

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 24, 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 24, 2020

Savannah River National Laboratory (SRNL): The Central Hood Exhaust System (CHEX) for B and C-Wings have four fans each, three of which are necessary to maintain the technical safety requirement minimum vacuum. Last month, one of the C-wing fan motors failed. While bringing in the replacement, rigging personnel damaged it which delayed installation (see 1/17/2020/ report). Just before shift change on Sunday morning, another C-Wing CHEX fan motor failed. Control room personnel received a low pressure alarm and pulled the appropriate alarm response procedure. After verifying that the pressure was below the normal range, the shift operations manager (SOM) implemented the immediate protective action of directing (via the public address system) personnel to place C-Wing laboratories in a safe condition and then relocate. The SOM then entered the applicable limiting condition for operation and directed radiological protection department personnel to barricade the affected laboratories. Upon investigation, SRNL personnel determined that the failure was due to degraded wiring. During a fact finding meeting, SRNL personnel speculated that this may be due to the long service life of this particular motor; however, no one had actually looked into the actual age.

HB-Line: Control room personnel received a trouble alarm for interface card 7 of a fire detection system on a Sunday evening. The HB-Line SOM contacted the on-call fire protection engineer at home and confirmed that the interface card trouble alarm condition meant that the system was inoperable. The fire protection engineer did not have the necessary reference material at home and incorrectly assumed that interface card 7 corresponded to MAPNET card 7 on the system which covers portions of 6th level. However, interface card 7 corresponds to MAPNET card 5 which covers another portion of the facility. As such, HB-Line personnel initiated a fire patrol every hour for the incorrect portion of the facility. The fire protection engineer intended to follow up on this upon returning to SRS the following morning, but became ill and missed the next several days of work. Several days later the Fire Systems Test Group was discussing their troubleshooting plans with the fire protection engineer when they realized the error and subsequently notified the SOM, who corrected the error.

K-Area: The resident inspector (RI) observed an emergency preparedness drill in K-Area. The scenario included a victim with an allergic reaction and a simulated fire involving a vehicle and low-level radioactive waste. During the drill, the RI observed several issues with command and control, communication, and delegation. Similar to the drill in L-Area last week (see 1/17/2020 report), the communication between the SOM and the incident scene was inadequate as evident by the fact that the Area Emergency Coordinator (AEC) asked the communicator if the fire department had arrived at the facility while the fire department were already fighting the fire. Additionally, the AEC was coached by a controller that they failed to announce their role as AEC and verbally declare an alert, yet they did not correct this until approximately ten minutes later. These and other concerns noted by the RI were also noted by the senior observer. Additionally, during the control room player hot wash, several alarms came in that the control room operator failed to announce. This was also noted by the senior observer.