DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 28, 2000

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers / R. T. Davis
SUBJECT: SRS Report for Week Ending April 28, 2000

A staff team was on site this week reviewing the Tritium Extraction Facility (TEF) confinement, stripper, and ventilation systems and the TEF remote handling building design features. Staff members Hadjian, Wille, Yeniscavich, and Zavadoski participated in the review.

H-Canyon Phase 3 Restart: Phase 3 restart will resume operation of the second solvent extraction cycle for uranium recovery and the evaporators only for second product cycle. Dissolving and processing Mark 16/22 spent fuel was suspended last September because of delays in phase 3 restart. In anticipation of successfully restarting this activity, WSRC resumed Mark 16/22 spent fuel dissolution on Friday. Cold runs for 1st cycle operations are planned for next week with 1st cycle operations expected to restart during the week of May 15.

On Monday, WSRC began their Readiness Assessment (RA) for the phase 3 restart at H-Canyon. The RA team observed simulator exercises/drills and second uranium mixer-settler and evaporator cold runs with minimal operational issues. WSRC plans to complete their RA next week.

The DOE RA team had planned to perform their review at the same time as the WSRC RA (site rep weekly 4/21/00). However, the team concluded that facility readiness was not adequate to support their review. Open issues include: Authorization Basis documents have not been approved by DOE, final criticality safety calculations associated with neutron monitors have not been completed by WSRC, and installation and testing of a new safety significant solenoid valve is not complete. Although DOE team members continued to observe cold run activities, DOE will not officially begin their review until WSRC completes their RA and concludes that the facility is ready. (3.a)

Tank 49 Benzene Depletion: WSRC declared success on benzene depletion runs in tank 49 this week (site rep weeklies 2/18/00 and 3/31/00). All 3 slurry pumps were operated for approximately 24 hours. During this run, benzene concentration in the vapor space peaked at about 940 ppm and subsequently reduced to 250 ppm. WSRC plans to decompose the remaining organics by heat and addition of a copper catalyst. The detailed strategy and safety basis for this activity is under development and should be available in May. (3.a)

9975 Shipping Containers: WSRC has provided a recovery plan to address issues identified during the 9975 shipping container drop tests (site rep weekly 4/7/00). WSRC is preparing a technical paper that provides a basis for using existing 9975 shipping containers for metal shipments only. This basis is expected to be available by mid-May. For oxides, WSRC is pursuing a design change to the package (bolted flange closure similar to that used on Y-12 DT-22 shipping containers). Additional drop tests will likely be required. The WSRC schedule will support 9975 shipping container certification in September. (3.a)