

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 14, 2001

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: R. T. Davis/ T. D. Burns
SUBJECT: SRS Report for Week Ending September 14, 2001

Operational Status: Following the terrorist attacks on Tuesday, site operations were suspended and all non-essential personnel were released. Normal site operations were resumed on Wednesday; however, the site remains in a heightened state of security awareness.

2H Evaporator: The contractor Operational Readiness Review (ORR) for restart of this evaporator began early last week. The ORR team has currently identified several issues including problems with system status control, procedures and equipment operability. The ORR team should finish their assessment this weekend and the DOE ORR is now expected to start on September 24th.

On Monday, the site representatives and staff member Bamdad met with DOE-SR and WSRC to discuss evaporator accident controls. The staff has been concerned with the potential for buildup of flammable vapors during an evaporator shutdown scenario. Safety controls for this particular scenario are not identified in the safety analysis. Based on discussions with the staff, WSRC will implement compensatory measures to limit evaporator source term prior to startup. The control is not expected to impact operations because this evaporator will be used to process low source term material from DWPF. After startup, WSRC will consider upgrading existing non-credited equipment to prevent this accident scenario.

HLW Authorization Basis: Staff members Bamdad and Zull were on site to review progress on the upgrade effort for the HLW Safety Analysis Report (SAR). The HLW SAR is being developed in a modular fashion, and the review focused on the first three modules which deal with a portion of the Consolidation, Storage, and Transfer (CST) activities.

WSRC discussed their improved hazard and accident analyses and outlined their safety strategy for identifying and implementing controls. This strategy emphasizes crediting hardware rather than operator action for the performance of safety functions. In recognition of the scope of the physical upgrades required to achieve an optimal final control set, an interim set of controls has also been proposed. The intent of the interim control set is to minimize reliance on operator actions in the near term, while physical upgrades are being pursued. The interim controls credit existing hardware that was not necessarily designed or procured to current functional classification requirements. Backfit analyses are being performed to better quantify the associated vulnerabilities, and increased surveillance requirements or other compensatory measures may be required.

The adequacy of this overall approach is highly dependent on the appropriate evaluation and management of interim control vulnerabilities, and, to a greater extent, the pace at which the final control set is implemented. WSRC has submitted both interim and final controls for the CST modules to DOE-SR for concurrence and expects to submit SAR and Technical Safety Requirements by November 2001.