

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 8, 2013

TO: S. A. Stokes, Acting Technical Director
FROM: M. T. Sautman and D. L. Burnfield, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending February 8, 2013

HB-Line: The site rep met with DOE management to discuss concerns with the SRNS proposal to downgrade the functional classification of the diesel generator from safety significant (SS) to general service (GS). The concern is that if normal power was lost and the GS generator failed to start, then both the normal purge air system and the emergency alternate purge method would become inoperable, as well as the room and glovebox exhaust systems. Thus, there would not be any controls to prevent the accumulation of a flammable gas mixture in the tanks and dissolvers, which can occur within 2.5 hours. DOE verbally stated that they will take action to keep the diesel generator SS.

F-Tank Farms: SRR is transferring a contaminated, 30 foot long, 11,000 pound submersible mixing pump (SMP) from tank 5 to tank 8. SRR was unable to fully insert the SMP into the tank 8 riser Wednesday because it encountered interference, but SRR also did not want to pull the pump from the riser and risk damaging the containment sleeve. SRR decided to use the mobile crane to suspend the SMP inside the riser until a safer method of holding the pump in place could be devised. SRR designed and fabricated a clamping mechanism to hold the pump in place so they could remove the crane. Tank farm management approved the mechanism and workers attached the clamp to the SMP Thursday evening. SRR continued to support the pump using the crane until Friday because they did not want to risk unhooking the crane during the rainstorm that occurred Thursday afternoon and night. The site rep observed SRR transfer the pump load from the crane to the clamps and move the crane to the side. As SRR rotated the crane out of way, a hydraulic valve failed and the boom violently retracted. This caused the hook and spreader bar to suddenly drop from ~20 feet high to within three feet of the equipment located on the tank top. SRR is currently evaluating the extent of condition and will conduct fact finding/post job meetings to determine the path forward for the crane and the pump.

Solid Waste Management Facility (SWMF): SRNS is inspecting several sealed neutron sources that have accumulated at SRS over the years to determine if the sources could be transferred to the Off-site Source Recovery Project (OSRP) for disposal. While inspecting a drum that was believed to contain a Pu-238/Be source, workers detected U-235 contamination and an unexpectedly high (greater than 1 rad) γ radiation field. The SWMF team responded to the unexpected condition correctly and packaged the drum back up. SRNS later found another drum containing a neutron source that was potentially cross contaminated — the unknown radioactive material is still being analyzed. SWMF personnel contacted OSRP personnel to determine if these sources still meet the acceptance criteria.

Recommendation 2012-1: The site rep met with DOE-SR, NNSA, SRNS, and SRR to discuss the participation of F-Area facilities in two upcoming 235-F drills involving radiological releases. The construction sites are proposing that the office workers, fire wardens, foremen, and subcontractor technical representatives (STR) participate, but not the craft workers. The basis for this position is that the craft workforce is transient and the foremen and STRs are responsible for ensuring the craft workers properly shelter. The site rep has requested additional information and the staff is evaluating this proposal.

H-Canyon: After verifying the integrity of the dissolver upper cooling and condenser coils, engineers believe that the lower coil is the likely source of the apparent leak. SRNS isolated the lower cooling coil and is using the Cash air system to maintain coil pressure in the lower coil. This should prevent leakage into the segregated cooling water system. This also allowed SRNS to complete another dissolution cycle for the current dissolver batch. If dissolution is confirmed complete, then SRNS will empty the dissolver and check the lower cooling coil's integrity.