

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 5, 2024

TO: Katherine R. Herrera, Acting Technical Director
FROM: L. Lin, Z.C. McCabe, and E.P. Richardson, Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending January 5, 2024

Receiving Basin for Offsite Fuels (RBOF): A resident inspector accompanied SRNS and DOE personnel on the annual inspection of RBOF, which was previously used to store spent nuclear fuel and has been deactivated since 2003. Over the last few years, rainwater intrusion has worsened, causing much of the facility flooring to be covered in standing water. During the walkdown, operators and radiological control technicians (RCT) traversed the building and completed a set of rounds to assess the condition of the building. In one instance, following the operators and RCTs completing their inspection of a room, a DOE facility representative questioned a location where rainwater was actively running onto the floor through a fume hood labeled as a contamination area. The inspection team then took the required spill actions and all personnel in the area were surveyed with no personnel contamination noted. The room was barricaded to prevent any further entry. Additionally, the liquid in the basin (which contains contaminated water, sludge, and activated scrap) is covered in a thick film, likely due to the addition of non-potable water and its subsequent reaction a few years ago. Therefore, the basin cannot be inspected visually. The facility documentation package from 2019 recommends that additional samples of the basin water be taken to properly characterize the radionuclide composition of the water and sludge, but no action has been taken to date.

Defense Waste Processing Facility (DWPF): Further investigation into the recent arc flash event (see 12/29/23 report) has revealed additional information. In contrast to previous reports by the contractor, four personnel (an operator, a trainee, the first line manager, and the shift manager) were in the chiller room at the time of the event. The operator was only three feet away at the time of the arc flash contrary to earlier reports of approximately six feet. All four personnel were wearing hearing protection as their only personal protective equipment. The lack of complete or consistent information can be attributed to the facility choosing to not perform an issue investigation meeting and instead conducting an informal information gathering, which did not identify the information discussed above. Since this was an ORPS reportable event, SRS Conduct of Operations Manual procedure for event investigations requires the responsible manager to conduct an issue investigation meeting unless all facts are known and no additional pertinent information would be gathered by a meeting. Additionally, statements were not collected from all personnel involved, which is also required by the event investigation procedure. Gathering personal statements expediently is an important aspect of the responsible manager's duties for investigations to gain as much information as possible from personnel involved while the occurrence is fresh in their mind. The lack of formal investigation and understanding of the event two weeks after it occurred is concerning to the RIs. The vendor replaced the damaged junction box and associated cabling this week and the facility plans to re-perform the loss of power surveillance in the next few weeks as facility conditions allow.