

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 10, 2023

TO: Timothy J. Dwyer, Acting Technical Director
FROM: L. Lin, Z.C. McCabe, and E.P. Richardson, Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending November 10, 2023

Staff Activity: Members of the Board's technical staff, S. Seprish and H. Dacayanan, were on site to observe the K-Area Surplus Plutonium Disposition Annual Peer Review.

Salt Waste Processing Facility (SWPF): On 11/4/2023, an electrical bus duct feeding SWPF failed, resulting in a brief fire and a partial loss of normal power. Qualified electrical workers working on a different system nearby observed smoke and visible arcing coming from the electrical bus. They immediately opened the associated disconnect switch, which removed power to the transformer and bus duct and stopped the smoke and arcing. Facility personnel took appropriate actions following the event, including entering the abnormal operating procedures for a fire and a loss of power and notifying the SRS operations center. The fire was not in a radiological area and there were no injuries or impacts to operations. This is the third fire at SWPF this year (see 3/24/23 and 4/21/23 reports) and is very similar to the bus duct fire failure in April, which has yet to be repaired. The facility was unable to determine the cause of the April event and plans to further investigate both events. Due to this event and two other reportable events this week, facility management has stopped all electrical outage work and will defer the remaining items to a later date. Issue investigations for the other two events will occur next week.

Savannah River Tritium Enterprise (SRTE): A resident inspector (RI) attended an issue investigation discussing a recent event where an operator observed a spark while performing troubleshooting of the reservoir hot air decontamination process. Rather than stopping work, the operator called the system engineer and together they attempted to recreate the observed spark. Only after recreating the spark did they stop and notify the control room. The operator and engineer performed adjustments with the equipment energized, which is contrary to the procedure, and they were unaware that voltage (6 VDC) was present at the work location. The issue investigation process failed to identify that recreating the spark was one of the main problems until prompted by the RI.

F-Area: An RI observed an F-Area emergency preparedness drill that simulated a vehicle collision, resulting in a spilled TRU waste container, a medical injury, and a fire that engulfed the vehicle and drum. Overall, players demonstrated good command and control at the scene and the control room. Due to the large amount of personnel that were new to their roles, more experienced players performed a lot of peer-coaching. Players and controllers appropriately noted several areas for improvement during the debrief after the drill. At the Emergency Operations Center, the DOE-SR representative was not successfully paged to go to the Technical Support Room. Due to the reduction in F-Area staffing as its mission scope decreases, the facility simulated contacting and receiving E-Area radiological protection department personnel support. The RI noted that with the continued reduction in workforce at F-Area and reliance on outside support, it would be prudent to perform a drill to verify that the response from other facilities is adequate.