

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 13, 2017

TO: S. A. Stokes, Technical Director
FROM: M. T. Sautman and Z. C. McCabe, Resident Inspectors
SUBJECT: Savannah River Site Resident Inspector Report for Week Ending Oct. 13, 2017

SRNS Conduct of Operations and Training: In response to the staff's review (see 5/5/17 report), SRNS is conducting a Rapid Improvement Event on causal analysis, conducted an assessment of Limiting Condition for Operations (LCO) management, started a pilot to identify both LCO number and conditions that are affected by corrective maintenance work packages, is evaluating increasing the use of a work release shift operations manager, and is providing more procedure guidance on performing extent of condition reviews. The LCO assessment confirmed staff observations about the lack of consistency with LCO entries/exits and mode changes. The assessment recommended a site level process to improve consistency and potentially eliminate human performance errors. The resident inspector (RI) reviewed the safety system impact statements and list of LCO numbers that may be affected in two work orders. One work order just listed the LCOs while the other one explained on how the work could affect the safety systems.

The RI reviewed approximately 50 examples of safety basis training that used scenarios. The facilities are taking various approaches. At the tritium facilities, a team of managers evaluates the response of a shift crew to a postulated event and asks several questions pertaining to the event. At K-Area, they have developed 30+ scenarios as they try to address every LCO and specific administrative control. Some of the facility scenarios involve a very straightforward response to an alarm and entry of applicable LCO condition. While this approach may help newer staff, it may not be as useful for experienced staff. The RI noted that continuing training for experienced staff may benefit from system operability determinations, navigation through chained LCO conditions, response to missed actions, TSR violations, and situations where a TSR is inadvertently (vice intentionally) met. The RI observed TSR training for H-Canyon operations staff and provided feedback on some of the TSR violation scenarios used.

Emergency Preparedness: The RI reviewed the 11 new or revised drill scenarios developed by the SRNS Consolidated Drill Team. This is the first step in replacing many of the old drill scenarios at SRS and closing the 146 scenario gaps that have been identified (see 10/10/14, 5/1/15, and 6/2/17 reports). Some of the scenarios included several options to add variability when the scenario is conducted more than once.

Tritium Production Capability (TPC): Last week, Parson's submitted the safety design strategy and conceptual safety design report for the TPC project to NNSA-SRFO for approval. The TPC project will replace much of the H-Area Old Manufacturing facility processing capabilities and the Tritium Facilities vault. The TPC conceptual design package includes plans for a new nuclear Hazard Category 2 (HC2) facility, a new radiological facility, and modifications to two existing facilities (one is expected to be a "Major Modification" per DOE-STD-1189-2016). The new HC2 facility is currently planned to include multiple safety class structures, systems, and components including the facility structure and lightning protection, fire suppression, and fire water supply systems.