

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 11, 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 August 11, 2017

K-Area Technical Safety Requirement (TSR) Violation: On July 19, an outage of the fire water tank caused K-Area personnel to place the Material Control and Accountability Instrument Room (MC&A Room), one of the process areas (PA) of the Material Storage Area (MSA), into TSR standby mode. This prohibits any shipping packages in the room. The MC&A Room contains the Neutron Multiplicity Counter (NMC) which is one of the ways K-Area personnel verify the contents of shipping packages. On August 3, K-Area received a shipment of material and were required to verify the contents of the shipment within 10 days. During the next shift, K-Area personnel verified the contents of the shipping package with the NMC while the room was in standby mode, which was a violation of the TSRs. An engineer first noted the issue on August 8. Numerous instances of less than adequate conduct of operations led to this violation. The MC&A Room is rarely in standby mode, however this was not highlighted. For instance, the shift operations managers (SOM) did not discuss the room mode during their turnover that evening. The SOM also failed to mention the mode status during the briefing at the beginning of the shift. Additionally, the first line manager failed to mention the mode status during the pre-job brief for the NMC measurement. The shipping package handling procedure has a step for the operator to ensure that the MSA (including all of the PAs) was in the appropriate mode to support the activity. When the operator asked the control room personnel the status of the MSA, a control room operator incorrectly responded that the MSA was in operations mode without checking the appropriate status board or SOM logbook.

This event is similar to other recent TSR violations at SRS (e.g., see 1/20/17 report). Less than adequate TSR implementation was also the focus of a recent Board staff review (see 5/5/17 report), during which the staff team noted multiple issues with mode administration at K-Area.

Solid Waste Management Facility: SRNS has been investigating the cause of the fire that destroyed a material handler and damaged nearby heavy equipment (see 7/28/17 report). The Fire Department previously identified that several strands of the positive cable for the battery were broken. This week the apparent cause analysis team found the ignition switch in the “on” position although the equipment had not been operated for nearly two days before the fire.

The resident inspector observed an emergency drill simulating a ruptured transuranic waste drum. The facility did not control the path for responders to use to the incident scene and allowed responders to mingle with the contaminated victim. As a result, several individuals were cross-contaminated and the first aid responders could not perform their task.

Seismic Response: SRNS facility management conducted a seminar involving H-Canyon and HB-Line shift operations managers and other managers to see how they would respond to various seismic events, including a failure of the H-Canyon exhaust tunnel. This seminar and related interviews clearly indicate the need for new or revised abnormal operating procedures. The resident inspector provided feedback on the conduct of the seminar and the response.