

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 8, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: L. Lin, Z.C. McCabe, and E.P. Richardson, Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending March 8, 2024

L-Area: SRNS personnel have continued planning efforts for up-righting the fallen research reactor cask in addition to inspecting the cask and uranium-based fuel within (see 3/1/24 report). SRNS is planning to up-right the cask next week. Due to the current configuration, SRNS is planning to up-right the cask utilizing a custom fabricated steel plate, which will be rigged to the lid lifting lugs. Although the lid lifting lugs are not intended for maneuvering the entire cask, SRNS engineers have developed a calculation that concluded that the intended lifting plan is acceptable. SRNS personnel presented their plan and supporting analysis to the cask owner who agreed with its viability. SRNS has put forth a significant amount of effort and coordinated with multiple onsite and offsite organizations to resolve this issue in a timely manner.

SRNS convened an issue investigation for the fallen cask event that discussed several problems identified by the investigative team. The investigation revealed that the cask tie-down and trailer were not adequate nor was the tie-down methodology evaluated or inspected per requirements.

Defense Waste Processing Facility (DWPF): DWPF management has shown reluctance to properly investigate multiple recent issues via the required site process. For instance, the near-miss event that consisted of an arc flash at a chiller unit has not been adequately investigated (see 12/29/23 and 1/5/24 reports). The proximity of the personnel to the arc was closer than the resident inspectors (RI) were initially and subsequently informed. Further, the RIs are now aware that the arc flash occurred after multiple failed attempts to start the chiller. DWPF management determined that an investigation was not necessary, stating that it was an equipment issue; however, the site investigation process recommends such issues be subject to an engineering evaluation, which has also not been formally completed. The associated occurrence report and post job review narrowly focused on the equipment failure and did not include enough relevant details to accurately capture the severity of this event and the near-miss to personnel safety. In addition, twice (once in December and once in February) DWPF personnel have taken a safety class gauge out of service (OOS) but failed to inform the appropriate personnel. In both instances, the OOS gauge reading was recorded during rounds and incorrectly included in the safety class nitrogen purge inventory calculation. Although DWPF personnel were able to determine that the appropriate inventory was available despite these errors, the recurrence of this issue demonstrates the ineffectiveness of the corrective actions initially implemented. Contributing to this weakness, management decided to not complete a formal issue investigation for either of these events. While DWPF management has internally investigated some of these events and developed corrective actions, they did not follow the established site process to methodically examine the key facts, establish the timeline, and develop a comprehensive list of apparent causes and corrective actions.

Recently, DWPF personnel incorrectly performed a procedure for a Low Point Pump Pit transfer. This event was properly investigated, which revealed multiple conduct of operations shortcomings regarding understanding the assigned task and less than adequate pre-job briefings.