

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 14, 2010

**TO:** T. J. Dwyer, Technical Director  
**FROM:** M. T. Sautman, Site Representatives  
**SUBJECT:** Savannah River Site Weekly Report for Week Ending May 14, 2010

Mr. Burnfield was on leave this week.

**Emergency Response:** Natural phenomena cause some of the largest public and co-located worker doses in the site Documented Safety Analyses. For example, the mitigated consequences of a seismic event at tank farms exceed 100 rem to co-located workers and 25 rem to the public. The tank farms Technical Safety Requirements not only includes the Emergency Response Program, but also includes an Event Response Program Specific Administrative Control that requires operators to perform 10 sets of actions following a seismic event. This not only includes terminating ongoing operations, but also installing and operating portable ventilation systems and manually monitoring hydrogen concentrations in waste tanks. However, a review of records back to 2004 indicated that H-Tank Farms did not conduct any seismic drills. (F-Tank Farms has conducted a seismic drill scenario, but the site rep has not reviewed its adequacy yet). The site rep is investigating preparations across SRS for natural phenomena events because these events can also impact multiple facilities, involve multiple contractors, and damage infrastructure critical during a response (e.g., communication systems and roads).

**F-Canyon:** After an electrical outage, one of the blowers for the transuranic waste enclosure failed to restart. Although the minimum number of blowers was still available, the enclosure was not achieving the desired differential pressure. During the week, repacking operations were repeatedly interrupted because workers noted swirling air flow around the dumper opening and detected contamination migrating from the dumper opening. Engineers believe these problems were caused by air being sucked back through the inoperable blower. Once the failed blower was replaced, ventilation returned to normal and the room was decontaminated.

Workers draining the fire suppression system in F-Canyon caused two unexpected flow alarms. Transuranic waste workers evacuated during the second alarm. The original fire impairment should have also included the fire suppression system. In addition, the shift operations manager did not fully understand which alarms to expect by the work.

**Modular Caustic Side Solvent Extraction Unit (MCU):** Operators resumed processing. The Justification for Continued Operations requires that 2000 gallons of strip effluent be diluted in the strip effluent feed tank. To date, more than 1400 gallons have been diluted so far. (See 3/5/10, 3/26/10, and 4/30/10 reports).

**R Area:** Radiological protection inspectors found beta-gamma contamination (max 14,000 dpm/100 cm<sup>2</sup>) on the floor after workers removed old pallets from a small building previously used for storing radioactive waste and used anti-contamination clothing.

**Facility Representatives:** The site rep observed a DOE-SR facility representative oral board. Both the conduct of the board and the candidate's performance were satisfactory.

**Defense Waste Processing Facility:** The site rep observed a field operator instruct a trainee on how to perform operator rounds on the third level. The conduct of the rounds and oversight of the trainee were satisfactory.