

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 12, 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 12, 2014

**Savannah River National Laboratory (SRNL):** SRNL continued the project to replace the windows in the shielded cells. In order to accomplish this task SRNL has set up a localized contamination area that includes the normal entry into the shielded cells, as well as a portion of the shielded cell facility. A design engineer who was qualified as a radiological worker violated the contamination boundary and introduced a non-radworker into the contamination area. Neither person was wearing the correct personal contamination clothing.

A researcher, who was trying to replace a pump inside a contamination area, scavenged two other pumps to configure one pump that would accomplish the task he desired. In the process of disassembling one of the pumps, he contaminated his hands (~6000 dpm  $\alpha$ ) without realizing that he had exposed contamination that was previously internal to the pump. Because he did not realize what he had done, he contaminated several other areas in the lab before performing a contamination survey while exiting the lab.

An engineer, who was in the process of preparing for dismantlement and reconfiguration of an old laboratory, discovered a trap in the high activity drain line that was not previously analyzed for criticality concerns. In this case, a trap is a steel box that has a larger hydraulic diameter than the drain line, allowing the fluid to slow down and any solids to fall to the bottom of the trap. The trap also has a screen to further retain the solids in the trap. The laboratory notified criticality safety and administratively shut down the use of the high activity drain in other laboratories until the drain lines could be confirmed to be within the accepted configuration control. The lab also put controls in place to preclude backflow into the trap until they complete the nuclear criticality safety evaluation.

While performing an assessment of the glove box inspection program, a member of the SRNS Independent Evaluation Board discovered a discrepancy between the inspection form that was being used to conduct the annual glove box inspections and the one that was contained in the approved facility procedures. The form SRNL was actually using was from an electronic database, which had not been updated when the procedures were updated. In addition, the database was being used to schedule the annual inspections of the glove boxes. SRNL stated that over a third of the safety significant glove boxes were late for their inspection. SRNL determined that together these two failures resulted in a programmatic.

In each of the cases above, SRNL is taking the appropriate actions to correct the deficiencies and to alert the remainder of the site.

**Tank Farms:** SRR construction workers were controlling the manifolds and breathing compressors for tasks they were completing while on breathing air in two separate huts on tank 15. A manifold operator and a compressor operator became confused and shut down the breathing air compressor for workers who were still in their breathing air supplied respiratory protection. SRR shut the work down, and several changes were made to the layout of the breathing air systems; however, the procedures were not changed to correct a significant problem that would allow a repetition of the event until the DOE fac-rep became involved.