

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 13, 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 February 13, 2015

**H-Canyon/HB-Line:** On Sunday night, an undervoltage device tripped, causing a breaker to open and causing a loss of normal power from the T-2 electrical feed. Unfortunately, the H-Canyon standby diesel generator could not pick up the load because it was out-of-service. As a result, power was lost to the control room panel boards and distributed control system, the cranes, instrument and plant air systems, the 150 and 15 psig steam systems, and the HB-Line room exhaust, building supply fans, and third level ventilation fans. SRNS started a portable air compressor to provide an air purge for H-Canyon vessels. During the week, H-Canyon personnel switched to alternate power feeds, restored steam, and completed repairs to the standby diesel generator. Troubleshooting of the relay identified some loose parts, which are being repaired.

SRNS also commenced their readiness assessment (RA) for the head end process, but the RA dry run was delayed due to power issues and the discovery that the gelatin to be used for the gelatin strike solution had expired. The site rep observed a drill (high temperature interlock activation) and interviews conducted as part of the RA. The site rep also observed the oral board for a process first line manager at HB-Line. The conduct and grading of the board were satisfactory.

**Emergency Preparedness:** In December, the site rep observed a drill at the Solid Waste Management Facility involving a forklift rupturing a transuranic waste drum. After the site rep shared several negative observations, the Radiological Protection Department (RPD) conducted training and several dry runs, clarified roles and responsibilities, and ensured radios and air samplers were readily available (see December 12, 2014 report). This week, the site rep observed the facility conduct this drill again and noted that RPD response times, control of contamination, and interface with the Fire Department was significantly improved.

**Building 235-F:** The site rep and Ajit Gwal, a member of the DNFSB technical staff, walked down the building focusing on the electrical de-energization that SRNS recently completed. During the walkdown, it was noted that the circuits appeared to be de-energized in accordance with the plan that was submitted as part of Recommendation 2012-1 (see January 23 and 30, 2015 weekly reports). However, SRNS personnel noted that the configuration management of the circuit breakers could be better controlled and the site rep agreed that the proposed changes would be appropriate. The site rep also noted that the approach described in the site's Control of Equipment and System Status procedure contained the necessary rigor for managing these breakers and inquired if the site could complete the necessary actions before the DOE RA.

During the walkdown, the technical staff also noted that Room 216B contained several old (possibly 50+ years) dry-type transformers totaling 155 kVA. While dry-type transformers typically have a lifetime of 40 years, these transformers have been in a facility that has not been fully operational for decades so the environmental conditions and maintenance may have been less than ideal. Furthermore, it is possible for dry-type transformers to fail violently and two of the walls and the door to this room are not fire-rated. In light of the potential hazard associated with full facility fires, the staff believes it would be prudent for DOE to analyze what actions they could take to reduce the likelihood of a violent failure of the transformers and/or fire propagation from this room.