

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 22, 2006

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: J. S. Contardi/M.T. Sautman, SRS Site Representatives
SUBJECT: SRS Report for Week Ending December 22, 2006

Tritium: The operator who was responsible for blowing the rupture disc last week during a deuterium transfer performed an activity without a procedure, performed steps out of order, and performed valve manipulations outside the procedure. (See 12/15/06 Site Rep weekly). The Site Reps also observed several of the first Tritium Producing Burnable Absorber Rods being cut.

H Tank Farms: Work to remove the failed Tank 37 transfer line was suspended when dose rates from the cut pipe exceeded the 200 mrem/hr alarm set point. Work was suspended again the next day when dose rates (1900 mrem/hr) exceeded the revised alarm set point (1000 mrem/hr). The Site Rep observed a review of the radiological controls where it was decided to plug the pipe ends to reduce the radiation streaming out.

The Site Rep and a facility representative walked down the 3-H Evaporator and all of the containment huts in the H Tank Farms, focusing on those huts which had been erected for several months. The Site Rep provided a list of questions to facility management about the age of the huts, their original purpose, current and future need, and how they are controlled. The Site Rep also inspected the Seven Springs and HY-1 laydown yards, where contaminated equipment from H Tank Farms is stored. In general, the equipment was stored appropriately and progress was being made in cleaning up the yards.

Savannah River National Laboratory: The Site Rep walked down the Separations Equipment Development (SED) Facilities I and II, where plutonium and uranium isotopes were processed and prototype plant-scale separation units were tested until 1978. Since plutonium hold up in chemical traps were removed in the mid-90's, this facility has been kept locked and is rarely entered other than for the occasional radiation survey. One concern is that the barrier preventing the residual plutonium from leaking out ports on the side of six 2-story high separation units (each containing up to a few hundred grams plutonium) appears to be just plastic and tape. A tag indicates the plastic and tape are 12 years old. Similar potential degradation issues apply to old plastic sleeving covering lines coming out of the top of gloveboxes in the mezzanine. Part of a cabinet and floor was covered in plastic in 2004 after contamination was found to be leaking out. Furthermore, there is a wood box reading 80 mrem/hr on contact whose contents are unknown and thus may not be tracked by the Radioactive Material Control Program.

Engineering: Recently, both the Department of Energy and the National Nuclear Security Administration sent the Washington Savannah River Company letters expressing concern with Conduct of Engineering issues related to authorization bases, process development, and equipment performance. The Site Chief Engineer held a mandatory meeting with all engineering managers to discuss engineering expectations.

Saltstone: Ad-mix system problems were fixed and batch 0 grout runs resumed this week.