

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 21, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: B. Caleca, P. Fox, and P. Meyer, Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending June 21, 2024

Central Waste Complex (CWC): Building 2402-WE contains the largest amount of radioactive material at the CWC. Last week, the safety-related dry-pipe sprinkler system for the facility tripped and went wet. Subsequently, an HMIS field team supported by a CPCCo fire system engineer attempted to reset and restore the system. When the main drain valve was opened as part of the system draining process, only a negligible amount of water was removed. They concluded that the riser control valve was closed, causing water to be trapped above it. The work instruction called for the team to ensure the riser control valve was reset. The HMIS team's method for doing this involved removal of a handhole cover bolted to the control valve body. They believed this action would be unsafe given the high pressure of the water. However, the 2402-series buildings have a different style of riser, which has an external reset mechanism not requiring removal of the handhole cover. After discussing the reset approach with the fire system engineer, the HMIS sprinkler fitter called a stop work. The facility implemented appropriate controls and convened a meeting to resolve the issue and develop a path forward. The resolution process proved challenging, and the fire protection system at the facility remained inoperable until the stop work was ultimately resolved five days later.

231Z Facility: Workers are in the process of removing old filters for the deactivation and decommissioning (D&D) of the 231Z facility. While removing a filter, the continuous air monitor (CAM) closest to the work alarmed, and workers promptly exited the containment structure used for the work. Only one worker was found to have any contamination on their outer personal protective clothing, and all workers surveyed out clean. Given the negative air machine ventilating the work, nondetectable nasal smears, and other air samples, CPCCo radiological control personnel do not believe respiratory protection was challenged. During an in-progress ALARA review, workers noted that space constraints prevented them from sleeving out the filters; instead, they opted to use sprays of fixative while removing filters. The work activity has been paused pending recovery actions inside the containment and development of additional controls to reduce dispersing airborne contaminants.

242-A Evaporator: Amentum chartered an independent review team to validate the evaporator facility's readiness. They reviewed the effectiveness of corrective actions developed to address contractor readiness assessment findings and the two recent inadvertent transfers of water to tank AW-102 (see 5/17/2024 and 5/31/2024 reports). The team observed similar weaknesses in conduct of operations (conops) previously noted by the resident inspectors. The team stated that recent events, while caused by gaps in technical understanding of facility systems by facility personnel, also included examples of poor conops, which the resident inspectors note amplified the events' consequences. The team recommended a four-step sequence to support restart of operations: completing corrective actions, performing water runs, conducting the DOE readiness assessment, and operations under shift supervisory watch and coaching of facility personnel. The team also recommended reviewing conops at other WRPS facilities for similar weaknesses.