DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 22, 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 Sept. 22, 2017

Salt Waste Processing Facility (SWPF): Two weeks ago, Parsons had an event involving a lockout/tagout (LOTO) where they lost control of equipment and system status. Until corrective actions were completed, Parsons stopped all work with the exception of rounds, housekeeping, and discrete work scopes authorized by the Project Manager (PM) (see 9/8/17 report). The PM authorized construction personnel to install five socket weld caps. When construction personnel loosened an existing cap, they discovered pressurized air in a line that was supposed to be isolated. When planning the work, SWPF personnel incorrectly concluded this line was covered by an existing LOTO for the plant air system when it was actually part of the seal flush bottle air system. When the shift operations manager (SOM) reviewed the LOTO and released the work, they reviewed the isometric drawings (which had the words "plant air" on them), but not the piping and instrumentation diagram which showed that the cap was not addressed by the existing LOTO. Additionally, notifications to the SOM were not timely or clear. Construction personnel told the SOM that the line was found connected to bottled air. However, the SOM did not realize they had found pressurized air while performing the work until the PM (informed by the construction manager) held a meeting two hours after the event occurred. The PM temporarily stopped all work except for required rounds. Parsons developed a four phase corrective action plan (in addition to the corrective actions for the previous event) for addressing the identified weaknesses and resuming normal operations. Corrective actions include senior supervisory watch concurrence prior to release of work, the establishment of a Work Release Coordination group, development of a work release checklist, and a SOM level of knowledge assessment. Meanwhile, a management self-assessment for the receipt of chemicals has identified significant findings with their Integrated Safety Management System, work planning and control, procedures, worker safety and health, and conduct of operations.

Savannah River National Laboratory (SRNL): SRNL research and development (R&D) issued a corrective action plan (CAP) to address recent issues (see 5/5/17, 5/12/17, and 7/21/17 reports). The CAP includes an extent of condition review of the scope, HA, and controls for ongoing hands-on activities, and an action to develop a plan and schedule for training on HA, and work control documents. SRNL R&D are planning to revise the CAP next week based on the results of the common cause analysis (CCA) that was also completed this week. The CCA identified two common causes: less than adequate (LTA) work organization and planning facilitated human performance errors, and work planning tools content are LTA.

Solid Waste Management Facility (SWMF): Radiologic control personnel were performing monthly surveys in a radioactive material area (RMA) when they identified a waste container that had off-gassing tritium escaping through a crack in the caulking seal. SWMF personnel responded appropriately and posted the area as an inactive airborne radiation area/contamination area because it is not routinely accessed. SWMF originally understood that the containers with tritium-contaminated waste have the potential to allow the escape of off-gassing tritium, but did not recognize that the area should not have been posted as only a RMA.