

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 17, 2000

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers / R. T. Davis
SUBJECT: SRS Report for Week Ending March 17, 2000

Plutonium Disposition Facilities: Comprehensive siting evaluations have yet to be performed for the disposition facilities (i.e., the pit conversion facility, the immobilization facility, and the MOX fuel fabrication facility). Previous evaluations were limited because of concerns with prejudicing the record of decision issued in January. Last summer, WSRC did obtain approval of site use permits to reserve potential locations and identify constraints. In the process, a trichloroethylene plume was identified under the 1st choice for the MOX plant location. Consequently, the MOX project requested an expedited review of other locations. Similar issues could arise for the other two facilities because thorough siting evaluations have not been done. Questions to date have been addressed piece-meal within the individual projects. To remedy this, WSRC recently proposed conducting a comprehensive evaluation for all 3 facilities. DOE action is imminent. (3.a)

Recommendation 94-1: In February 1999, DOE suspended the Actinide Packaging and Storage Facility (APSF) project without a backup plan for stabilizing and packaging plutonium. During the last year, the site representatives have reported on several options that DOE has considered.

One option now being considered is to install a stabilization and packaging system in 235-F. This option appears to be quicker and less costly than the previous 235-F concept because it does not include vault upgrades to store Hanford material (see site rep weekly 10/8/99). WSRC has indicated that vault upgrades (e.g., installing racks) would require transferring material in 235-F vaults to K-Area Material Storage (KAMS). Before it could be transferred, the material would need to be packaged in an outer STD-3013 container to comply with the KAMS safety basis. The previous concept included an outer can welder in FB-Line for this purpose. All of this may be avoided in the new concept. The new option also provides stabilization capabilities independent of the canyons and B-Lines. 235-F is old but appears to be structurally robust and has a sand filter. WSRC estimates that the cost could be about half that of building a new APSF-like facility.

There are also disadvantages. Available vault space on site may become limited. Legacy contamination in 235-F may make modifications to ventilation and other systems challenging. The conceptual information available is insufficient to baseline the project cost and schedule now. A WSRC evaluation last December indicated that it might take 5 to 7 years to complete the project (i.e., until 2005 to 2008 depending on the start date). More reliable cost and schedule information requires more design development, but further design won't begin until DOE makes a decision.(3.a)

Public Interaction: On Thursday, a site representative briefed a Citizens Advisory Board (CAB) committee on Recommendation 2000-1 and the Secretary's response. The briefing emphasized that stabilization progress being made does not reflect the urgency required. For example, DOE has well-developed plans for stabilization of HEU and AmCm solutions, but schedules stretch out to 2003 and later, nearly a decade past the original recommendation (94-1). Also, DOE has been developing a new plan for plutonium stabilization and packaging, but some of the options could extend those activities to 2011. This is 17 years past the original recommendation. DOE-SR stated that an updated implementation plan will be submitted to the Board in April. (3.a)