

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 19, 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 February 19, 2021

235-F: The breach of enclosure scenario assumes a breach in the cold press glovebox results in increased air flow from the glovebox into cell 1 and causes air entrainment of material-at-risk (MAR) in cells 1 through 5, which are interconnected. The revised scenario excludes the MAR in the coolers and furnaces, a 32% reduction. In the seismic event scenario, the entrainment of MAR is being calculated differently depending on whether the MAR is subject to active airflow or is not subject to impact or airflow (i.e., static conditions). SRNS says the unmitigated doses to the co-located worker due to these scenarios is now 54.8 and 92 rem, respectively.

Emergency Preparedness: Eighty-five of the 468 members of the SRNS facility emergency response organizations did not participate in a drill in 2020. This includes 50 members at the Savannah River National Laboratory (SRNL). In the Emergency Operations Center, fifty-one personnel who man the Technical Support Room and forty-seven who have positions in the Command Room and Consequence Assessment Room also did not participate. SRNS has been conducting virtual drills for these facilities and positions in 2021.

K-Area: K-Area personnel identified that they violated their Technical Safety Requirements earlier this year by introducing a 9975 shipping container's primary containment vessel (PCV) into the Destructive Evaluation (DE) Room without verifying that the hydraulic press was de-energized (see 2/12/21 report). Further investigation identified that K-Area personnel violated the same TSR control multiple times by creating pressurizable containers in the DE Room Glovebox when they sampled plutonium oxide material. K-Area personnel are continuing to look into all other potentially pressurizable containers in the room and glovebox. Additionally, SRNS is performing a root cause analysis.

Savannah River Tritium Enterprise (SRTE): The resident inspector provided feedback following an oral board regarding the scenario discussed regarding minimum staffing at many boards over the past several years. The resident inspector pointed out that the scenario is largely unchanged when presented to candidates and does not touch on the most recent minimum staffing issue SRTE experienced in 2017. At an oral board this week, SRTE personnel included a question that incorporated the feedback.

H-Canyon: H-Canyon personnel had not routinely wore combination cartridges (for industrial and radiological hazards) on their full face respirators for a specific task as required by the procedure. The Assisted Hazards Analysis for the procedure did not include the requirement as it should have. Once the error was noted, H-Canyon personnel issued combination cartridges as required for the next evolution, but when the respirator issuance software prompted them for a change out schedule (as required for combination cartridges), they did not believe it was required. They then issued the respiratory protection via a paper form (as a work around) which is only intended to be used when the software is unavailable.