

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 5, 2019

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 July 5, 2019

H-Area New Manufacturing (HANM): Savannah River Tritium Enterprise (SRTE) personnel were performing modifications on a reservoir unloading line in HANM to support project work. While troubleshooting a low voltage electrical component, mechanics inadvertently overloaded a silicon controlled rectifier (SCR) which briefly began smoking. As a result, all non-essential personnel evacuated HANM. The SRS Fire Department responded and confirmed that there was no fire before giving the all clear. After discussion with SRTE management, those involved believed the issue was with the SCR. As such, the mechanics resumed troubleshooting another SCR with the same technique and equipment with the added instruction of de-energizing the component quickly if there was elevated amperage. The troubleshooting resulted in the overloading of the second SCR as well; however, it did not smoke due to the added precaution. None of the personnel directly involved in this evolution were present for the fact gathering earlier this week. As a result, the SRTE Quality Assurance team determined that the fact gathering was unsatisfactory and will need to be performed again with the correct personnel.

Salt Waste Processing Facility: The Resident Inspectors (RI) observed oral boards for a shift operations manager, a shift technical engineer (STE), control room manager, and two cognizant safety engineers (CSE). A significant percentage of candidates are appropriately failing the boards in one area and will have to go through another limited oral board focused on that area. After the RI observed the first CSE oral board, the RI noted that the question set did not focus enough on CSE responsibilities and had several questions that were more appropriate for a STE or operator. The questions asked at the next CSE oral board were more focused on their responsibilities. The RI also observed a briefing to a shift crew summarizing general and shift-specific weaknesses observed during emergency preparedness drills conducted in May and June. Common issues include delays with emergency classification and taking as long as 44 minutes to get emergency medical technicians to the accident scene after the injury is reported.

Technical Safety Requirements: Between January 1 and June 25, 2019, there were six unplanned entries into Limiting Conditions for Operations (LCO) at the Defense Waste Processing Facility (DWPF) and 139 unplanned entries into LCOs and for Corrosion Control Program compensatory actions at Tank Farms. The RI reviewed the causes and durations of these. Many of the tank farm entries were weather-related (e.g., heavy rain caused a tank annulus conductivity probe to alarm) rather than real events like leaks. Three of the six unplanned LCO entries at DWPF occurred during a diesel generator loss of power test that unexpectedly caused power to be lost to a load center. Many of the remaining tank farm entries were related to equipment issues (e.g., broken fan belt). The RI further investigated several entries that appeared to be due to performance issues like not pulling a waste sample by the due date or having to enter a second LCO condition because the initial LCO condition's required action was not completed in time. However, in these cases, there were valid reasons such as a lockout to support a jumper refurbishment outage or the intentionally aligning the taking of corrosion control samples with process samples/turbidity measurements to minimize tank entries.