundles of fuel per year for three years (two fuel qualification campaigns of four lead assemblies each). Six sites have offered proposals: SRS, Idaho, Hanford, Oak Ridge, Livermore, and Los Alamos. A DOE team is visiting these sites and will prepare a report addressing cost, capability, and schedule. Selection is expected in January 1999. The milestone for first production is June 2003. SRS is proposing two options: the never operated Uranium Solidification Facility (USF) located below HB-Line, and a combination of FB-Line, SRTC, and the never operated Plutonium Storage Facility (PSF) located above F-Canyon.

DWPF Canister Damage - The lip of a filled canister was damaged during ram insertion of the plug into the canister throat. It appears the damage is limited to the outer lip and should be repairable so that the canister can be welded shut. If not, the canister would have to be overpacked, requiring a very extensive effort which would probably not be undertaken until the end of facility life. An action plan, including a waste compliance evaluation, will likely be developed with options for dispositioning this canister. The more time-critical activity is to inspect, repair, and test the hydraulic ram. Due to a current melter outage and some lag storage capacity, restoration of the ram should not impact overall operations until the end of the month.

DWPF Occurrences - DWPF had two additional occurrences this week. The first was an inadvertent melter pour due to operator error during pre-pour checks. The second occurrence was a violation of a Limiting Condition of Operation (LCO) which also involved operator error. In the second occurrence an operator was required by an LCO to be stationed in the Fan Building in order to manually operate safety class exhaust fans. The operator left the building. Because of the increase in occurrences at DWPF, management decided to brief all personnel on the importance of conduct of operations and attention to detail.