

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 16, 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 September 16, 2022

DNFSB Staff Activity: C. Jones of the Board's Y-12/ORNL resident office was on site this week for training.

Conduct of Operations: An RI reviewed the shift operations manager's (SOM) and a control room operator's (CRO) log late in the afternoon (approximately 1530). The CRO's log included several entries regarding activities completed throughout the day and included several alarms that had come in. The SOM logbook only included that the SOM had assumed the role of SOM at approximately 0630 and included no other entries. The RI brought this to the attention of facility management. The following morning, the logbook had been completed without any indication of the fact that it had not been filled out at the appropriate time.

H-Area: The resident inspectors (RI) observed an emergency preparedness drill that involved a simulated radioactive spill of solvent and subsequent fire in H-Area Outside Facilities. This was the same drill scenario conducted a few weeks prior that the SRNS senior observer requested to be re-performed (see 9/2/22 report). Overall drill performance was less than adequate. The drill involved an injured person that relocated from the scene to a safety shower and reported their location to the emergency duty officer. When fire department responders arrived at the incident scene, they planned to put together a search and rescue team when a controller told them to simulate it and focus their resources on responding to the fire. Miscommunication among the controllers led to simulating the response to the patient, which was not a preapproved simulation. As a result, emergency responders never found the patient and no first aid responders were dispatched. The drill was terminated before the scene was safe, stable, and secure and will be re-performed. The RIs noted additional observations, including a gap of over 25 minutes between protective action announcements, incorrect information being reported from controllers, and coaching opportunities that were not taken with new radiological protection department personnel.

Tank Farms: Last month, tank farms control room personnel received an annulus conductivity probe alarm. The conductivity probes in tank annuli and associated alarms are credited to provide indication of an annulus level increase and require entry into a limiting condition of operation (LCO). These instruments often alarm when it rains, and no hazard is present. Although it was raining at the time of the alarm last month, Tank Farms personnel took the appropriate actions, including entering the LCO and investigating the level increase. After performing camera inspections, Tank Farms personnel were able to approximate the liquid level in the annulus as about 4 inches and noted seven previously unidentified leak sites from the tank into the annulus. After several flushes, the level has increased to approximately 8 inches, which is still well under the Technical Safety Requirement (TSR) limit. Tank Farms personnel performed an unreviewed safety question and raised the conductivity probe above the liquid level (but below the maximum TSR height) and are making preparations to install a Contingency Transfer System to remove the liquid in the annulus if needed.