

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 2, 2024

TO: Katherine R. Herrera, Acting Technical Director
FROM: L. Lin, Z.C. McCabe, and E.P. Richardson, Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending February 2, 2024

F/H Lab: F-Area personnel discovered a leak from a hose that serves as part of the transfer line between a tank cell that contained radioactive liquid to an intermediate holding trailer. Rainwater can get into the tank cell and is pumped out when it reaches a certain level. When the leak was discovered, personnel immediately notified the on-duty shift operations manager (SOM), and the facility entered the appropriate abnormal operating procedure. Personnel placed a leak collection device under the leak and confirmed that there was no release to the outfalls and sandbagged the area. Engineering estimated that there was 18 gallons in the hose, and approximately 10 gallons that leaked onto the asphalt. Personnel sampled the immediate drain culvert and downstream culvert and results showed they were below reportable limits. During the issue investigation, personnel attributed the leak to freezing cycles damaging the camlock on the hose. They noted several missed opportunities, such as identifying whether freeze protection would be needed during the design of the temporary system, having procedures to drain the line prior to cold weather, and performing cold weather walkdowns to include temporary transfer lines. An extent of condition is being performed on other systems.

Savannah River National Laboratory (SRNL): SRNL operations personnel inadvertently turned off an individual's breathing air while they were waiting for assistance to doff their plastic suit. SRNL personnel were unable to determine how this error occurred through their investigation. However, their investigation did reveal that operations personnel were not aware of, nor did they use, the SRNL procedure for using a portable air compressor with a portable manifold for breathing air. In addition, operations management was not informed of the loss of breathing air until several hours after it occurred, despite being informed that operations had completed the job. It wasn't until radiological protection management became aware that they informed the operations management team. The individual that lost breathing air was in an airborne radioactivity area and high contamination area for approximately 1 minute without respiratory protection. Their personal air sampling unit measured less than 4 DAC-hours and radiological protection found no contamination on the individual.

H-Canyon: While preparing to conduct repairs on a leaking valve flange, H-Canyon personnel isolated an evaporator coil pressure transmitter including a lockout. This rendered the safety significant high coil pressure/steam flow interlock inoperable. None of the personnel who approved the lockout identified the need to enter a limiting condition of operation (LCO) as part of the installation. Further, the SOM authorized the lockout installation without reviewing the associated work package, which clearly required entering an LCO due to the safety system impacts of the work. The control room team received indications of the transmitter being isolated but dismissed them as an expected condition of the work being performed. While preparing for their shift a few hours later, the oncoming SOM identified the problem, and the watch team entered the appropriate LCO and completed all required actions within their allowable time limits. All necessary personnel were present and forthcoming during a well-conducted issue investigation meeting.