DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 27, 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 27, 2018

L-Area: During a criticality safety assessment, criticality safety personnel identified that one of the safety significant mechanical blocking devices was missing. These blocking devices are placed on the monorail system (used to move fuel) at multiple locations around L-Basin to prevent unwanted interactions between fuel and other material that could lead to an inadvertent criticality. The missing block was added to the list of permanent blocks in July 2017. Two subsequent field assessment walkdowns performed by criticality safety personnel indicated that the block was present. However, L-Area personnel have no record of it actually being installed and suspect that it was never put in place. When the criticality safety personnel discovered the missing block, they informed the shift operations manager, who then approved the installation of the block. After the fact, L-Area personnel determined that the safety function of this block was provided by another block and thus they had adequate controls in place to prevent an inadvertent criticality. L-Area senior management were not informed of the error until a week later during a review of the assessment and are still investigating the issue.

Defense Waste Processing Facility (DWPF): An operator did not follow a procedure step which instructed them to "reset" the sodium nitrite flow totalizer prior to adding sodium nitrite to a tank. The operator mistakenly believed he had reset the totalizer and therefore signed off the step. This step was labeled a specific administrative control (SAC) and required an independent verification (IV), which was also performed incorrectly. The IVer mistook another measurement (similarly labeled) that read zero as the totalizer reading and proceeded. The operator later identified the error and stopped the transfer after 17 of the required 215 gallons had transferred. The operator notified the control room manager (CRM), who then discussed the error with the SOM. Because the CRM and SOM knew that the 215 gallon amount was a minimum amount, they determined that it was acceptable to reset the totalizer and re-start the addition of sodium nitrite. Neither the CRM nor the SOM reviewed the Technical Safety Requirements to confirm that this would be acceptable. The CRM included a description of the event in his log; however, the SOM did not. Additionally, the SOM failed to suspend the procedure before re-performing the steps as required by the site Conduct of Operations Manual. Although the operator re-initialed several of the steps in the procedure while re-performing it, they failed to re-initial the step requiring the reset of the totalizer and the independent verifier did not re-sign the verification. The shift technical engineer was not informed of the issue until after the step had been re-performed. The DOE-SR facility representative identified this issue while reviewing the CRM log book days later and brought it to the attention of DWPF management.

Tank Farms: SRR resumed operation of the 3H Evaporator on Thursday. SRR is performing periodic inspections of the evaporator pot exterior to see if the two known leak sites have become active again and whether any additional leak sites are identified. At this time, no new leaks sites have been identified and the larger known leak site appears to be wet.