

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 21, 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 June 21, 2024

K-Area: While performing preventive maintenance on an uninterruptible power supply (UPS) battery, workers landed an electrical lead in the wrong location, which subsequently caused a short circuit and damage to the battery lead tab. The workers also failed to follow proper personal protective equipment (PPE) requirements for the arc flash hazard associated with the batteries. The work instruction, hazard analysis, and label on the equipment listed the correct value for the arc flash rating, but the workers read the incorrect arc flash hazard label (for the AC charger), which indicated no hazard. Therefore, they believed the PPE requirements were reduced. No personnel were injured because of the battery short. The issue investigation identified the causes as a less than adequate task-preview and pre-job brief, along with the workers not verifying arc flash requirements prior to starting work. Discussions revealed that this task has also been performed without the correct PPE in the past.

H-Canyon: H-Canyon crane operators used a special, one-time-use procedure to install most of the new equipment for the electrolytic dissolver back in 2022. During the issue investigation for the anode and cathode busbars installation issue, the completed special procedure could not be found (see 4/19/24 report). Though this special procedure was not used in the case of the busbar installations, the fact that facility personnel could not find the procedure after months of trying is worrisome. The resident inspector (RI) discussed how documents are tracked, managed, and retained with H--Canyon personnel and with the site's records management department personnel. The process is dependent on personnel asking for a tracking number and retention time for completed documents, and the database does not track the location of the documents within H-Canyon before they get sent to records management. For one-time-use procedures especially, there do not appear to be expectations for how quickly completed documents are initially processed for tracking.

Work Planning: The RI discussed activity-level work planning with personnel from H-Canyon and Tank Farms. This included walking through work planner qualifications, prioritization of work, subject matter expert (SME) and worker involvement in different stages of the planning process, identification of controls, deconflicting concurrent or co-located work, and the different work planning tools available. The Assisted Hazards Analysis application used at the site appears to be a thorough and useful tool for determining what hazards may exist, what controls are mandatory or should be considered, what SME reviews are needed to ensure controls address the hazards, and how those controls are to be addressed (e.g., in a technical work document or pre-job brief). In SRMC's case, the use of the Visual Management Tool provided additional insights on the status of work packages, resource loading, and a score for the system, structure, or component to be worked on based on their impact on the facility (e.g., safety basis implications, process impacts, environmental compliance, process improvement).