DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 7, 2001

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: R. T. Davis/ T. D. Burns
SUBJECT: SRS Report for Week Ending September 7, 2001

Headquarters Oversight Initiative: The Nuclear Regulatory Commission's (NRC) Regional Administrator for Region II (Atlanta), Luis Reyes, was on site to review safety management practices in support of Under Secretary Robert Card's initiative to reform DOE oversight processes. The new initiative draws on the ideology of the NRC's recently adopted Risk-Informed Regulation process in exploring the use of common Performance Indicators and "accredited" self-assessments as tools to focus limited federal oversight resources where they are most needed. Mr. Reyes is on detail to the Under Secretary for 90 days and his work includes the identification of practical Performance Indicators and "accreditation" criteria for self-assessments.

HLW Tank 49: On Tuesday, WSRC finished the transfer of waste from Tank 49 to Tank 50. Subsequent video inspections inside Tank 49 identified several cooling coil support bracket failures. No cooling coil leaks in the affected coils have been identified; however, these coils have been isolated pending an engineering path forward. The failure appears to be a cyclic fatigue failure that was likely caused by the significant run time of the slurry pumps as a part of the phenylborate decomposition activities. All failed support brackets currently identified are close to one of the slurry pumps. WSRC has written a non-conformance report and is evaluating safety basis impacts but does not believe that this failure will impact returning Tank 49 to HLW service. WSRC is also evaluating long term impacts and investigating other tanks that have seen significant slurry pump operations.

L-Area Experimental Facility (LEF): LEF is intended to demonstrate the spent nuclear fuel melt-and-dilute process. DOE plans to use this process in the proposed Spent Nuclear Fuel (SNF) Treatment and Storage Facility (TSF) to stabilize aluminum-based SNF. Information gained during the LEF campaign, which is expected to process 6 to 8 fuel assemblies, will be used as design input for TSF and will validate previous SRTC testing done with surrogate material.

The LEF project involves installing an induction furnace, filtered ventilation system, and support systems in the 105-L purification wing trailer space. A new control building has been built outside the purification wing to provide power, process control, and data acquisition. WSRC is nearing the completion of construction activities. After construction is complete, WSRC will perform integrated system testing to verify equipment operability. Operators have been selected for this activity and are reviewing and validating procedures. The project will be turned over to operations following integrated testing in October. Initial radioactive operations are expected to occur in June 2002.