

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 9, 2023

TO: Katherine Herrera, Acting Technical Director
FROM: B. Caleca, P. Fox, N. Huntington, and P. Meyer, Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending June 9, 2023

DNFSB Staff Activity: B. Sharpless was onsite to observe an ongoing management self-assessment at the 105-KW facility. D. Montierth was onsite to become familiar with site facilities and operations.

Tank Farms: A DOE Senior Review Board (SRB) met to evaluate a proposed amendment to the tank farm documented safety analysis that establishes a new technical safety requirement mode for operation of the Tank Side Cesium Removal (TSCR) System. Normally, entry into the TSCR process enclosure is not allowed until after the ion exchange columns (IXC) are depressurized and blown down to prevent exposure of entering personnel to spray and flammable gas hazards. The new mode allows entry of personnel into the process enclosure for activities that do not require work on a loaded IXC or its associated Chemjoint™ fittings without completing a blowdown. This improvement will allow repair of most equipment failures that might prevent completion of necessary blowdowns without having to complete the precluded blowdown, eliminating the need for the use of justifications for continued operation previously required for this work. The SRB recommended approval to the safety basis approval authority.

Resident inspectors observed a drill for exercise credit at the S Tank farm. In the scenario, a crane operator suffers a medical emergency, driving their crane over a waste tank, leading to a dome collapse, and triggering a site area emergency. The resident inspectors noted weaknesses in deploying personnel resources and radiological control performance, which were shared with the drill control organization.

Central Waste Complex (CWC): While removing the waste drum inventory from 2402-WJ in support of planned fire riser system repairs (see 6/2/2023 report), contamination was discovered on three waste containers during confirmatory surveys performed outside the entrance to the building. Workers secured the building doors and ventilation and performed whole-body surveys. Contamination was found on the pant leg of one worker. A recovery plan was developed for the outside hot zone. During recovery, contamination was discovered on a forklift tine. Two of the drums were successfully overpacked, however while preparing the third drum for overpack, three pin hole leaks were identified on the bottom of the drum and waste contamination deposits were observed on the pallet. Work continued with multiple applications of fixative, bagging of a pallet and the forklift tine, and overpacking all eight drums that were in the hot zone. The zone footprint was reduced, and it was down posted to a contamination area. The overpacked containers and other vehicles located in the zone have been removed. Plans to disposition the contaminated forklift and remove contaminated pavement are underway. Areas of contamination discovered in the building were decontaminated and the building was down posted. In all, 40 waste containers were removed from the building. Given a potential for discovery of additional drum integrity issues, the contractor has decided to leave the remaining waste drum inventory in the building while performing the fire riser system repairs.