DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 27, 2019

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 September 27, 2019

L-Area: In December 2018, an L-Area criticality safety engineer identified an opportunity for improvement to revise the cask handling procedures to clarify the implementing steps for the credited criticality safety requirement of verifying all of the lifting equipment is within the required periodicity prior to initiating a lift. As written, the procedure only requires the verification of the crane preventative maintenance and the wire rope inspection. Multiple pieces of equipment are not specifically called-out. Recently, L-Area personnel determined that seven additional verifications were required. Upon reviewing the draft procedure revision, the Shift Operations Manager (SOM) questioned why the current procedure was acceptable and halted all cask handling. L-Area personnel are still determining what is required.

Savannah River National Laboratory (SRNL): A review of prior operator rounds data revealed that the differential pressure (DP) of the B-Wing Offgas Exhaust System was below the acceptable range for this Technical Safety Requirement surveillance. An operator-in-training read the safety-significant gauge that day under the instruction of a qualified operator using the electronic rounds system. Neither the trainee, qualified operator, peer checker nor the SOM notice that it was out of range during their reviews. As a result, the SOM did not enter the applicable limiting condition for operation or perform the required actions. Other indications (i.e., general service gauge and control room alarm), the operators' recollection and the DP values recorded before and after this instance have led SRNL personnel to conclude that the gauge was actually within range and the out of range reading was the result of a transcription error (i.e., typed 38 vs 48) on the electronic rounds tablet.

Roughly 800 grams of depleted uranium metal was found in a furnace inside a room not authorized to store nuclear material. The worker was familiar with this item, having worked with similar items for a project that ended in 2002. After confirming it was radioactive, the item was bagged, surveyed, and transported to an authorized location with assistance from a nuclear material custodian. However, it took six days for the SOM to be notified and the material added to the facility's material-at-risk database. Furthermore, the move was not coordinated with nuclear or criticality safety personnel and confirmation that it was depleted took 11 days.

H Area New Manufacturing: When the K-22 tritium air monitor failed, alternate monitoring was provided by running a hose from K-23 to the room. In order to fix K-22, a card needed to be replaced which took K-23 out-of-service. The shift technical engineer (STE) and SOM suspended the alternate monitoring plan (AMP) and workers barricaded the rooms. At this point, the hose connected to K-23 could have been removed. After the card was replaced, K-22 was returned to service. Since K-22 was now working, there was no need to restart the suspended AMP and resume the use of K-23 for alternate monitoring. However, by not going back and completing the AMP section which returns it to normal service, the hose was left. The incorrect configuration was not noticed for three days. The SOM and STE closed out the suspended AMP despite the two blank pages in it for returning the monitor to normal service.