

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 11, 2004

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
J. J. McConnell, Deputy Technical Director
FROM: R. T. Davis/ T. D. Burns
SUBJECT: SRS Report for Week Ending June 11, 2004

Staff member J. Zelinski was on-site Monday through Thursday for familiarization with site operations. While on-site, Mr. Zelinski performed walk-downs of the Defense Waste Processing Facility, H-Tank Farm and associated evaporators, Building 512-S, the Tritium Processing Facilities, and the Tritium Extraction Facility.

External Interactions: On Thursday, Dr. Burns briefed the South Carolina Governor's Nuclear Advisory Council (SC-GNAC) on the Board's perspective regarding DOE's accelerated clean-up plan for high-level wastes at the Savannah River Site (SRS). Because this was the first briefing the Board's staff has provided to SC-GNAC, Dr. Burns provided an overview of the Board's charter, mission, and organizational structure as well.

The brief outlined the significant safety risks associated with extended operation of the tank farms, especially when compliant tank space is limited, and indicated that expedited waste removal, stabilization, and disposition is essential for reducing and eliminating these operational safety risks. Dr. Burns indicated that the Board believes that the current DOE plan, as briefed to the Board on April 27, 2004, for removing, stabilizing, and disposing of tank waste at SRS is sound and should be implemented without delay. The Board's position that a performance-based framework for making waste disposition determinations is appropriate was also discussed.

The briefing was well received by the Council and the Council indicated that they would like to maintain a dialogue with the Board on areas of mutual interest. Periodic future briefings were requested from the Board's site representatives.

HLW Clean-up Program: On Monday, the DOE Assistant Secretary for Environmental Management issued a letter of direction to the DOE-SR Site Manager re-authorizing the expenditure of FY04 funds for preliminary design of the Salt Waste Processing Facility and operation of other site activities related to salt removal, decontamination, and disposition (site rep weekly, 3/26/04). Continued progress on these capabilities is of fundamental importance to the success of the overall stabilization and clean-up program at SRS.

Tank Farms Safety Basis: Currently, planned evolutions that release trapped hydrogen gas require additional Safety Class controls (i.e. interlocks between pumps and hydrogen monitors) if the gas release can result in greater than 25% of the Lower-Flammability-Limit (LFL) in the tank head-space. WSRC has prepared a DSA/TSR change package that would increase the threshold for Safety Class controls to 60% of the LFL. Analyses supporting this change package have concluded that transient hydrogen accumulation is credible and will require additional controls. These transient accumulations were not previously considered. These controls may impact available tank space (e.g. controls require minimum vapor space heights). It is not clear that the proposed DSA/TSR changes are warranted. Additional staff scrutiny is necessary.