

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 19, 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 April 19, 2019

Staff Activity: Ms. McCoy of the Board's technical staff was on site this week for resident inspector training.

Salt Waste Processing Facility (SWPF): Multiple failures resulted in an operator being sprayed with a small amount of sludge simulant (pH of 11) while replacing a pump. Previously, the pump had failed and caused a part of the system to become pressurized with sludge simulant. The maintenance work order for the pump replacement included several steps for operations personnel to complete, including the removal and draining of the suction and discharge hoses. However, operations staff did not participate in several pre-task activities and reviews. For instance, they did not participate in the development or review of the hazards analysis, reviewing or approving the work order, or the pre-job brief. Maintenance personnel at the job site were waiting for others to arrive to take a Wet Bulb Globe Temperature measurement, a prerequisite step, when the operator arrived. The operator confirmed which hoses they were to disconnect with a maintenance mechanic. (No supervisor was present.) Without reviewing either the work order or the job hazards analysis, or understanding the status of the task, the operator left the area, obtained and donned what they believed to be the correct personal protective equipment (PPE), and returned to the job site. A maintenance mechanic noticed that the operator was approaching the pump while not wearing the proper PPE (an apron instead of a chemical resistant suit), but failed to say anything. When the operator began disconnecting the discharge hose, the built up pressure in the hose caused sludge simulant to spray on the operator and the immediate area. The operator doffed their PPE and went to the nearest bathroom, where they noticed that sludge simulant had sprayed their neck and personal clothing and began flushing the area with water from the bathroom sink instead of the nearby safety shower. The operator was not injured. During their investigation, SWPF personnel noted that the work order could not be completed as written, but this did not contribute to this event because the operator did not read or follow the work order.

Savannah River National Laboratory (SRNL): SRNL remains in the safety pause initiated on April 4. The resident inspector met with SRNL and DOE-SR senior management to discuss the goals of the safety pause, the upcoming transition from the pause and the resident inspector's observations at SRNL before and during the pause (see 4/12/19 report). The resident inspector understands that the focus of the safety pause is ensuring that SRNL personnel understand their roles and responsibilities related to performing work including task previews and pre-job briefs. SRNL management intends to transition out of the pause next week, beginning with releasing low hazard, non-essential work as determined by the associate laboratory directors.

SRNS personnel received a shipment for SRNL from a university containing nuclear material. Upon receipt, SRNS personnel found contamination on outside of the shipping container and stopped and made the appropriate notifications. SRNL's investigation revealed some imprecise communication between SRNL and the university. The contamination occurred prior to shipping this material back to SRNL.