DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 5, 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 October 5, 2018

Salt Waste Processing Facility: Parsons is conducting a Management Self-Assessment to support the introduction of chemicals to the main facility. The resident inspector observed an evaluated drill that simulated a 20% nitric acid spill on a worker, who subsequently received a head injury. The worker used a safety shower very close to the leak location that was inside a diked area. The first aid responder entered the diked area because they assumed the safety shower runoff was sufficient to dilute the acid. Facility safety personnel did not believe there to be an inhalation hazard and so the victim and responders stayed relatively close to the leak site. The Fire Department response, however, was delayed because they wanted to better understand the hazards before they entered the area. They eventually used pH paper and a multi-gas portable monitor (not designed for nitric acid). The presence of a spill kit with pH paper and gas detection tubes could have allowed the actual conditions to be verified with little delay or reliance on a "nobody was showing symptoms so it must be safe" mentality.

H-Area New Manufacturing: A resident inspector and Mr. Migliorini observed reservoir loading in the control room. When the target pressure was not achieved in the high pressure manifold, the staff observed how tritium personnel troubleshot the situation, determined a valve was leaking and had it repaired, developed and approved a gas transfer, and then implemented a procedure attachment to let down the pressure due to an unexpected condition.

Tank Closure Cesium Removal System (TCCR): The resident inspectors walked down the field equipment for TCCR and attended TCCR-related training. Startup testing is nearly complete and practical factors training for operators will commence shortly. The resident inspector observed Tank Farms personnel training on the TCCR Documented Safety Analysis and Technical Safety Requirements changes and new Specific Administrative Control (SAC) overview. In addition to the safety basis additions and changes the training focused on the TCCR Operations Program that will implement the SAC through fifteen implementation actions.

H-Canyon Justification for Continued Operations (JCO): The H-Canyon Justification for Continued Operations transfer protocol requires a standby operator to stop an ongoing radiological material transfer within five minutes of a seismic event to prevent a radiological release. The reliability of the transfer protocol was the subject of a Board letter sent to DOE on September 7, 2018 and the subject of a recent DOE-SR assessment (see 9/21/2018 report). As such, SRNS has subcontracted a subject matter expert to perform a human factors assessment of the transfer protocol and the required standby operator actions.

TSR Effectiveness Review: SRNS completed an effectiveness review of the corrective actions taken to improve the compliance with safety basis controls. The team concluded that 13 corrective actions were effective, but four were only partially effective because they identified five facility-specific findings related to them. The team also identified 10 SRNS opportunities for improvement (OFI) and 48 facility/area-specific OFIs.