

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 12, 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 July 12, 2024

Staff Activity: R. Csillag and D. Montieth were onsite this week to support oversight of DOE readiness activities. H. Ashford was onsite for site familiarization and double-shell tank (DST) SY-103 analysis support.

242-A Evaporator: DOE Hanford kicked off its readiness assessment (RA) of the evaporator facility. RA team members conducted interviews of facility personnel, including operators and management, observed portions of the evaporator startup procedure, an operations drill at the facility's simulator, and conducted reviews of safety basis and training documents. During the attempts to start up the facility, multiple procedure changes delayed operations, and water leaks from the steam system and leak detector alarms from the transfer line connecting the evaporator to the liquid effluent retention basins prevented demonstration of key activities. In addition, several key WRPS individuals cancelled their scheduled interviews with the RA team to join efforts to troubleshoot and repair these issues. As a result of these interruptions to planned observations, the RA team consulted with the field office and recommended a suspension of the RA to allow additional time for the contractor to achieve and reverify readiness. The team noted that continuing the RA while the contractor attempted to address procedure and plant issues would compromise the independence of the team. The RA team intends to document its current observations internally and only share items that could pose an immediate safety risk to the facility, equipment, and personnel, giving WRPS time to independently address their problems prior to resuming the RA. A DOE Office of Enterprise Assessments observer communicated that they agreed with the RA team's approach given the potential for inappropriately influencing the RA outcome if detailed feedback is provided prior to completing all RA objectives.

Tank Farms: A work crew completed final preparations and replaced the DST AP-102 transfer pump with a new vertical turbine type pump. The crew also installed an adapter flange on a separate riser and an associated tank return nozzle. The work was well coordinated; and the work methods used by the crew were effective, safe, and professional. The field work supervisor addressed minor work safety improvements suggested by the resident inspector.

Tank Side Cesium Removal (TSCR): A WRPS engineering team completed an apparent cause analysis related to the discovery of loose fittings on a TSCR ion exchange column gas sample port. The team determined that the sub-contractor responsible for providing the assembly did not conform to the consensus standard specified by the contract, which provides requirements for tightening of threaded joints. The team also noted that, because of an oversight, the function and requirements evaluation document for the assembly did not include the design or failure modes of the fittings, resulting in a failure to adequately inspect or test the fittings after receipt. A corrective action review board subsequently recommended approval of the team's results. The resident inspector notes that this issue was discovered in June of 2023. The delayed completion of this cause analysis is not consistent with best practices for prompt evaluation of safety issues.