DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 20, 2025

TO: Technical Director
FROM: Hanford Site Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending June 20, 2025

Tank Farms: H2C uses a specific administrative control (SAC) to protect workers from tank waste sprays, jets, or streams that might occur if waste is misrouted. The SAC requires operators to ensure two safety-significant (SS) isolation valves are in position to block misroute paths, and then provide an independent visual verification to confirm the valves are in the correct position. Consequently, to fulfill their SS function under the SAC, valves must function to restrict flow, and operators must be able to visually verify the valve's position. During a waste transfer, operators encountered higher-than-expected pump flows. They secured the transfer and verified the position of valves. They found a valve partially open that was expected to be closed. Although the valve was not being used for the SAC, it had been positioned using the same procedures used for the SAC. The qualified operator who originally positioned the valve stated the valve was difficult to operate and, based on the force they applied, believed it was correctly positioned. The qualified operator who performed the independent verification stated that, per procedure, they checked the orientation of painted lines on the valve operator cover plate on the exterior of the shield box to verify valve position. These lines only provide a gross indication of valve position and are known to be poorly aligned for some valves. Because of the misalignments, this method is not accurate enough to determine whether the valve is positioned within the valve manufacturer's specified tolerance to ensure flow is blocked. The only way to visually ascertain the valve position is within tolerance is for operators to observe the location of the valve stop pin, which is located inside the shield box and is not normally visible. Because of the event, H2C managers directed the performance of a potential inadequacy in the safety analysis (PISA) evaluation. A management team that reviewed the evaluation determined that a PISA does not exist because the valve would have been correctly positioned had the operator used sufficient force, per specification, and because —had the valve been used for the SAC—it would be unlikely for two valves to be concurrently out of position. Despite the contents of the evaluation and management's determination, the safety basis does not specify a torque value for operating the valves or the ability for an operator to visually ascertain the position of the valve within manufacturer tolerances for closure in the functional safety requirements for the valves.

Central Waste Complex (CWC): Following identification of radiological contamination on two standard waste boxes (SWBs) returned from an off-site repackaging vendor (see 6/13/2025 report), CWC radiological control personnel identified contaminated containers from a second return shipment of 10 SWBs. In total, 11 of 12 containers returned last week from the vendor were found to have either fixed or removable contamination. Five of these containers were decontaminated, and six were wrapped pending overpacking. The drivers who returned the shipments, as well as potentially affected offsite areas, were surveyed for contamination, with none identified. The response by CPCCo personnel to the contamination was appropriate; however, a significant delay occurred in surveying the drivers and associated offsite areas. CPCCo is working to establish new processes to prevent similar events from occurring in the future.