

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 8, 2021

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** M. T. Sautman and Z. C. McCabe, Resident Inspectors  
**SUBJECT:** Savannah River Site Activity Report for Week Ending January 8, 2021

**Savannah River National Laboratory (SRNL):** The south sand filter exhaust fan caught fire on Monday morning. SRNL personnel were first alerted of an abnormality when the control room received a low differential pressure alarm. The control room dispatched an operator to the fans just north-east of main laboratory building. The operator saw smoke coming from the south fan belt guard and reported it back to the control room who requested support from the fire department. While the fire department was en route, flames began to emit from the belt guard. The fire department was able to quickly extinguish the fire. SRNL are still investigating the cause and are planning to have a fact finding meeting in the near future. The impacts to the facility were minimal as the north fan came online as designed when the low differential pressure set point was reached. The following day the fan belts were replaced and the fan was placed back in service after a successful test of the fan in maintenance mode.

**H-Canyon:** During a review of engineering documents, H-Canyon personnel noted that the non-safety related 221-H diesel generator loss of power test should be completed at a semi-annual frequency rather than the annual frequency it had been completed at since 2003. The National Fire Protection Association is the driver for the surveillance rather than the Technical Safety Requirements and thus not tracked the same way. It had been just under a year since the last loss of power test when H-Canyon personnel identified the oversight. They administratively removed the generator from service pending scheduling and completion of the test.

**Salt Waste Processing Facility:** Parsons has found higher than expected dose rates at a couple locations. Operation of the caustic side solvent extraction (CSSX) contactors creates a fine mist that is carried into the process vessel vent (PVV) system. The mist is collecting in the piping prior to the moisture removal trains. Three valves upstream of the demisters have had contact dose rates around 1 rem/hr. Parsons has been flushing these valves to reduce the rates below 100 mrem/hr @ 30 cm and the resident inspector (RI) observed portions of this activity. Parsons is also looking at adding a continuous flush mist to help scrub out the mist created by the contactors. Parsons is also frequently changing the PVV pre-filters to keep the whole body dose rates in that area less than 100 mrem/hr. Some of these pre-filters have been as hot as 3.5 rem/hr on contact. Parsons also found higher than expected dose rates in the CSSX corridor outside the rooms that house equipment used to transfer Cs-137 rich solutions. Filling flush lines and performing flushes of the piping have reduced dose rates and Parsons is monitoring two pipe elbows to see if a check valve needs to be replaced or whether additional shielding is warranted.

**Defense Waste Processing Facility:** The RI and the Safety and Health Manager visited the laboratory area where a water spill spread contamination to an adjacent laboratory service room and a radiological buffer area corridor (see December 11, 2020 report). The purpose of the visit was to discuss the extent of contamination, the decontamination techniques SRR used, and the current radiological conditions. SRR intends to remove portions of the floor since contaminated water flowed under it.