DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 16, 2001

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers / R. T. Davis
SUBJECT: SRS Report for Week Ending February 16, 2001

Staff members Contardi, Graham, Gwal, and White were on site this week reviewing safety related Instrumentation and Control, including applications for the Americium-Curium Project and the L-Area Experimental Facility. Hadjian was on site reviewing structural/seismic design for the Enriched Uranium Storage tank, the Tritium Extraction Facility, and the Pit Disassembly and Conversion Facility. Jellett attended National Research Council meetings related to salt disposition.

HLW Tank 6: SRC inspections of the primary tank wall are expected to be completed in about two weeks (site rep weekly 2/9/01). This week, WSRC completed inspections through the West riser and is now beginning inspections at the East riser. A sixth leak site was identified this week at about 145 inch elevation. No leak sites have been identified below the center horizontal weld (about 130 inches). WSRC will be prepared for a waste transfer from Tank 6 to Tank 8 by the end of next week. Although Tank 8 has seen similar service to Tank 6 (i.e., storage of dry sludge), Tank 8 was recently exercised up to the 130 inch level during sludge removal activities with no tank integrity issues identified. Using Tank 8 to the 130 inch level would reduce Tank 6 level below the lowest leak site identified to date. A decision on this waste transfer has not been finalized.

Americium-Curium (AmCm) Stabilization: The AmCm project is highly challenged and continues to receive top-level site management attention because of still unresolved vitrification equipment vendor issues, the pretreatment redesign, and emergent requirements (site rep weekly 12/22/00). The staff is conducting on-site reviews this week and next week to determine, in detail, how the safety issues raised in the Board's August 2000 letter are being resolved. Also, the project announced this week a 12-day slip in the start of the 2nd pre-treatment formal design review (now to begin 2/28/01). This slip appears prudent to allow a thorough review, which would address one of the issues in the Board's letter. Previous near-term schedules did not allow enough time for internal or external reviews. The project is strongly driven to complete a cost and schedule rebaseline by March 16th.

Plutonium Stabilization and Packaging: On Thursday, DOE-SR authorized WSRC to proceed with preliminary design for the 235-F project (i.e, Critical Decision 1), based on the expectation that WSRC will strive for minimal acceptable scope. Also, the site reps understand that WSRC efforts to achieve accelerated stabilization capability in FB-Line are proceeding in parallel. Relatedly, this week, a site rep observed the SRTC-Hanford outer 3013 can welder in operation and discussed with SRTC the questions described in last week's report. The welder operation is straight-forward. SRTC appears to be on a path to formally address the weld qualification questions during the next month.

Enriched Uranium Storage (EUS) Tank: The EUS tank outside H-Canyon is used now to store highly enriched uranium (HEU) solutions and will play an important role in the HEU blend-down program during the next decade. This is a large, double-shell tank (about 164,000 gal capacity). It is well anchored. The inner and outer tanks share a common dome. A recent WSRC structural analysis indicates adequate seismic margin exists, subject to fill height restrictions (e.g., protect the dome from sloshing). During a walk-down, the staff observed the potential for seismic interaction between the tank top and an adjacent stair tower. This is a condition that needs to be corrected.