

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 26, 2014

**TO:** S. A. Stokes, Technical Director  
**FROM:** M. T. Sautman and D. L. Burnfield, Site Representatives  
**SUBJECT:** Savannah River Site Weekly Report for Week Ending September 26, 2014

**Saltstone:** During a grout run Monday, one of the hoses in the grout (peristaltic) pump ruptured. As soon as the operators received an alarm indicating that grout was in the Saltstone hopper overflow container (SHOC), they started taking actions to get the grout out of the mixer and hopper (i.e., stopping dry feeds and then later salt solution feed). Meanwhile, the other half of the grout pump was able to continue pumping grout through the grout line to the Saltstone Disposal Unit. To prevent grout accumulation in the grout line, operators performed a high pressure flush and then shot a rubber ball (i.e., a pig) at high pressure through the grout line. Then operators restarted the grout pump and started flushing the mixer and hopper to clean any residual grout out of them and the associated piping. Meanwhile, the SHOC filled up with 510 gallons of grout, at which point grout started to overflow by design into a trench. Weirs retained about 150 gallons of grout in the trench and up to an additional 150 gallons of grout drained back into the salt feed tank. Following the upset, dose rates due to grout in the process room were up to 80 mrem/hr whole body and transferrable beta-gamma contamination levels reached a couple mrad/hr (too high to count decays per minute). The operators' actions prevented the grout from being held up in the process equipment and hardening, which has greatly complicated past recoveries. SRR plans to inspect the failed hose with a camera, but foreign material in the dry feeds caused a previous upset (see 9/23 and 9/30/11 weekly reports) and are suspected again this time. SRR had recently installed a magnetic separator and screen to prevent foreign material in the dry feeds, but the entire current dry feed inventory had not been treated. SRR believes they might be ready to resume operations next week.

**Emergency Management:** The Emergency Operations Center (EOC) is located in the basement of a former administrative building with a failed roof. During a weekly test of the safety alarm system, observers could not hear the warble or public address (PA) system in A-Area. An investigation found that rainwater had leaked into an electrical panel in the basement, causing a large electrical arc. This caused the safety alarm and PA systems to be lost for A, B, C, and N-Areas for approximately two hours until power could be rerouted. Leaking rainwater caused an arc in another electrical panel a month ago. While SRNS was already preparing to fix the roof, DOE and SRNS have been trying get funding to build a new EOC for several years.

**L-Area:** The facility has a number of locations underground that share an interior wall with the basin. In some locations, basin water seeps through the wall and leaves a mineral deposit on the other side (see 2/24/12 weekly report). The site rep accompanied engineers conducting their semi-annual structural integrity program inspection of active and inactive leak sites on the -40 level. A leak site in the overflow tank room had reactivated (i.e., a wet sheen was noticeable), but the leak sites visible from the storage tank room mezzanine were nearly dry this time.

**Tritium:** The site rep observed SRNS conduct the first shift release board. The conduct of operations advisor briefed senior management on what he and the senior supervisory watch (SSW) participants had observed during the last 8 weeks (see 8/1/14 weekly report). The board agreed that this shift no longer needed continuous SSW.