

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 23, 2009

**TO:** T. J. Dwyer, Technical Director  
**FROM:** D. L. Burnfield and M. T. Sautman, Site Representatives  
**SUBJECT:** Savannah River Site Weekly Report for Week Ending October 23, 2009

**F-Area:** Thousands of old drums of depleted uranium oxide in 221-22F are being banded and palletized in preparation for off-site shipment (see 8/1/08 report). While raising a rusty drum (labeled as weighing 1500 lbs) up for a visual inspection and radiological smear, the drum slipped from the forklift's drum gripper and fell approximately four feet. The drum was not breached and none of the workers using remote tools were injured. Troubleshooting determined that the pressure exerted by the gripper arms decreased from 2200 to 1500 psi within five minutes, possibly due to contaminated hydraulic oil. In the future, the drum grippers will undergo more preventive maintenance and testing and the drum gripper pad condition will be inspected. The Site Rep also talked with the Solid Waste Facility Manager about how they were addressing similar issues with their forklifts.

**Hanford Low Assay Plutonium:** The initially proposed Specific Administrative Control (SAC) for preventing motor vehicle impacts will be replaced with two new SACs that better define how traffic barriers will be used and traffic will be secured during the outside transportation of 85-gallon overpacks. (See 10/16/09 report).

**Saltstone:** The Saltstone hopper nearly plugged while executing the second part of the restart plan Friday (see 10/2/09 report). While inhibited water was being processed during startup, a low flow alarm initiated setback. Shortly afterwards, several large clumps of material (some of it visibly dry) were seen in the hopper. Although operators were unable to divert the grout to the overflow catch container, the Shift Operations Manager initiated hopper flushes. This water drained through a small hole in the clumps and eventually eroded them away. The system was then shut down. Engineers are actively reviewing the videos and process data to determine a cause.

**Tritium Extraction Facility:** The staff attended a meeting in which inputs and assumptions to the safety analysis documentation were reviewed and revised. For those scenarios where the projected dose was primarily based upon exposure to tritium, the primary revisions to the input was to increase the available material at risk (MAR). While the primary reason for doing so was to increase conservatism in the calculations, this action would also allow additional material to be introduced. The actual analysis will indicate how much of an increase in projected dose to the public and the collocated worker is expected from these scenarios. For those scenarios where the projected dose was from an external source, the Site Rep identified two areas where the identified credited controls would not protect the worker. In each case, the controls were present, but the site had not taken credit for the administrative programs or designed controls. The Site Rep will follow up to determine the resolution of these items.

**Salt Waste Processing Facility (SWPF):** The Site Rep attended an SWPF project status meeting. In this meeting, the contractor identified that cost and schedule variance were improved but still negative as indicated by indices and that historically achievable efforts would not result in the contractor regaining all of the lost ground by the end of the year and could in fact result in further delays. The contractor did identify areas where they had not previously taken credit for work actually completed that should help to improve the schedule. The site rep will follow the project status.

**HB-Line:** The Site Reps observed operator rounds in Phase I and II, observed a facility fire/injury drill, and walked down the facility. Minor comments were provided to management.