

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 31, 2001

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director

FROM: R. T. Davis

SUBJECT: SRS Report for Week Ending August 31, 2001

HEU Blend Down: The objective of the High-Enriched Uranium (HEU) Blend Down Project is to disposition 20.4 MT of SRS uranium materials. Approximately 8.6 MT of this material is irradiated fuel elements (Mark 16/22) that are currently being processed in H-Canyon as a part of the Recommendation 94-1 program. An additional 7.1 MT of unirradiated fuel elements will be processed in H-Canyon following the irradiated material. The remainder (unirradiated ingots) will be shipped directly to a commercial vendor. The HEU Blend Down project will use natural uranium to blend with the HEU solutions to form a LEU solution. This solution will be shipped to TVA for processing to a commercial fuel.

This week, WSRC submitted the performance baseline cost and schedule for the project and requested DOE approval of critical decision 2 by early November. Total project cost remains approximately \$100 M with a high confidence schedule to begin operations in June 2003. Detail design is approximately 50% complete and should finish in January 2002. Current WSRC estimates indicate that HEU solution storage will be exhausted in March 2003, which may limit H-Canyon operations and impact Mark 16/22 processing. In addition to accelerating the project, WSRC is pursuing other processing options to reduce this impact (e.g., additional Sterling Forest Oxide processing that produces less HEU solution).

H-Canyon: DOE-SR and WSRC continue to evaluate the Criticality Safety Limit (CSL) violation that was identified last week. On Thursday, WSRC concluded that one of the defenses identified in the Double Contingency Analysis (DCA) that required an annual cell floor inspection may not be adequate to protect the CSL. This potential inadequacy in the safety analysis applies to DCA controls for both H and F-Canyon. WSRC has suspended all fissile material transfers in both canyons until this issue is resolved. To allow canyon operations to continue in the near term, WSRC will likely increase the frequency for cell floor inspections. For the long term, WSRC will likely perform additional analysis to identify a more appropriate CSL so that inspection and flush frequencies can be reduced.

2H Evaporator: The WSRC Management Self Assessment (MSA) for restart of the 2H evaporator should be completed this weekend. WSRC plans to begin the contractor Operational Readiness Review (ORR) on Monday after all MSA findings are resolved. The schedule for evaporator restart is mid-October.

HLW Tank 49: On Friday, WSRC began transferring the In-Tank Precipitation wash water contained in Tank 49 to Tank 50. This transfer should be completed this weekend and will allow WSRC to return Tank 49 to HLW service. WSRC plans to restart the Saltstone Facility to process the Tank 49 and 50 material in Spring 2002.