

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 10, 2018

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 August 10, 2018

Staff Activity: B. Caleca, D. Cleaves, Y. Li, Outside Expert K. Folliard, and the resident inspector met with DOE-SR and SRNS personnel to discuss the H-Canyon Exhaust (HCAEX) Tunnel. The discussions focused on the non-linear analysis acceptance criteria, analytical inputs and assumptions, and Savannah River National Laboratory (SRNL) testing of contaminated concrete cores removed from the HCAEX Cross-over Tunnel last year. The non-linear analysis is ongoing and is scheduled to be complete in May 2019.

Savannah River National Laboratory: Last Sunday, a fluorescent lighting ballast caught fire when workers re-energized the light following some work nearby. The fire quickly self-extinguished and damage was minimal. The light was 1980s vintage and aging is believed to be a factor in the ignition. SRNL is looking at some other lighting fixtures that are of similar age to determine if they should be replaced. The light was near a large, heavily shielded Co-60 source. The resident inspector (RI) questioned the time between the first public address (PA) announcement to stay clear and the second announcement to evacuate the building (+0:16), completion of accountability (+0:28), and tracking down 5 missing construction workers (+0:38). Because the missing workers stated they did not hear the evacuation announcement, SRNL is investigating whether the known PA dead zone was properly controlled or whether there are audibility issues where the workers were located during the evacuation PA announcement.

Emergency Preparedness: The RI observed a drill involving a simulated transformer room fire in L-Area and a worker receiving an electrical shock. While the Fire Department (FD) quickly placed the unconscious worker in an ambulance and extinguished the fire, the slow facility response raises questions again about the effectiveness of having K-Area control room staff act as the Area Emergency Coordinator (AEC) during the day shift (see 12/19/14 report). Facility personnel never provided an automated external defibrillator to the victim and the facility First Aid Team arrived 12 minutes after the victim was already in the ambulance. The facility did not provide a representative to meet the FD to provide information about the fire so firefighters had very little information when they entered the facility. The first PA announcement occurred 3 minutes after the victim was in the ambulance and the PA announcement to evacuate the building was four minutes after the fire was extinguished. By the time the L-Area Shift Operations Manager (SOM) arrived as the Incident Scene Coordinator (ISC), it was after the FD had already taken care of the victim and fire so the Incident Commander ended up briefing the ISC. The facility's response was slowed because workers at the scene initially contact the SRS Operations Center and the K-Area control room prior to contacting the L-Area SOM and the L-Area SOM must get approval from the K-Area AEC (who may only be a control room operator) for all decisions. Malfunctioning security equipment also delayed the completion of accountability until 48 minutes after the drill commenced.

Tank Farms: Engineers estimate that the salt growth on the exterior of the 3H Evaporator pot from the one active leak site has been ~0.5 liters/day. This is within safety basis limits.