

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 14, 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 November 14, 2014

**L- Area:** While preparing two californium-252 (Cf-252) sources for final disposition, SRNS personnel opened two overpack containers under water in the Disassembly Basin. When SRNS opened the second overpack container and emptied it into the tray, they were unable to find the second source. SRNS believes that the source is contained in the basin. The site rep's initial evaluation of the situation indicates that each source currently contain approximately 10 mCi of Cf-252.

**Savannah River National Laboratory (SRNL):** Last week, the storage tank and fire protection wireless monitoring system began to communicate erratically. SRNS entered the applicable limiting conditions for operations and began fire patrols and periodic verifications of the fire water level. The communication problem was caused by water accumulating in the cabinet housing the safety-significant system and damaging a submerged a coaxial cable. The cabinet was not sealed and was exposed to the elements. (This system was installed in response to the Board's 3/27/12 letter to DOE). Troubleshooting was delayed for several days because site services later removed a breaker in order to calibrate it without realizing that this breaker in the old power house feeds the wireless monitoring system in another building. The workers had walked down the immediate area, but the breaker panel label had not been updated and the workers did not pull the drawing which had an amendment noting the wireless monitoring system.

**Emergency Preparedness:** The site rep met with SRR to discuss their plans for improving their drill program (see 10/10 and 10/24/14 reports). SRR will be conducting a review of their drill using an approach very similar to the SRNS one discussed in last week's report.

The site rep also observed the control room response to a SRNL C-Wing explosion drill scenario, the first time this scenario had been conducted in the field. An engineer identified that the simulated facility breach was in close proximity to air intakes for the air handling units providing ventilation for the C-Wing service floor and control room. This hazard warranted more attention than it received, including confirming that airborne activity in the control room was safe throughout the drill. The drill also helped identify the need to conduct further training on contaminated patient transfers, siting hot zone boundaries, and establishing barricades and to keep simulation to a minimum.

**Tank Farms:** As part of closure, SRR is isolating Tank 12 from the rest of the tank farm. This involves isolation of former high-level waste transfer lines. SRR construction personnel flushed one of these drain lines and later placed a wet tap on the line. In accordance with the technical work documents (TWDs), SRR placed the wet tap inside of a glovebag and then fed the drain from the wet tap into a plastic bottle that was intended to be placed at a lower elevation from the wet tap and outside of the glovebag. Had the drain been successfully set-up the remaining contaminated water in the line would have been able to drain directly to the bottle; however, construction found it hard to place the bottle at a lower elevation so they inserted a hand pump into the line between the glovebag and the bottle. The pump was not included in the TWDs and a hazard analysis was not conducted to ensure the revised scope did not create any new hazards. Further, SRR did not use typical controls such as inserting the pump inside the glovebag or sleeving the pump to prevent leaks. Thus when the pump failed, one worker contaminated his face (8000 dpm  $\beta/\gamma$ ). During the fact finding for this event the field personnel associated with this task did not realize that they had increased the scope and complexity of the task without modifications to the appropriate documentation and control set.