

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 6, 2001

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers / R. T. Davis
SUBJECT: SRS Report for Week Ending July 6, 2001

FB-Line: WSRC has physically completed vault ventilation upgrades that address some major contributors to the September 1999 uptake event – lack of adequate air flow and airborne monitoring in the space. This is a step forward since personnel frequently enter this vault in the course of routine operations. A WSRC assessment is scheduled next week to review design documentation, testing, and operational aspects. By mid-September if performance evaluations are successful, WSRC intends to downgrade the vault to a contamination area and no longer require respiratory protection for entry. The site reps believe that this is acceptable provided that other current radiological control practices are maintained (e.g., contamination swipes on cans before handling).

HLW System: Tank 49 benzene concentration is less than 5 ppm, which is well below predicted levels. WSRC is evaluating sample results to determine the path forward. Also, a second pump has been installed to transfer liquid from the neutralization tank for the 2H evaporator cleaning to Tank 42. Once the liquid is transferred, the second (and likely final) acid strike to the pot can begin, possibly today. Decontamination of the neutralization tank dike continues.

Seismic Design Requirements: SRS is internally reassessing the current assumption that vertical acceleration is proportional to the horizontal acceleration for all earthquakes at all frequencies. This assumption is commonly made throughout the DOE complex. However, a preliminary site-specific review, considering Western-US strong motion records, has concluded that it may not always be conservative at SRS (e.g., frequency dependence). An independent peer review of the study is expected in a few weeks.

Recommendation 2000-2: Based on discussions with the staff and site reps, DOE is revising the phase II assessment report on H-Canyon confinement ventilation to discuss the programs that were assessed and that need to be maintained for long-term operability, such as the in-service inspection, predictive maintenance, and integrated system reliability programs (site rep weekly 6/22/01).

Tritium Extraction Facility (TEF): Last Friday, the DP-25 technical review team (i.e., the Red Team) provided the project a closeout briefing on the team's review of the detailed design. Issues raised included showing pipe slope on drawings (a design requirement to minimize water entrapped in the system), completing a development program on methane cracking by catalyst beds, and ensuring that constructability, operability and maintainability are formally reviewed and documented with sufficient rigor. The Red Team final report is expected at the end of July.

Also, on Tuesday, the constructor poured the remaining base slab for the Remote Handling Building (about 1,800 cubic yards of concrete), except for a small area near the shield door rails. The first wall is expected to be poured next week. The deuterium extraction demonstration of the Proof of Principle furnace is also scheduled to begin next week and run about 10 days.

Administrative: This is the final site rep report at SRS for Keilers, who will be reporting to LANL for similar duties on August 6th. It's been an education and a pleasure to serve here.