

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 22, 2000

**MEMORANDUM FOR:** J. Kent Fortenberry, Technical Director  
**FROM:** C. H. Keilers / R. T. Davis  
**SUBJECT:** SRS Report for Week Ending December 22, 2000

Staff members A. Gwal and C. Graham were on site this week reviewing electrical safety.

**Plutonium Disposition:** On Monday, DOE directed the Pit Disassembly and Conversion Facility (PDCF) design agent to consider a sand filter for building confinement (site rep weekly 11/17/00). Design studies have indicated that, compared to a HEPA filter design, a sand filter may be more expensive to build, but less expensive to operate and more effective at mitigating a major fire.

**Americium-Curium (AmCm) Stabilization:** The AmCm project is receiving top-level site management attention because of the vitrification equipment vendor issues, the pretreatment redesign, and the emergent requirement to qualify the product for a geologic repository (site rep weekly 12/8/00). It may be February before the full impact of these issues will be understood.

The site reps believe that the product qualification issue has languished. DOE has not yet decided which repository requirements apply (e.g., TRU or HLW), and product qualification is still outside the project's scope. In July, DOE identified the need. In September, WSRC did an assessment. Last week, DOE-EM, DOE-RW, and SRS personnel met to review the requirements for the HLW option. DOE-SR personnel are optimistic based on last week's meeting, but exercising this option would require more lab-scale testing, more in-process data recording, more material procurement requirements, and more vendor inspections and verification. Little progress on this issue is likely until DOE incorporates the product qualification requirement into the project baseline.

**K-Area Material Storage (KAMS):** DOE-SR is close to authorizing KAMS Phase II operation, although the facility is not expected to receive any plutonium before May 2001 because of Rocky Flats delays. Phase II basically adds storage area outside the process room. The WSRC Readiness Assessment (RA) began in October and ended earlier this month. The RA team reported 69 pre-start and 49 post-start findings. WSRC has been resolving pre-start findings in parallel with the RA. For example, WSRC eventually demonstrated, at least administratively, that a container suspected to be damaged can be transported to FB-Line (site rep weekly 10/27/00). The site reps believe the RA was thoroughly and independently conducted. However, its duration and the number of findings indicate that it may have started too soon and that it may have become a "management-assist." Planning for KAMS Phase III (i.e., capability to triple-stack containers) continues.

**Tank 49 Material Disposition:** This week, DOE issued the Safety Evaluation Report (SER) and signed the Authorization Agreement for tank 49 material disposition activities (site rep weekly 11/10/00). This will allow WSRC to begin tank heat-up to 40°C as early as this weekend. Copper addition to accelerate benzene byproduct decomposition will occur in about 2 weeks after WSRC verifies sample results. The DOE SER approves oxygen controls using the normal and standby nitrogen systems to prevent tank deflagration. Fuel control will be implemented as defense in depth and is supported by tank vapor space monitoring. WSRC plans to complete disposition activities and recover this tank for high level waste service by June 2001.