

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 17, 2022

TO: Christopher J. Roscetti, 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 June 17, 2022

Defense Waste Processing Facility (DWPF): A lab technician was using a chain hoist that resides inside a lab hot cell when the hook popped off the hoist. During the fact-finding, personnel noted that the interlock to stop the hoist when it reaches an upper limit did not work. The issue with the limit switch was noted in 2013, and this same event had occurred in January 2017. After the last event, a note was put in the laboratory information management system (LIMS) to not run the hoist past the bottom of the chain bucket, but this was never formalized further. There is a reference procedure for performing pre-operational checks on the hoist, which includes raising the hoist to ensure the operation of the HI limit switch. Performing the procedure steps as written would have led to the same problem where maintenance would need to re-thread the chain onto the hoist. The lab technicians using the hoist were not aware of the note in LIMS or the pre-operational check.

Solid Waste Management Facility (SWMF): An operator performing monthly inspections discovered a pinhole in the lid of a low-level waste (LLW) drum on 6/9/22. The operator immediately left the area and contacted the shift operations manager (SOM). Surveys for alpha, beta/gamma and tritium activities measured less than detectable, but the SOM conservatively directed actions from the radiological spill Emergency Operating Procedure (EOP). The site Emergency Duty Officer confirmed that levels did not direct Emergency Action Level entry, but the SOM requested that the fire department respond. Conversely, the SOM did not request protective force response as directed by the procedure and instead had SWMF personnel act as human barricades. During the issue investigation, the DOE Facility Representative questioned the use and applicability of the EOP as overly conservative. The drum with the pinhole has been taped and covered with plastic.

SWMF conducted an evaluated exercise this week consisting of a dropped transuranic waste payload followed by an explosion and injury to an individual. While the drill conduct in the control room showed appropriately quick actions and good command and control, the field play was lacking in several areas. For instance, the individuals at the scene moved the unconscious victim (simulated by a mannequin) approximately 100 yards after the event before first responders arrived. The DOE-SR evaluator at the scene provided feedback after the exercise was complete and indicated that the evaluated exercise would have to be re-performed.

H-Canyon: H-Canyon personnel conducted their first criticality drill in nearly three years. Some oversights occurred, for instance, the operations team overlooked a manual accountability tracking sheet, which delayed them from obtaining 100% accountability. However, other personnel performed well, including the incident scene coordinator and the operations support center coordinator. Additionally, the site drill controller organization noted the shortcomings but improved the effectiveness of the drill through timely coaching and good use of simulations.