

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 1, 2001

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers / R. T. Davis
SUBJECT: SRS Report for Week Ending June 1, 2001

Recommendation 2001-1: On Tuesday, WSRC completed a transfer of approximately 280,000 gallons of waste from Tank 6 to Tank 8. This transfer reduces the waste level in Tank 6 to below all known leak sites and is consistent with the Board's Recommendation. On-going inspections have not identified additional liquid in the tank annulus.

3H Evaporator: Over the last 6 months, WSRC has only been able to operate the 3H evaporator for very limited durations because of cooling coil failures in the drop tank (Tank 30). During evaporator operations, this tank must be cooled to stay below the Authorization Basis temperature limit (site rep weekly 12/15/00). As an interim improvement this week, WSRC added an internal sealant to three of the five coils that have the lowest leak rates. Subsequent leak checks indicate that two of these coils do not have measurable leakage and have been placed back into service. While this improvement should increase evaporator performance, the cooling capacity remains insufficient for unlimited operation. WSRC will be required to continue operating the evaporator intermittently to control temperature in Tank 30. For the long term, WSRC plans to use Tank 37 as the drop tank. Facility modifications and salt removal from this tank will be required.

K-Area Material Storage (KAMS): On May 10th, WSRC submitted to DOE a conceptual design for storage in KAMS of several hundred plutonium contaminated HEU parts that are now at Rocky Flats (site rep weekly 2/23/01). The project would take 55 weeks to complete. Key elements include shipping the parts from Rocky Flats in screw-lid containers inside DT-22 shipping containers; removing the screw-lid containers from the shipping containers while inside the KAMS stack area (a radiological buffer area); repackaging the screw-lid containers into pipe over-pack containers; and double and triple stacking pallets of pipe over-pack containers in the stack area. While some preliminary evaluations have been done, many required safety analyses have yet to be performed, including fire and criticality analyses. Also, WSRC proposes performing radiological surveys during the repackaging operation because of the potential for contamination on the exposed screw-lid containers, but is basically assuming contamination will not be present. The site reps believe that this operation requires scrutiny because of the potential for contamination and the lack of filtered ventilation or confinement features for this room.

Tritium Extraction Facility (TEF): SRS is making rapid progress on the TEF design and construction. Last Thursday and Friday, the construction contractor poured the western half of the Remote Handling Building basemat – about 1,500 cubic yards of concrete. The contractor continues to place reinforcement and services in the east end and expects to make the next pour in late June. Also, WSRC completed the remaining detailed design work in mid-May. DOE Headquarters is planning a "Red Team" review of the design from June 21st to July 1st.