DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 14, 2023

TO: Timothy J. Dwyer, Acting Technical Director
FROM: Frank Harshman and Clinton Jones, Resident Inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending July 14, 2023

Criticality Safety: As a follow-up to a criticality safety concern that the resident inspectors discovered in the machine coolant area of Building 9215 (see 6/23/23 report), the shift manager received guidance from nuclear criticality safety (NCS) engineering on how to disposition and store items in the affected area. During the cleanup effort, chemical operators were removing the wipes and placing them into storage containers specified by NCS. A supervisor and a NPO facility representative (FR) were observing the operation from a radiological control boundary approximately 12 feet away and noticed the chemical operators place storage containers that contained the wipes within 12 inches of each other. This violated the NCS guidance that was given. When the supervisor advised the chemical operators of the issue, they moved one of the containers to within 12 inches of another piece of fissile equipment, again violating the guidance. The supervisor advised the chemical operators of the situation, and they moved the container to a compliant distance. At no time did the supervisor or chemical operators enter the abnormal operating procedure for an abnormal condition involving fissile material which is required when a concern of this nature is discovered. Due to this observation by the NPO FR and another condition that the FR observed in the facility, CNS decided to perform an event investigation. The investigation is ongoing, but CNS took an action to perform additional walkdowns of the Building 9215 material access area. The resident inspectors attended two of the three walkdowns. During these walkdowns, which were attended by the NCS chief engineer, a criticality safety engineer, a criticality safety officer, the production manager, the operations manager, the NPO FR, and others, an additional 16 criticality safety concerns were identified over three days. These concerns are still pending evaluation. In the resident inspector's opinion, the level of sensitivity to criticality safety by the everyday workforce is lacking based on recent events, which may call into question the effectiveness of the CNS criticality safety pause.

Building 9204-2E: A recent discovery by members of the floor crew revealed an issue with inspections on lifting fixtures for both fissile and non-fissile components in the building. While performing a side-by-side comparison of two lifting fixtures of the same type, an assembly person noted a difference in the labeling. One fixture had the appropriate label indicating a yearly inspection had been completed and was not expired and the other simply had a green sticker indicating a one-time inspection had been completed with no visible identification number stamped into the fixture as required. The assembly person reported this issue to the acting operations manager and shift manager. The acting operations manager directed an extent of condition review be performed for all active lifting fixtures in the building. During this review, multiple lifting fixtures were found to be out of compliance with the equipment testing and inspection program by either not having labels or non-compliant ones. During the event investigation, the resident inspectors questioned how the workers verify lifting fixtures as part of procedures that are being worked. The response was that the workers have a yearly computer-based training that should reinforce the requirement. The resident inspectors pointed out that the previous training did not appear to be effective because of the number of issues going back several years and that a simple briefing of facility personnel was unlikely to prevent future recurrence.