

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 20, 2018

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** M. T. Sautman and Z. C. McCabe, Resident Inspectors  
**SUBJECT:** Savannah River Site Activity Report for Week Ending July 20, 2018

**Tank Farms:** SRR is conducting a root cause analysis (RCA) for a recent Technical Safety Requirement violation (see 6/1/18 report). The RCA team received feedback during their interviews that some of the Alarm Response Procedures (ARP) direct the operator to take actions that may not reflect the current facility configuration and/or desired response. For example, conductivity probe ARPs direct an operator to go out to the tank, raise the conductivity probe, and dry it off. However, many of the probes are highly contaminated and conductivity probe alarms often occur during thunderstorms due to rainwater intrusion. Workers are not sent to perform work on a tank when lightning is present. This situation has happened because Tank Farms was not conducting periodic reviews of their 4000+ ARPs. Furthermore, when SRS transitioned to a new document control system a few years ago, the automatic periodic procedure review function was lost until recently. While SRR still conducted periodic procedure reviews manually, their backlog grew. This week, SRR entered a Deliberate Operations period at Tank Farms focusing on ARP implementation and periodic review performance. Every time an ARP is entered, the operator will document which steps were completed, suspend the ARP and/or get management approval if a procedure departure is needed, identify procedure changes needed to avoid conflicts or contradictions, initiate procedure change requests as needed, and document the above on a form that will be reviewed by the Operations Manager (or Deputy). Meanwhile, SRR is pursuing plans to ensure all procedures, including ARPs, will be reviewed periodically.

**Savannah River National Laboratory (SRNL):** SRNL personnel entered the High Activity Waste (HAW) piping gallery this week to further investigate whether the amount of nuclear material in the HAW piping gallery would require upgrading the facility from Hazard Category (HazCat) 3 to HazCat 2 (see 3/9/18 report). SRNL personnel suspected that there may be HazCat 2 quantities of material underneath a pile of lead shielding pieces (approximately 15 pounds each) in the HAW piping gallery. Because the HAW piping gallery is a confined space, high radiation area (previously measured at 1000mrem/hr whole body at one location), high contamination area (previously measured at 400,000dpm  $\alpha$ /100cm<sup>2</sup> and 190mrad/hr/100cm<sup>2</sup> at one location), and airborne radiation area, significant planning went into this entry to ensure it was done safely despite the relative simplicity of the task. In addition to the facility radiological action team meeting (see 7/13/18 report), the resident inspector observed the task preview, pre-job brief, and execution of this activity. SRNL personnel did not identify anything under the pile of lead shielding pieces that would require the facility to be reclassified as HazCat 2. Next week, SRNL personnel are planning to analyze a sample taken from the HAW piping gallery sump during a previous entry to determine if the material in the sump exceeds the HazCat 3 threshold.

The SRNL Senior Leadership Review Board (SLRB) is a group mostly composed of SRNL senior management tasked with evaluation corrective actions and determining whether each directorate can transition out of the Management Control Plan (see 5/18/18 report). The SRLB approved the transition plan for the Research Operations and Environmental Stewardship directorates.