

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 29, 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 29, 2011

**F/H Laboratory:** While SRNS personnel were manipulating valves to restore steam to systems following a planned steam outage, they heard a loud banging noise. Steam was once again secured and personnel took the correct actions to ensure no significant equipment damage occurred. Upon removal of the insulation, it was evident that the valve had deteriorated with age. The deterioration of the valve and its unusual method of installation have led the site to the conclusion that the valve should be replaced and a downstream drain, which was previously removed, should be reinstalled.

**HB-Line:** Workers wearing plastic suits inside a contamination hut replaced a cracked glovebox panel. The radiological work permit for the task specified that the job should be suspended when the whole body dose levels exceeded 400 mrem/hr, the derived air concentration (DAC) exceeded 1000, or the surface contamination levels exceeded 1,000,000 dpm  $\alpha$ /100cm<sup>2</sup>. When they removed the panel from the glovebox, they measured whole body dose rates as high as 480 mrem/hr. They correctly called a time out and received approval from the shift operations manager and area radiological control manager to raise the suspension guide to 600 mrem/hr. The workers then replaced the panel. While tightening the bolts, an inspector pulled filter paper from an airborne contamination monitor that indicated airborne contamination levels as high as 2800 DAC. The team exited the area and radiological control operations found elevated surface contamination levels below the suspension guide. No one was contaminated and no unexpected personnel doses were recorded.

**Actinide Removal Process:** Operators inadvertently transferred 10 gallons of monosodium titanate and process water into the wrong strike tank. This resulted in this strike tank receiving a double strike. SRR will hold a fact finding meeting next week.

**Emergency Preparedness:** The site rep observed an F-Area severe weather drill involving F-Canyon, F/H Laboratory, the Waste Solidification Building, the Mixed Oxide Fuel Fabrication Facility, and F-Tank Farms (shift manager only). While the drill scenario was pretty straightforward, this was the first time SRS conducted a drill involving multiple contractors and DOE offices as well as both operating and construction facilities. (See 6/18/10 report).

**Savannah River National Laboratory:** SRNS x-rayed a wooden box with unknown contents (reading 80 mrem/hr on contact) that had been sitting in the Separations Equipment Development facility for years. The box contained a furnace. (See 12/22/06 and 1/5/07 reports).

**Nuclear Safety:** The site rep talked with SRNS nuclear safety personnel about their self-protection philosophy (see 4/22/11 report) as well as how they handled combustible controls in the draft HB-Line unmitigated fire scenarios.

**F-Canyon:** The site rep observed workers searching fruitlessly for aerosol cans that had been observed on the real time radiography of the transuranic waste boxes. SRNS is investigating whether they could use metal detectors to find these quicker.