

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 17, 2018

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** M. T. Sautman and Z. C. McCabe, Resident Inspectors  
**SUBJECT:** Savannah River Site Activity Report for Week Ending August 17, 2018

**Staff Activity:** D. Andersen and R. Jackson were on site this week to observe the Master Asset Plan Deep Dive for Tritium Facilities.

**Tritium:** Two relatively inexperienced (i.e., 1 and 18 months) auxiliary support operators needed to de-energize power loads for a motor control center (MCC) and transfer the power feed for a lighting panel to alternate feed in preparation of de-energizing a transformer in the H-Area Old Manufacturing (HAOM) chiller building. The work was to be performed using a First Time Use Validation Procedure (FTUV). FTUVs require a manager to oversee their execution and this FTUV incorporated some recent interim partial changes (IPC). The procedure requires workers to transfer power feed for a lighting panel from normal to alternate feed, but the operators mistakenly believed that a nearby power disconnect (indicating “on” for alternate feed) satisfied that step. Thus when they de-energized the MCC, they cut power to the lighting panel, which also supplies the distributed control system for control of the chiller plant. The investigation of this event identified many conduct of operations issues. After conducting a partial task preview [i.e., walked down earlier steps, but did not look at manual transfer switch (MTS)] and a pre-job briefing with the FTUV, the FTUV was misplaced and the operators used the version in document control, which still had the IPCs, and did not realize they were using the previous version. The operators were confused by the procedure step renumbering in the IPC so they performed the steps in the original order rather than the revised order. The operators also performed the steps while their first line manager was still returning from an earlier Time Out that had recently been resolved. The operators also convinced themselves that they were working on the correct MTS even though the power disconnect looks physically different, had a different identification label, and the step told them to take an action (i.e., transfer power feed) versus ensure it was in the correct position. In response to this event, SRNS stopped all performance of FTUVs at tritium facilities until facility managers release them. In addition, mentors and coaches will observe HAOM auxiliary equipment operations for a month.

**235-F:** In preparation for the start of material removal from Cell 1, SRNS needed to activate the glove ports in the maintenance glovebox. Unfortunately, exposure to Pu-238 for ~20 years had corroded aluminum components and the buildup of those corrosion products prevented the removal of the blind cartridge through normal means. An attempt to loosen the blind cartridge using an extension tool was unsuccessful when the tool failed. After studying various alternatives, SRNS used a new tool this week that eventually was able to allow workers to remove the blind cartridges and install new glove cartridges.

**K-Area:** During a review of a draft Unreviewed Safety Question Evaluation, the resident inspector questioned the lack of criteria (i.e., time, temperature) for thermally stabilizing uncharacterized plutonium glovebox sweepings to ensure the final form would comply with K-Area’s safety basis when it was received. SRNS is planning to address this concern.