

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 15, 2016

TO: S. A. Stokes, Technical Director
FROM: M. T. Sautman and Z. C. McCabe, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending July 15, 2016

DNFSB Staff Activity: Technical staff members Dibesh Shrestha, Sanjoy Sircar, and Carter Shuffler met with DOE-SR and SRR personnel this week to discuss the path forward for safety issues at the Defense Waste Processing Facility raised by the Board, and review the proposed changes to the safety basis. See Board letter dated 8/3/2015.

Commercial Grade Dedication (CGD): The CGD process ensures that parts are procured that have reasonable assurance of meeting their safety function. While one of the goals of CGD is to improve the reliability of safety equipment, the site reps are observing more instances where problems in implementing the CGD program may inadvertently be decreasing the reliability of safety equipment by delaying corrective and preventive maintenance (CM/PM) and the return of safety equipment back to operations. The safety class H-Canyon standby diesel generators (SDG) illustrate some of the issues being encountered. To support planned maintenance for the next 11 months, a total of 260 CGDs are required, yet only 15 are complete. (The single system engineer is also responsible for the HB-Line SDG which requires an additional ~50 CGDs for CM and PM). While SRNS has parts on-site to support the replacement of hoses, belts, and thermostats that were last replaced in 2010 and 2011 and to fix fuel and coolant leaks, this work cannot be performed until the respective CGDs are completed. Furthermore, assuming all 108 CGDs needed to support the H-Canyon SDG A train top end overhaul are completed on schedule (0 complete so far), this recommended maintenance would be performed 3 years past the recommended 10 year frequency. Complicating matters is that much of the detailed design information needed to support the identification of critical characteristics for acceptance (e.g., dimensions, material physical characteristics) is considered to be proprietary information by the vendors. As a result, the contractors are in the process of setting up contracts where they may have to pay thousands of dollar per individual part for this information, which would strain already tight maintenance budgets. Furthermore, the time to return safety equipment back to service when a part fails can drag out for weeks or months if the affected part number has changed, the vendor is slow to provide design information, or if the part must be purchased from someone other than the original manufacturer. These increased times to return equipment to service may be starting to be reflected in revised Limiting Conditions for Operation (LCO). For example, the HB-Line SDG LCO used to have required action completion times of 72 hours/3 months/7 days; the proposed revision has completion times of 120 days/6 months/60 days. Since the above information is mostly anecdotal, the site reps have initiated discussions with site personnel to better understand the magnitude of the current backlog and differences in interpretation of CGD requirements.

L-Area: L-Area personnel were bundling a shipment of spent nuclear fuel (SNF) under water for storage in the basin. While beginning to raise a caddy of SNF out of the basket, the fuel handling tool disengaged the caddy which subsequently fell approximately 8 inches into the basket location from which it was pulled. The operators and first line manager took the appropriate immediate actions by calling a time out, putting the basin in a safe state and notifying the shift operations manager. L-Area nuclear and criticality safety personnel do not expect the fuel or caddy to have been damaged by the fall and have concluded that the fuel and continuing to handle the fuel are within the L-Area safety basis. However, L-Area personnel have decided to not continue to bundle fuel until an investigation into the cause of the drop is complete.