

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 11, 2018

TO: S. A. Stokes, Technical Director
FROM: Z. C. McCabe, Resident Inspector
SUBJECT: Savannah River Site Activity Report for Week Ending May 11, 2018

Savannah River National Laboratory (SRNL): Research and Development (R&D) and Research Operations Division (ROD) at SRNL remain in the safety pause that began on April 26 (see 4/27/18 report). SRNS acquired an independent assessor to review SRNL's recent performance and to evaluate the planned and ongoing actions to correct the poor safety performance. Through two days of observations and interviews, the assessor concluded that the common cause of the recent issues was a cultural issue, specifically "[I]ack of clear and reinforced management expectations and standards." Additionally SRNS completed their own common cause analysis (CCA) of the recent issues. The CCA cites human performance errors in addition to the aforementioned management expectations issue.

DOE-SR personnel provided SRNS the results of their multi-discipline assessment of SRNL (see 4/20/18 report). DOE-SR identified five findings and nine opportunities for improvement, most of which were concerning radiological protection. Notably, DOE-SR determined that the SRNS radiological postings do not meet the requirements of 10 CFR 835 Subpart G for High Contamination Areas/Contamination Areas within radio hoods.

Last September R&D developed a corrective action plan (CAP) to address a series of recent issues (see 9/22/17 report). The CAP identified corrective actions for several areas including issue investigation, work authorization, hazard analysis, lessons learned, and performance assessment. Despite several recent issues indicating that some of these weaknesses remain, SRNL personnel issued a report on April 30 that concluded that the corrective actions were effective. SRNL management have since rescinded the report and plan to include a revised effectiveness review with the effectiveness review of the pending CAP for the recent issues, currently planned to be issued this month.

Causal Analysis: SRNS personnel performed an apparent causal analysis (ACA) discussion relating to the recent exceedance of an extremity suspension guide during a laboratory evolution (see 4/13/2018 report). The causes identified include failure to recognize the hazard, a weakness in the hazard analysis process, human performance error, and an unclear procedure. As a corrective action SRNL personnel are planning to clarify the SRNL procedure governing advanced radiological workers (ARWs) on when to measure radiological dose rates during an activity. Additionally, SRNL management are planning to discuss this event and expectations with other ARWs as an interim measure until formal training is developed. This ACA utilized the Blue Dragon™ methodology which has been taught to several individuals in attempt to improve the causal analysis and identification of corrective actions.

Recommendation 2012-1: DOE-SR is now planning to commence intrusive work in cells 1 through 5 to remove material-at-risk beginning in July 2018 (see 8/18/2017 report). DOE-SR personnel believe this schedule will allow them to meet the implementation plan milestone of completing deactivation of cells 1 through 9 by 1/31/2020.