

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 1, 2011

**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 April 1, 2011

**H-Canyon/HB-Line:** In order to satisfy delivery contracts, DOE directed SRNS to process enough high enriched uranium to produce another 1.5 MT of LEU. This processing would continue through July. DOE also directed HB-Line to mix and package 70 pipe overpack containers of plutonium not suitable for the Mixed Oxide Fuel Fabrication Facility for disposal at the Waste Isolation Pilot Plant. This will include oxide received from the Savannah River National Laboratory.

Meanwhile, SRNS submitted their flushing plans to DOE for H-Canyon and HB-Line. SRNS plans to complete the HB-Line flushes in April, at which point, 14 of the 45 Surveillance Requirements are candidates for suspension. Once flushing is complete in H-Canyon, DOE could place the following process areas in standby mode: both dissolvers, 7 evaporators, 10 mixer-settler streams, the strike tank, the decanter, and all but six hot and warm canyon vessels. Other potential changes include bypassing the nuclear incident monitors for the second uranium cycle vessels, outside facility tanks, and sumps, and suspending 215 of the required 617 Surveillance Requirements.

**Emergency Preparedness:** The site rep observed an H-Tank Farms training drill involving a seismic event. In the scenario, operators had to stop a waste transfer and salt processing, evacuate the main control room, set up the alternate Operations Support Center (OSC), and deploy a portable ventilation unit to Tank 48. Since this was one of the first drills involving backup facilities and the loss of cell phone systems, the drill revealed issues like the lack of emergency radios in the main control room and the fact that many of the phones in the alternate OSC were disconnected. It took about 75 minutes to manually shut down the first tank transfer, the first immediate action in the emergency operating procedure. Although the portable ventilation units are stored in a seismically qualified building, SRR does not store any gas in the building to power them due to environmental concerns. The site rep was very skeptical of the plan to siphon gas out of vehicle tanks. This safety equipment is necessary to prevent hydrogen building up in the headspace of waste tanks if a seismic event disables their ventilation system.

The site rep also observed a planning meeting for an H-Canyon/HB-Line seismic drill. These drills are causing operations and emergency preparedness staffs to take a hard look at their emergency procedures. Lively discussions are ongoing about whether it is better to evacuate or shelter following an earthquake, whether the public announcement system and radio repeaters would survive, whether having 8 hours of fuel in seismically-qualified tanks is sufficient for H-Canyon, and what to do when main and backup control rooms are not in seismically-qualified buildings.

**F-Canyon Remediation of Miscellaneous Transuranic (TRU) Waste Containers:** DOE conducted a readiness assessment (RA) of the planned operations in F-Canyon to remediate boxes of TRU waste. The DOE RA team identified six pre-start findings, three post-start findings, and two opportunities for improvement. The pre-start findings include the need to update the fire pre-plans to include TRU waste remediation in the truckwell, the need to revise TRU waste procedures to implement several technical safety requirements, and the failure to recognize that the airline suits had been modified without proper authorization. It was unclear whether the RA team recognized the need to have the suits qualified in accordance with the DOE respiratory acceptance program standard (DOE-STD-1167-2003), which also includes the configuration management requirements.