

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 5, 2015

TO: S. A. Stokes, Technical Director
FROM: M. T. Sautman and D. L. Burnfield, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending June 5, 2015

T. Chapman, M. Helfrich, and M. Bradisse conducted a review of the SRS emergency management program.

SRR Drill Program Assessment: The SRR final report identifies eight findings and twenty-seven opportunities for improvement (see 5/8 and 5/14/15 reports). SRR concluded that current staffing is not effective in ensuring drill program requirements are met, including the development, updating and refreshing of drills. In order to address this shortage, SRR is increasing the number of staff dedicated to the drill program from 3.5 full-time equivalents (FTE) to 10 FTE (with a temporary surge to 12.5 FTE). The new staff includes several ex-shift operations managers and radiological work planning staff who are very familiar with facility hazards and operations. SRR also conducted a scenario development training workshop to increase the number of staff who can develop and revise drill scenarios. SRR will also evaluate safety basis credited emergency response actions to determine which ones need to be drilled and develop a long range schedule (3-5 years) of all the emergency preparedness and conduct of operations drills to perform.

H-Area: The four cooling water pumps for H-Canyon and HB-Line are aligned in parallel, draw water from the cooling tower basin, and pump it through the facilities. SRNS normally runs two of the three electric pumps and maintains the steam pump in standby. Electric pump #2 was off line while SRNS worked on the electrical bus, and electric pumps #3 and #4 were online. The outlet of pump #3 had a leak that they could not repair while the pump was online. H-Area and site services personnel isolated pump #3 for repair while allowing pump#4 to handle the load. SRNS infrequently operates only one electric pump in this system. They performed this operation without a formal prejob brief, using a reference procedure that was not present in the field, and without the necessary technical information to understand how the system would respond. When SRNS took pump #3 offline, a sharp pressure drop occurred, and cooling water was lost to both H-Canyon and HB-Line. Because the canyon and HB-Line are not currently operating, no safety related events occurred. SRNS held an issue review but at this time has not determined a cause for the incident. The site rep performed a walkdown of the area with SRNS personnel. The site rep noted that because of the design of the system, it is not clear how the system operating curves would be affected by the order of shutting down the pumps. Also, the controls for each pump are located immediately beside each other making it likely that the wrong pump will be operated at some time in the future, and an attempt to preclude working on similar looking equipment was ineffectively being implemented.

DWPF: SRR periodically performs swipe surveys of the shielded canister transporter (SCT) grapples while the grapple is extended into an underground area. Following one of these surveys, the SRR operator drove the SCT without retracting the grapple. This resulted in damage to the grapple as well as the facility.