DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 1, 2013

TO: S. A. Stokes, Acting Technical Director
FROM: M. T. Sautman and D. L. Burnfield, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending March 1, 2013

Fiscal Year 2013 Funding and Sequestration: Facing a $100M shortfall, SRNS will be notifying a large portion of its workforce that they will be going to a shortened workweek in April. If the shortfall is not resolved, SRNS is considering options that may include full time furloughs, operating some facilities only three days a week, and keeping many facilities at the minimum staffing allowed by their Technical Safety Requirements. These more drastic options would have significant impacts on operations, maintenance, and as well as addressing commitments to the Board.

H-Canyon: The site rep observed the pre-job briefings, field preparations, and actual recovery of the hoses and steam cart that appear to contain dissolved spent fuel (see last two week's reports). Workers disconnected the hoses, placed them inside a shielded drum, transported the drum to the hot canyon crane maintenance area, and then placed the drum on one of the canyon cell covers with a crane. Although real-time radiation monitoring indicated that workers were exposed to dose rates as high as 2500 mrem/hr (shallow), none of the workers received a deep dose higher than 12 mrem due to the time, distance, and shielding controls utilized. However, follow-up contamination and dose rate surveys of the steam cart unexpectedly found contamination and 17,000 mrem/hr on contact with the steam inlet nozzle of the steam cart but little contamination and dose rates near background level on the cart's discharge nozzle—the opposite of what was expected. This strongly suggests that the hose that connected the steam supply to the cart and the hose that connected the cart to the installed instrument air line were reversed. (Both hoses are identical except for the connections to the air line and steam supply and the excess length of both were looped around the same rack. Workers had replaced both hoses in December). If this was the actual configuration during the event, it would have allowed the steam purge to be performed, but when the operator tried to close the steam supply valve and open the plant air, he would have instead connected the 90 psi plant air and 150 psi steam while isolating the discharge hose and dip tube from the purge air. Without the air purge, steam remaining in the hose and instrument air could have condensed, formed a vacuum, and sucked the solution out through the dip tube. If the check valve did not work properly, it would also indicate why the operator reported seeing misting from a nearby plant air header.

Tank Farms: On 2/18/2013, a plume of vapor was noticed coming from the Tank 7 purge reheater. SRR evaluated the reheater for repair/replacement and SRR was moving forward to take the necessary corrective actions. Today, SRR determined that they should have treated the reheater as safety class equipment since it forms part of the pressure boundary. SRR is evaluating the reheaters on other tanks to determine the extent of condition.

On Thursday the site rep observed the preparations for an upcoming above ground transfer between Tanks10 and 11 as part of the planned salt dissolution in Tank 10.

A first line radiological controls manager stepped on a nail inside the radiological buffer area just east of Tank 32. The nail penetrated the boot sole, and punctured the foot. The Aiken hospital ER removed the nail and no contamination was detected. SRR later found several other sharps in the area. An extent of condition activity is under way to inspect all walking areas for sharps.