

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 4, 2019

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 October 4, 2019

Salt Waste Processing Facility (SWPF): Parsons conducted an EP exercise that was evaluated by the contractor Operational Readiness Review (CORR) team. The exercise scenario consisted of an Alpha Finishing Facility (AFF) process deflagration concurrent with an AFF ventilation system failure. This caused an injury, a release of contamination inside the AFF, a radioactive stack release, and the declaration of a Site Area Emergency. The resident inspectors (RI) and visiting staff (A. Hutain, D. Owen, and S. Seprish) observed the exercise at the incident scene, the control room, the incident command post, the operations support center, the SRS Operations Center, and the Emergency Operations Center (this portion was a coached drill). At the contaminated incident scene, most responders arrived wearing rubber shoe covers, but the Incident Scene Coordinator (ISC) did not. Later when responders were leaving the AFF, the Incident Scene Coordinator was wearing rubber shoe covers because he contaminated his shoes while other responders were wearing shoe covers to protect their shoes from contamination. This caused confusion and resulted in the ISC contaminating an airlock and the personnel contamination monitor. The hot zone step off pad also had to be relocated. The ISC ended up being unavailable during much of the exercise. The RI also questioned controllers later on when they provided survey data indicating the ISC shoes were no longer contaminated. The controllers subsequently changed the data to reflect they were still contaminated. Operations personnel entered a limiting condition for operation (LCO) for the ventilation system. The staff questioned if they realized the high efficiency particulate air (HEPA) filters were breached because operations did not enter a specific condition of the LCO for filter efficiency <99%. The drill scenario also resulted in activating an alarm for low differential pressure across the HEPA filters. However, the staff team found that the associated alarm response procedure prescribed incorrect actions. Other parts of the response went better.

Recommendation 2012-1: In response to a SRNS independent review of fire hazards, SRNS is planning to remove several ceiling tiles to reduce the amount of potentially combustible material. This removal will adversely impact the functionality of the installed fire detection and alarm system, a defense-in-depth/important-to-safety (DID/ITS) system. This system was installed as a Rec. 2012-1 deliverable to support the surveillance and monitoring and deactivation phases. Rather than replace these tiles with noncombustible tiles, SRNS has requested that DOE approve the permanent degradation of this system and eliminate this system as a credited DID/ITS control. SRNS believes that a full facility fire is incredible once these tiles are removed.

H-Canyon: The general service portable seismic air compressor, is required to perform the safety significant specific administrative control of purging hydrogen from the H-Canyon process vessels in the event of a seismic induced failure of the instrument air system. The RI observed several vehicles and an excavation site surrounding the staging area for the air compressor and questioned if this activity was reviewed through the unreviewed safety question process. DOE-SR personnel determined that it was not properly documented. H-Canyon personnel have since halted this work until the concerns are addressed.