

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 13, 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 November 13, 2009

**Solid Waste Management Facility (SWMF):** While two operators were placing transuranic waste drums removed from a Pad 1 concrete culvert on pallets, a small puddle of water was noticed standing on the tarp covering the ground. The drums had previously been sitting in several inches of water inside the culvert, which had been sampled and found clean. When the drums were removed with a crane, the drums had been dried and surveys had not detected any contamination. The workers exited the area and were surveyed, but they did not notify their supervisor nor did they inform the radiological control inspectors that there had been a spill. Contamination (expected to be due to plutonium-238) was found on personal clothing of the two operators handling the drums, with a maximum contamination of 100,000 dpm alpha on one operator's shoes. Operations secured the culvert unloading area and immediate actions were taken to stabilize the area (e.g., covering the drum with a tarp). The recovery team found the source of the contamination to be a leaking drum. The contamination spread was limited to a small area around the drum and airborne radioactivity was low. The drum was overpacked and transported to another pad while the other drums were put inside another culvert. The initial recovery was completed before a major rain storm hit the area. More detailed recovery actions are being planned to recover the area for future activities and to determine what systemic actions are necessary to allow continued culvert unloading operations.

**F-Canyon:** The Site Rep observed the receipt of the first transuranic waste drum from SWMF, however, resumption of waste remediation will be delayed until next week because of diesel generator issues. During the monthly load test in October, the frequency readings for one of the generators took an extra 0.25 seconds to get within the Technical Safety Requirement (TSR) limit. While troubleshooting was in progress, a portable generator was installed, but it shed its load within a few hours. A page change to the TSR is now being pursued that will slightly modify the TSR basis, but still comply with industry standards.

**Nuclear Safety:** The Site Reps met with SRNS to discuss their plans for reviewing safety basis approaches and methodologies. Their goal is to eliminate implementation of "add on" requirements, streamline and standardize analyses, upgrade to current DOE approaches, and incrementally increase risk acceptance where prudent. The Site Reps did not philosophically object to the use of more sophisticated models or reexamining scenarios that were simply assumed to occur without examining their physical possibility. Other examples like downgrading controls that ensure zero releases at K-Area Material Storage or screening out chemical release scenarios when existing analyses indicate they have co-located worker impacts will need to be thoroughly reviewed.

**Saltstone:** The Site Rep observed four engineering teams present their recommendations to an Independent Review Team examining four recent pluggage events and a near-miss. The cause for the most recent near miss (see 11/6/09 report) is believed to be dry feed material passing through the mixer and hopper feed leg during a transition period of no liquid flow to the mixer, resulting in pluggage at the hopper discharge. The teams did not identify a single cause for the events, but a series of process modifications during the last year may have increased the likelihood of a dry feed/liquid mismatch reaching the hopper discharge where the pluggage has been found. Corrective actions address software, equipment, and procedures. Hot processing is expected to resume next week.