

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 10, 2016

**TO:** S. A. Stokes, Technical Director  
**FROM:** M. T. Sautman and Z. C. McCabe, Site Representatives  
**SUBJECT:** Savannah River Site Weekly Report for Week Ending June 10, 2016

**F/H Laboratory:** A technician did not check the label of a tank farms sample inside a shielded container and loaded a high radiation sample (500 mrem/hr @ 30 cm) into the shielded cells without the proper controls. These controls would have included: a formal pre-job briefing, a designated person-in-charge, continuous coverage by a radiological protection department (RPD) inspector, the use of electronic and extremity dosimetry, guarding the doors, and a public address announcement warning people of the high radiation area. When the technician started to remove the sample from the shielded container, he set off a radiation alarm and rather than responding to the alarm per the procedure, he just put the sample back in. When a RPD inspector showed up later on, he realized what had happened and took appropriate actions. Management called a stand down shortly thereafter, briefed all personnel, and put in place compensatory actions.

**Savannah River National Laboratory (SRNL):** The Outside Underground Fire Water Supply System includes the safety significant 782-A water storage tank, which is known to be old and corroded (see 8/23/13 weekly report). The tank began leaking from the 0.25" thick bottom plate. The size of the leak is growing and is currently about 1.5" long X 0.25" wide. So far, the water loss has been accommodated by the makeup water supply. A vendor will be inspecting the tank's interior Monday and SRNS is pursuing various options to repair the tank or to address the leak with a modification.

SRNL Research Operations Division exited deliberate operations on June 6.

**Solid Waste Management Facility:** Workers in plastic suits sampled the residue that leaked out of the welded stainless steel cylinder (see 5/27/16 report). Riggers used an A-Frame to lift the leaking cylinder and three similar ones nearby ones so that they could be placed inside a plastic bag and put on a new pallet with a spill dike.

**H-Area Tank Farm:** A lock out work order for a nitrogen flow switch specified a single point lock out to isolate the switch, however, the switch had two energized feeds. Lock out procedures include a verification step to ensure a safe energy state after a lock out. The location of verification was intended to be at the switch, which is where the work would be performed. The operator verified the lock out at a different location without requesting approval from the shift operations manager, engineering, and the work group manager as required by the Tank Farms lock out program procedure. The location that was checked by the operator was de-energized and the lock out work package was signed off as complete. The following day a qualified electrical worker (QEW) was authorized to replace the switch. Prior to beginning the task, the QEW performed a pre-work voltage check on the switch, per the site electrical safety manual, and discovered voltage present. The QEW appropriately stopped work and notified his supervision. There were no injuries or electrical shocks.

**DOE-SR Letter to SRR:** DOE-SR sent a letter to SRR on June 1 expressing concern about the series of recent operational events. DOE-SR requested a plan to address the recent issues that considers the effectiveness of the previously identified measures to improve procedure compliance and performance.