

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 17, 2001

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director

FROM: R. T. Davis

SUBJECT: SRS Report for Week Ending August 17, 2001

Plutonium Packaging and Stabilization: In June, DOE approved the mission need (CD-0) for the FB-Line plutonium Packaging and Stabilization (P&S) project. This project was identified as a cost effective alternative to the 235-F P&S project that could achieve accelerated plutonium stabilization and packaging in accordance with DOE-STD-3013.

This week, WSRC submitted the conceptual design package and requested DOE approval of the preliminary baseline range (CD-1). The scope of this project has not changed: design, fabricate and install two high fire furnaces (within existing furnace enclosures); install an outer can welder (OCW); modify the bagless transfer can system to accept a taller oxide can; and provide appropriate security and support system modifications. The cost estimate remains \$13.5M to \$29M, depending on the extent of FB-Line infrastructure upgrades.

The project now includes parallel design, construction and startup of the furnace (oxide stabilization) and OCW. Early startup of the OCW would allow WSRC to bring plutonium metal into compliance with the standard sooner. The schedule range for OCW startup is August 2003 to March 2004 and furnace startup is April 2004 to November 2004. Although this project begins stabilization and packaging of plutonium significantly earlier than the 235-F P&S project, the site representative believes that the schedule is not aggressive and that additional emphasis on early project completion is appropriate.

Americium-Curium (AmCm) Stabilization: This week, WSRC provided the baseline cost and schedule estimate for disposal of the AmCm solution to the HLW system. The cost estimate range has been narrowed to \$24M to \$33M from the previous pre-conceptual range of \$24M to \$54M. The schedule supports transfer of the solution to HLW Tank 51 (Extended Sludge Processing) by early 2003, which will support preparations of sludge batch 3 for vitrification at DWPF.

Central Laboratory Facility (CLAB): On Monday, WSRC declared a Potential Inadequacy in the Safety Analysis (PISA) for buildings 772-F and 772-1F because some transuranic (TRU) material is not included in the facility curie inventory program. The CLAB Authorization Basis (AB) requires facility controls to ensure that assumed material inventory limits are not exceeded. The curie inventory program implements this control but is only used to track sample material and did not include waste material (e.g., plastic drum liners). WSRC later concluded that a PISA did not exist because the Safety Analysis Report requires a program to track material inventory. However, implementation of this control is not adequate. Immediate actions were taken to ensure existing material inventories in these facilities did not exceed AB requirements and to establish interim controls for drum liner inventory. WSRC is developing procedures to include this TRU material in the inventory control program.