

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 13, 2023

TO: Katherine R. Herrera, Acting Technical Director
FROM: A. Z. Kline, L. Lin, Z. C. McCabe, and E. P. Richardson, Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending January 13, 2023

Protective Force: The resident inspectors (RIs) continue to investigate the safety basis related issue through discussions with relevant site security organizations (see 1/6/23 report). At this time, the RIs have determined that there is no configuration-controlled document or process to ensure that field implementation of changes to security posture do not occur prior to going through the safety basis screening across the site. Last week, the RIs informed BSRA and SRMC of the issue. During a discussion this week, the RIs questioned SRNS personnel on whether E and F-Area personnel were aware of the change and had done a safety basis screen. Shortly after the meeting, SRNS personnel informed the appropriate personnel for the first time. DOE-SR has been pursuing this at the executive level and has informally (verbally) prohibited the protective force contractor from making additional changes until this issue is resolved.

SRMC Issue Investigation: The RIs observed an issue investigation about a contamination event at the Saltstone facility. The investigation meeting was less than adequate in that many of the key personnel (three of five) were not present. This required the team to rely on written statements and co-workers observations which precluded them from identifying what occurred.

Savannah River National Laboratory (SRNL): SRNL had three safety-significant (SS) fire suppression systems fail due to freezing conditions in December which were discussed in their issue investigation process. SRNL personnel continue to show weaknesses in the conduct of investigations related to identifying appropriate problem statements, direct causes, and establishing timelines.

The most recent investigation failed to adequately investigate the response to the receipt of a SS low-low (LL) alarm for the fire water tank level. The alarm response procedure directed the shift operations manager (SOM) to evaluate entering Limiting Condition for Operation (LCO) 3.1.1 Condition A and/or B. When they received the alarm, the SOM entered only Condition A (for an inoperable alarm) and not Condition B (for an inoperable sprinkler system). The Technical Safety Requirements explicitly state the inoperability definition of the sprinkler system, which includes receipt of the LL tank level alarm in the control room. SRNL personnel did not investigate how the SOM reconciled this until after the RI identified the concern. SRNL personnel have since stated that other non-safety related indications in the control room allowed them to conclude that the alarm was inoperable, thus they entered Condition A, and determined Condition B was inappropriate. Although the sprinkler system was operable in this instance, it is noteworthy that upon reviewing the only two relevant SS indicators in the control room (the alarm and digital level indicator) which indicated that the fire water tank was lower than the required minimum, the SOM determined that the system was inoperable prior to completing any further actions. Further, SRNL personnel later reviewed this practice and determined it to be appropriate. Condition B of the LCO includes two immediate required actions, a fire patrol and prohibiting the start of new hot work, which were not performed. The alarm cleared approximately five minutes after receipt and site services verified the tank level was adequate.