

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 1, 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 May 1, 2015

Zachery Beauvais provided site representative support this week.

Emergency Preparedness (EP): Last fall, the site representative expressed concern 1) whether the EP and conduct of operations (so-called 2S) drill scenarios adequately covered the accident scenarios in the Emergency Planning Hazard Assessments and Documented Safety Analyses and 2) with the lack of integration amongst the EP, nuclear safety, operations, and training organizations with respect to drills. In response, both SRNS and SRR (with oversight by DOE) launched comprehensive assessments of their drill programs to identify gaps at the facility and site-wide level (see 10/10 and 11/7/14 reports). SRNS completed their assessment and SRR is nearing completion of theirs. The SRNS assessment team did a thorough, self-critical review and identified 20 findings and 69 opportunities for improvement (OFI). Because responsibility for the drill program was spread over multiple organizations, the team recommended merging the drill program functions into a consolidated drill organization to bring standardization and commonality to both the EP and 2S drills. Of the 130 facility-specific and 27 general site emergency action levels (EAL), 88 of the facility-specific and 25 of the general site EALs did not have an associated drill scenario and this is even after taking credit that the same scenario could cover similar alert and site area emergencies (e.g., fire, explosion). At the Savannah River National Laboratory, for example, no scenarios existed for 12 EALs and another 10 drill scenarios needed revision. Neither H-Canyon nor HB-Line had any criticality response drill scenarios. The only H-Canyon fire scenario involved the 4th level offices and control room although the fire hazards analysis identifies several locations where the consequences would be significantly higher and where facility worker evacuation is credited. The H-Canyon drill scenarios also did not address puncture wounds, suck back events (a real suck back event involving dissolved spent fuel occurred in 2013), tornadoes, or seismic events. SRNS also did not have a formal process for determining if changes to the hazards analysis, safety basis, or facility design would drive the development or revision of abnormal or emergency operating procedures or drills. Other findings and OFIs addressed: 1) inconsistent tracking of drill issues, 2) lack of training objectives for coached/training drills, 3) lack of criticism in post-drill critiques, 4) drills not proceeding through recovery, 5) drills not being performed at minimum staffing levels, and 6) the lack of a process for determining remediation and reevaluation for drill attributes that were graded unsatisfactory. The technical staff will discuss SRNS's planned corrective actions during their review the week of June 1.

L-Area: The facility has a number of locations underground that share an interior wall with the basin. A member of the staff accompanied SRNS and SRNL structural engineers, who were conducting visual inspection of known leak sites where water has seeped through the concrete wall and left mineral deposits on the opposite side. The inspection team found no visible evidence of moisture at the leak sites despite having observed moisture during previous semiannual inspections (see 2/24/12 and 9/26/14 weekly reports).