

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 12, 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 January 12, 2024

Event Investigations: DOE-SR has initiated their effectiveness review of the changes to the site process and procedure improvements in regard to event investigations. Last year, SRNS in collaboration with BSRA and SRMC drafted a complete revision to the site procedure governing event investigations and provided training to all investigators. DOE-SR plans to have their effectiveness review completed in February.

Savannah River Tritium Enterprise (SRTE): SRTE personnel conducted an emergency preparedness drill at the Tritium Extraction Facility (TEF). The drill scenario consisted of an operator inadvertently pulling a thermocouple vacuum gauge out of a vessel containing tritium and pulling a glove from the glovebox, resulting in a hydrogen deflagration and release of tritium from the TEF stack and an injury. Although there were still issues with the conduct of the drill and the demonstrated response, the RIs noted several areas of improvements with the execution and subsequent feedback discussed amongst the drill team and SRTE personnel as compared to last year's drills (see 8/25/23 report). Most notably, the SRTE personnel and drill team present at the controller debrief were appropriately complimentary and critical of the drill performance and identified actions to improve future performance. Among the noted shortcomings was the less than adequate timeliness and lack of prioritization of classifying the emergency by the emergency response organization. In addition, the scenario did not provide information regarding the tritium air monitor in the exhaust duct for the room the event occurred in, which would have provided the drill players additional information regarding the duration and quantity of the release. Players and controllers also noted breakdowns in communications. For example, no one from operations was left at the incident scene when the incident scene coordinator went to the incident command post and instead had to rely on other personnel to provide updates.

C-Area: The RIs attended an issue investigation on a lockout that was improperly installed. One lock was utilized for multiple single point lockouts (SPLT) when there should have been four locks. In addition, two of the four lockout tags were missing signatures and/or dates. This lockout was needed to de-energize a panel to support modification work at C-Reactor. A pre-job briefing was performed, but it did not cover how this lockout was to be hung. For some breaker SPLTs, the equipment is not substantial enough to hang multiple locks and an alternate protective measure can be employed instead. In this case, the breaker was substantial enough to hang multiple locks on it. The workers performed the safe energy check and then proceeded to install the lockout with the foreman and general foreman observing. Later that day, the facility point of contact noted the potential issue with the lockout and notified the shift operations manager. The construction superintendent paused the work and set up barricades around the area. During the issue investigation, personnel noted that they misinterpreted the requirements of the site manual that a lock and tag is required for each SPLT. The personnel involved in the work were not familiar with this type of lockout. Previously, they had signed onto lockouts that had required and had already been reviewed and verified by other personnel. Facility personnel are developing corrective actions.