DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 21, 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 December 21, 2018

Tritium Extraction Facility (TEF): While reviewing an electronic procedure used for performing rounds in TEF on December 5, personnel identified that a step implementing a Technical Safety Requirement (TSR) was not properly marked and trailered according to SRS requirements. The procedure was modified and loaded for use on November 28 without undergoing an Unreviewed Safety Question (USQ) review and a separate review by nuclear safety personnel. An issue investigation revealed that TEF personnel requested this change informally via an email in December 2017 without generating a procedure change request (PCR). Despite knowing that the change would affect a TSR-related step, tritium personnel marked that a USQ review was not required for this change on the Computer Program Modification Tracker (CMT) because the program would have required a USQ number that was not available at the time. Later in the year, tritium personnel requested two other changes to this procedure, one of which was requested properly via a PCR. This PCR was later modified to include all of these changes; however, the defined scope was not modified to reflect that it included a change to the TSR-related step. This likely contributed to the fact that none of the reviewers later recognized the need for both a USQ review and a nuclear safety personnel review. Additionally, the revised procedure was loaded and used by operations personnel without the load being accepted by several working groups. Tritium personnel are developing corrective actions and have completed an extent of condition review. No similar issues were found with other CMTs.

Savannah River National Laboratory: When propane gas was recently introduced to a modified laboratory, an industrial hygienist's gas monitor detected that the air in a pipe chase reached 8% of the lower flammability limit before they turned the propane off. A later leak test with nitrogen gas identified a leak in a propane line tie-in joint, which was supposed to have previously undergone an in-service leak test. A subsequent investigation determined that this section of the propane system had never been leak tested. Nearly a year and a half earlier, construction forces had "completed" a work order step that required a vacuum box leak test of the propane line tie-in joint in accordance with the Quality Inspection Plan (QIP). Construction forces intended to perform this leak test after other modifications were completed, but the person-in-charge did not note this expectation in the work order package. Despite being linked to an unsigned Quality Control hold point in the QIP, the work order step had no sign off so there was no indication that it was not really complete. (The QIP also specified an in-service leak test rather than a vacuum box leak test). When facility personnel later completed their SRNL Operations Acceptance Checklist, they signed off that post-modification testing (PMTs) was complete even though the listed reference was only for one of the required PMTs. As a result, the requirement to perform a leak test was not tracked. The construction work order was also later closed because there was nothing to indicate that the leak test was still outstanding.

SRR Training: A DOE facility representative and the resident inspector provided extensive comments on the conduct of an oral board for a control room manager. The facility manager voided the board and senior management will approve future board members at that facility.