

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 11, 2024

**TO:** Timothy J. Dwyer, Technical Director  
**FROM:** L. Lin, Z.C. McCabe, and E.P. Richardson, Resident Inspectors  
**SUBJECT:** Savannah River Site Activity Report for Week Ending October 11, 2024

**Tank Farms:** As part of waste removal efforts, personnel were adding water in Tank 15 to reduce the salt concentration prior to mixing and transferring the contents. Personnel performed the prerequisites for the water addition, which included steps for verifying that the purge ventilation system was operable and parameters were within round sheet limits, which were satisfactory at the time. However, the water addition was delayed a week due to equipment issues. Tank 15 is classified as a rapid generation tank, which has a Technical Safety Requirement (TSR) surveillance to verify that the tank purge exhaust flow is greater than 0.2 inches water column every 24 hours to ensure the hydrogen generated does not reach the flammability limit. After the water addition was initiated, the first line manager (FLM) reviewing the data sheet noticed that the purge flow was lower than the TSR limit. They notified the shift operations manager (SOM), who entered the LCO for low purge on that tank, which included stopping liquid additions into the tank and verifying the hydrogen levels were below the allowed limit, which they were. Upon further investigation, it was discovered that the purge flow had been recorded below the TSR limits on Tank 15 starting two days prior. Field operators that performed the electronic rounds and that filled out the increased surveillance data sheet every shift noted that the purge flow was out of limits, but each assumed that the tank was already in the LCO for low flow. The SOM was not immediately notified of the out of limit reading on a TSR surveillance, as is required. In addition, the purge flow on that tank had been trending downward for almost a week, but personnel had not identified the trend. During the issue investigation meeting, personnel noted that the purge flow reading is not flagged in the electronic rounds application or noted on the physical data sheet as a TSR step though it should be. In addition, they noted that the drop-down options for comments in the electronic rounds contains previous comments entered from any time. In this case, a previous comment in the system that the FLM was notified contributed to the operators' assumption that the tank was already in the appropriate LCO. Tank Farms management also noted that this was during the time where recovery efforts from Hurricane Helene were ongoing, which may have led to distractions. Tank Farms personnel are developing corrective actions as a result of this event.

While performing work to install inhibited water pipe supports, a laborer entered an excavation. Two other employees noted that the laborer was in the excavation without a protective system (e.g., sloping or shoring) and requested the laborer exit the excavation, contacted construction safety and health, and took a timeout. That morning, the excavation competent person had completed an inspection and signed the excavation safety checklist, including the section that authorized entry into the excavation, though no entry was intended. Personnel had not conducted pre-entry atmospheric monitoring nor established a protective system as would be required for entry into an excavation exceeding 5 feet in depth. Personnel discussed the misunderstanding of the excavation safety checklist, and that the inspection section should not have been completed if no entry into the excavation was intended. In addition, workers in the daily meeting that morning had not discussed whether the task involved entering the excavation or not. From the investigation, they also discovered that several personnel did not have the required training.