

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 14, 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 June 14, 2019

Quality Assurance (QA): An experienced operator gave a newly qualified operator the chance to weld a waste canister per ASME, Section IX requirements for the first time. However, they did not inform their first line manager (FLM) of this decision. They also did not conduct a task preview to identify critical steps or perform a pre-job briefing beforehand. During the weld, only 3 of the 4 power packs fired resulting in a peak weld current of 189.4 kiloamps. That being said, both the operator and the QA inspector signed a QA hold point verification step that the current was within the acceptance criteria of 240 – 263 kiloamps. Both the operator and the FLM later signed the procedure off as complete. A second QA reviewer identified the mistake. The above performance fell short of several well-established expectations of facility management. A similar issue was recently identified at tank farms. A mechanic performing a surveillance requirement incorrectly wrote down a number that was outside the allowable range (although the actual value was within the range). The mechanic, a QA inspector performing the QA hold point, maintenance first line manager, and shift manager all reviewed and approved the surveillance requirement data with the out-of-range value.

Savannah River National Laboratory (SRNL): Prior to beginning the evolution, the principle investigator (PI) filled out a procedure attachment for an upcoming plutonium metal transfer to K-Area by copying the same attachment from the last time this procedure was completed in October 2018. The copied information included isotopic data and a description of the packaged container configuration. The following day, K-Area engineering personnel observed SRNL personnel load the sample in a 9975 for transfer. Upon reviewing the requirements for transfer after the loading was complete (but before the transfer), a K-Area engineer noted that SRNL personnel did not use the proper slip-lid can and raised the issue with the SRNL PI. The PI then lined through the mention of the slip lid can in the description of the container configuration on the procedure attachment and initialed and dated it. Shortly thereafter, K-Area personnel determined that they could not accept the shipment unless it was repackaged appropriately. K-Area personnel also recognized that two other shipments they had already received from SRNL in September and October in 2018 may also not meet their requirements. Thus, K-Area personnel entered a limiting condition for operation associated with non-compliant containers and isolated the two packages. Discussions during an issue review revealed multiple procedure compliance issues and an apparent lack of understanding of the requirements for an Independent Verification that may go beyond the personnel involved in this issue. SRNL and K-Area personnel are planning to reconvene at a later date to discuss additional causes and corrective actions.

L-Area: Multiple conduct of operations failures led to maintenance personnel leaving water system valves in a configuration that resulted in a continuous water addition to the basin. The issue was noted on following day when an oncoming individual noted that the water level was one inch higher (although still within acceptable limits) than it was the previous day.