

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 5, 1999

MEMORANDUM FOR: G. W. Cunningham, Technical Director
J. Kent Fortenberry, Deputy Technical Director
FROM: C. H. Keilers / R. T. Davis
SUBJECT: SRS Report for Week Ending February 5, 1999

Keilers was onsite Monday through Friday (February 1-5) for site representative transition..

Future Plutonium Storage and Disposition - The Actinide Packaging and Storage Facility (APSF) is unfunded in FY 2000 in the federal budget submitted to Congress this week. DOE is deferring APSF construction and initiating a systems engineering effort to assess possible integration of SRS storage and disposition activities. DOE-SR is also pursuing shifting current resources from APSF to the Canyon Exhaust Upgrades Project and other projects. The K-Area Material Storage (KAMS) Project is unaffected and is scheduled to start receiving Rocky Flats material in January 2000. DOE-SR and DOE-MD are meeting next week to discuss integration.

Spent Nuclear Fuel Draft EIS - DOE held 2 EIS public meetings on February 2nd in North Augusta, SC. They were lightly attended (e.g., about 3 dozen for the evening session). The EIS preferred alternative involves (1) processing some material in F or H Canyon during the next 2 years, (2) processing other material through a new melt and dilute process starting in 2005 with subsequent dry storage, and (3) storing a third group pending transfer off-site.

During the evening session, public comments focused on conclusions from the National Research Council review in 1998 that conventional reprocessing (i.e., F/H Canyons) has been demonstrated to work well and has known costs and risks, while the new melt and dilute process appears motivated by a perceived demand - beyond 2009 - to process small amounts of aluminum-based research reactor fuel. In response, DOE identified that maintaining the high canyon processing capacity beyond 2009 is inefficient given the expected small demand, and that DOE has a 1996 commitment to pursue alternatives to reprocessing. DOE indicated that, regardless, currently assigned missions will require F and H Canyon operations through 2003 and 2005, respectively. The Final EIS is expected in March or April. A Record of Decision is expected in April or May.

H-Canyon Potential Inadequacy in Safety Analysis (PISA) - Last year, WSRC identified a scenario through which the acidity of a canyon waste tank could be lost, leading to conditions conducive to plutonium polymerization. This scenario had not been addressed in the double contingency analysis for criticality (see site representative report 9/4/98). Recently, as follow-up, the Savannah River Technology Center (SRTC) completed a review of the conditions necessary for polymerization. DOE-SR and WSRC have compared the SRTC evaluation to the current double contingency analysis and concluded that, although adequate controls are in place, improvements are needed in the authorization basis controls, particularly for Pu-239 storage tanks and canyon sump receipt tanks. For the storage tanks, these improvements would address scenarios such as acid dilution from leaking cooling coils or other sources. For the sump receipt tanks, the improvements will address dilution from sump flushing.