DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 22, 2022

TO: Christopher J. Roscetti, 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 July 22, 2022

Staff Activity: Erin McCullough and Seraphin Castelino of the Board's technical staff were onsite this week for resident inspector augmentation.

Savannah River National Laboratory (SRNL): This week, BSRA personnel reconvened the fact-finding meeting regarding the less than adequate response to several safety related system issues following the loss of instrument air. In the meeting, BSRA personnel discussed various portions of the response that were not up to management expectations (see 7/8/22 report), such as the inappropriate limiting condition for operation (LCO) administration during the second set of failures of portable instrument air compressors on 7/4/22. In this instance, BSRA personnel entered LCO 3.2.5 condition A, which required several actions be completed including restoration of the Off-Gas Exhaust (OGE) system within 24 hours. BSRA personnel decided to remain in the LCO condition until the normal instrument air compressors were back online despite having the necessary instrument air from the portable compressor. Thus, SRNL personnel did not take actions to exit the LCO and restore the OGE system to operable. When the required actions for condition A cannot be met, SRNL personnel must enter the subsequent LCO condition, 3.2.5 condition E, and place the affected areas in standby mode within 6 hours. The shift operations manager (SOM) did not recognize that they were required to enter condition E before the 24-hour clock expired and believed they had 30 hours (24 hours plus 6 hours from condition E) to place the areas in standby mode, based on the only available documentation. The SOM entered condition E and completed the required actions at 27 hours and 31 minutes after initially entering condition A. Due to the upset condition, SRNL personnel had already barricaded the affected areas and stopped all work several hours prior; however, placing an area into standby mode requires ensuring all the necessary actions outlined in the technical safety requirements (TSRs) are met prior to officially entering standby mode. During the fact-finding, the SOM was unable to articulate the actions necessary to enter standby mode.

Defense Waste Processing Facility (DWPF): On July 15, an operator performing rounds noticed liquid on the floor, and the facility entered the abnormal operating procedure (AOP) for spills. A person responding to the scene came into contact with caustic and the facility entered the AOP for a person needing medical attention. DWPF personnel believe that the spill came from the caustic feed tank. The level indicator on the tank was not working correctly; the facility performed two blowdowns and then overrode the level indicator in order to perform a caustic transfer before the spill was discovered.

H-Area: A resident inspector and member of the technical staff attended a common cause analysis kick off meeting on 7/19/22 focused on the last six major issues the occurred in H-Area, most notably the Recycle Sump overflow (see 06/24/22 report) and the Tuff Tank spill (see 07/15/22 report). While the overall discussion was productive and established a proposed path forward, the resident inspector questions conducting this analysis at this time since the investigations for both events are ongoing and the root causes have not been determined.