DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 10, 2023

TO: Katherine R. Herrera, Acting Technical Director
FROM: A.Z. Kline, L. Lin, Z.C. McCabe, and E.P. Richardson, Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending February 10, 2023

H-Tank Farm: While maneuvering an 80-ton crane during transit, a crane operator raised the boom and rotated the crane to avoid obstacles on top of Tank 32. The crane's outriggers were not extended due to transit, and the weight of the crane's counterweights caused it to tip. The crane came to rest on three of its six wheels at approximately a 50° angle with the counterweights sunk approximately six inches into the asphalt. Spotters were present during the evolution and no injuries were noted. There are no underground transfer lines or utilities where the crane impacted the pavement. The tank farms team added dunnage under the counterweights to prevent any further rotation of the crane and a recovery plan is being developed.

Salt Waste Processing Facility (SWPF): While performing a routine filter flushing activity, SWPF control room personnel noted an unexpectedly low pressure on pump P-102-1A approximately three minutes after restoring filter loop valving. Shortly thereafter, the control room manager identified that the filter flow control valve was incorrectly closed. SWPF personnel consulted with operations management and engineering on the path forward. They determined that they would suspend the procedure and manually drain the flush water from the filter per an existing procedure. The issue investigation determined that the operator performing the filter cleaning erroneously restored the filter flow control valve to the incorrect mode (automatic rather than manual). Several factors resulted in this error, including improperly completing a previous step where valve set points were not recorded as required and failing to call a time out when a step could not be performed as written. SWPF personnel are implementing several corrective actions, including adding clarity to the procedure and distributing refresher training on which valve modes are automatically controlled by the Basic Processing Control System and which are manually controlled.

Savannah River National Laboratory (SRNL): BSRA plans to implement their own event investigation procedure and process (see 2/3/23 report). However, DOE-SR reviewed the draft procedure and has scheduled a meeting with BSRA personnel to discuss DOE's comments. This will likely preclude BSRA from implementing a new process before implementation of the site-wide process on March 1. Thus, BSRA personnel attended a training session for the revised site-wide investigation process in support of implementing the site-wide procedure.

After discussions with DOE-SR, BSRA personnel have determined that upon receiving the safety significant fire water storage tank low-low level alarm in the control room, they should enter limiting condition for operation 3.1.1 condition A and B to comply with the Technical Safety Requirements. This is in contrast SRNL personnel's actions on 12/23/22 when they entered condition A for an inoperable alarm and failed to enter condition B for a low tank level (see 1/20/23 report). BSRA personnel have since initiated a change to the abnormal operating procedure to direct entering both conditions. In the meantime, BSRA operations management have issued a standing order to enter both conditions when the alarm is received and that provides additional context.