

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 17, 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 January 17, 2020

Salt Waste Processing Facility (SWPF): The resident inspectors (RI) observed the last planned emergency preparedness drill prior to the start of the DOE Operational Readiness Review (ORR). The scenario was a process vessel explosion with a contaminated injured person. The RIs observed activities in the control room, incident scene, incident command post and operational support center during the drill. Fire Department dress down was curtailed due to a real injury elsewhere at SRS. The control room response was orderly and personnel ensured that new information was promptly and clearly communicated to the room. There was a slight delay because of confusion over where facility personnel were to meet the fire department. The transfer of the contaminated worker from the incident scene to the ambulance potentially contaminated the transfer route, but workers took actions to control the path. While there was a desire to perform accountability in the administrative building and the support trailers, there was not a defined process for how to perform this during a Remain Indoors protective action.

Savannah River National Laboratory (SRNL): Site rigging personnel were attempting to move a fan motor into a contaminated basement room from outside. This involved lifting the motor over a railing and lowering the motor down approximately fifteen feet with a tine attachment on a fork truck and a chain fall. With the motor less than a foot from the floor, a rigger began drifting (physically pushing) the motor into the doorway where other riggers were prepared to transition the load to a floor crane in the contamination area. The rigging team determined that they needed the tines to be tilted down slightly. After the second “bump” down the rigger began drifting the motor again when the lifting attachment slipped off of the tines and fell in front of the rigger. No one involved was injured, but the motor, which fell approximately 8 inches, was damaged. The team halted their efforts; however, they did use the same equipment to raise the old motor (already outside the facility) a few inches, enough to slide a pallet underneath, with the same lifting attachment.

Tritium Extraction Facility (TEF): A worker protection system (WPS) card in a circuit board failed on December 31, 2019 which resulted in the loss of several pieces of equipment. The alarm response directed TEF personnel to a technical reference document that listed several affected systems including area radiation monitors (ARM) and tritium air monitors (TAM). TEF personnel promptly implemented the appropriate compensatory measures for the systems listed. However, two TAMs and one ARM (not safety basis related) were not included on the list in the technical reference, and, thus, not identified by TEF personnel. Six days later TEF personnel identified that these systems were also impacted by the failed WPS card and took the appropriate corrective actions. There was no other evidence of failure of the impacted TAM and ARMs. In fact, the TAM was able to pass the daily operability checks and the ARMs passed the quarterly surveillance two days after the card failed. Tritium personnel are currently investigating this seemingly partial card failure.