

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 28, 2020

**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 February 28, 2020

**235-F:** SRNS submitted revisions to the Basis for Interim Operations and Technical Safety Requirements to DOE. SRNS intends to remove the high-efficiency particulate air filters that filter air from the cells and gloveboxes. SRNS has also proposed no longer crediting the filter efficiency of the sand filter, although the sand filter would still be present. The resident inspector (RI) questioned the safety benefit of the credited exhaust fan, exhaust tunnel vacuum, ventilation system interlocks, and flow path structure if the safety basis was just crediting moving unfiltered air from inside the facility to a ground level release outside the facility. SRNS is also crediting the fire protection and emergency response programs as safety significant controls which reduce the co-located worker dose consequence from a seismic event and fire below 100 rem total effective dose (TED), although neither of them is a specific administrative control. The RI questioned whether the existing procedures and training of F-Area complex personnel is sufficient to warrant a four-fold reduction in the dose consequence from entrainment. The RI also questioned the unmitigated co-located worker dose consequence due to a loss of confinement scenario. SRNS later said that the dose consequence was 101 rem TED, but that no safety significant controls were needed due to the conservatism in their analysis.

**Savannah River National Laboratory (SRNL):** In order to calibrate one of the Off-Gas Exhaust (OGE) pressure transmitters, a work package required the programmable logical control for the B2 fan to be in the “Run” position and the B1 to be in the “Stop” position. However, the control room operator (CRO) mistakenly assumed that the B2 fan (currently running) that was in the “Lead” position met the intent of the procedure required configuration of “Run.” As such, when the CRO placed the B1 fan in the “Stop” position, the B2 fan stopped as well, which resulted in the OGE system differential pressure to fall below the alarm set point. SRNL personnel took the appropriate actions to evacuate personnel from the affected areas, entered the appropriate limiting condition for operation, and eventually restored the system. Radiological Control Inspectors (RCI) did not find any spread of contamination. Discussions during a fact finding revealed numerous shortcomings that resulted in this error. For instance, although the task involved operations personnel, no one from operations was present during the pre-job brief. Additionally, the step in the work package directed the verification of the fan configuration versus actually changing the configuration. More notably, at the time of work authorization, the Work Release and On-Watch shift operations managers (SOM) did not recognize that the OGE fan configuration would be changed. Shortly after the work was authorized, the On-Watch SOM began to question the appropriate system configuration. He then told some of the control room personnel that he would be back, and left the control room to consult with management while the work continued.

**H-Canyon:** Unclear roles and responsibilities and lack of communications led to an RCI accidentally turning off the air to another’s supplied air during a plastic suit job. The RCI inspector was not actually assigned to valve off the air lines and inexperienced with plastic suit work in this portion of the facility.