

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 10, 2001

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: R. T. Davis
SUBJECT: SRS Report for Week Ending August 10, 2001

Secretary of Energy Visit: On Thursday, Secretary of Energy Spencer Abraham and Assistant Secretary of Energy for Environmental Management Jessie Roberson visited SRS. The visit included site tours of the Tritium Facilities and the Defense Waste Processing Facility. The Secretary also conducted an all-hands meeting and stressed the important role that SRS plays relative to national security, environmental management, and nuclear nonproliferation.

HB-Line Phase II: Staff members J. Troan and R. West (outside expert) were onsite this week to observe cold run activities as a part of the contractor's Management Self-Assessment (MSA) for startup of HB-Line Phase II. The MSA started on Tuesday with seven open "A" items including DOE approval of the Basis for Interim Operation (BIO) and Technical Safety Requirements (TSR). There are also several equipment problems that need to be corrected and a criticality evaluation of cabinet and vessel as-built dimensions that needs to be performed.

Equipment problems (e.g., breathing air system and a stuck valve) limited cold run activities this week. During the operations observed by the staff, weaknesses with operator proficiency, procedures and simulations were identified. The contractor's MSA team appeared to recognize these issues. The team should finish their review next week. The WSRC Operational Readiness Review (ORR) is scheduled to begin in mid-September with the DOE ORR in mid-October. DOE-SR and WSRC continue to work with the staff to resolve issues identified in the Board's letter dated July 20, 2001.

Americium-Curium (AmCm) Stabilization: WSRC continues to pursue technical and programmatic issues to develop a detailed plan for disposal of the AmCm solution to the HLW system. WSRC plans to provide a baseline schedule and cost estimate next week and DOE should make a decision on the disposition option by early September. The staff conducted a video teleconference with the site this week to discuss the status, safety basis implications, and initial solubility testing results.

Potential hazards for the F-Canyon portion of this activity (i.e., solution neutralization and transfer) are similar to those identified for the pretreatment associated with the Multi Purpose Processing Facility (MPPF) vitrification option. However, most accident scenario consequences are less for the HLW option because the AmCm solution is diluted during the neutralization process whereas the MPPF vitrification option requires the solution to be concentrated. WSRC continues to evaluate safety basis issues for the HLW portion of this activity (i.e., solution transfer and sludge processing). Several safety-related upgrades will likely be pursued including additional contamination monitoring and ventilation upgrades for a H-Area diversion box.

Initial solubility tests performed by SRTC indicate that most of the alpha emitting isotopes are insoluble after neutralization. Therefore, most of the material is expected to remain with the sludge during sludge processing and then be transferred to DWPF for vitrification as a part of sludge batch 3.