

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 15, 2010

TO: T. J. Dwyer, Technical Director
FROM: M. T. Sautman and D. L. Burnfield, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending October 15, 2010

F/H Laboratory: The Board staff is reviewing the proposed closure for 8 gaps that DOE identified in the Rec. 2004-2 Ventilation System Evaluation. In addition, the staff is reviewing the technical basis for the 0.2 leak path factor that is credited in the Documented Safety Analysis for full facility and glovebox fires and how this is protected during an accident.

Saltstone: SRR intends to resume grouting next week after shutting down in mid-August. A corporate review of 6 recent hopper pluggage events did not conclusively identify a cause for why excess dry feeds were present without adequate liquid. A 2003 design change unexpectedly reduced the mixer throughput capacity so that it has actually been running near full capacity during operations. SRR installed additional instrumentation to better monitor the mixer chute and dry feed system. After reviewing data from 62 previous process runs, four parameters (i.e., grout density, hopper level, grout flow rate, and grout pump discharge pressure) will have to be satisfied for 30 seconds to avoid premature liquid feed transitions.

Solid Waste Management Facility: The site reps reviewed Pad 16 recovery progress and lessons learned (see 9/10/10 report). Workers have removed 335 containers from Pad 16 and SRNS expects to resume handling of high-risk containers in November. SRNS is stocking up a large supply of ventilation equipment, contamination fixatives, and personnel protective equipment for emergency use in a dedicated facility. The site rep also reviewed and commented on some of the new and revised emergency procedures and drill scenarios.

Tritium: Rooms within the Tritium Extraction Facility contain tritium air monitors (TAMS) for potential tritium releases. SRNS designed the system to place duplicate TAMS in each room (monitored area). This design allows maintenance of the TAMS to be performed while maintaining coverage. The safety basis documentation allows workers to perform the monthly functional check of the monitors within a two-hour window without entering the limiting condition for operation (LCO). In order to be within this window, however, the workers are required to enter the start time in a logbook and begin a timer on the electronic status board. This week workers performed the functional check without beginning the timer on the electronic status board and failed to complete the maintenance within the two-hour period. They did not enter the LCO. This resulted in a Technical Safety Requirement violation for the facility.

Tank Farms: SRR needs to be able to transfer salt batches to the Salt Waste Processing Facility that contain low concentrations of solids. The site rep observed a demonstration where a special pump blended simulated salt solution inside a scaled blending tank with little disturbance of settled solids at the tank bottom.

Facility Walkdowns: The site rep observed a full facility fire training drill at 235-F, where drills just recently resumed (see 6/18/10 report). The site rep also walked down the 235-F facility to obtain a more thorough understanding of the Deactivation and Decontamination (D&D) planning (see 10/9/10 report). In addition, the site rep completed walkdowns of the Seven Springs Laydown area and the C-Reactor building.

Operations: At H-Canyon, a worker received a slight burn on his arm when he brushed against a flow transmitter that was weeping 24% nitric acid from a fitting. Another worker lost control of a hose used to place grout on the R-Reactor roof. The hose whipped free, hit the worker in the back of the neck/head, and knocked him face first into the wet grout.