

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 18, 2023

TO: Timothy J. Dwyer, Acting Technical Director
FROM: B. Caleca, P. Fox, N. Huntington, and P. Meyer, Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending August 18, 2023

Solids Waste Operations Complex (SWOC): The contractor completed their root cause evaluation for the performance degradation of fire suppression systems (FSS) identified with excess corrosion and sediment in sprinkler system branch lines (see 1/20, 2/3, and 2/10/2023 reports). The identified root cause was an inaccurate perception of the risk for pipe obstructions due to missed 5-year internal inspections. Contributing causes identified included a normalization of deviance to transfer corporate responsibility of managing and resolving the issue, and ineffective utilization of the both the issues management process and the work control process. To date, all buildings at the Central Waste Complex have had their FSSs restored to operability. Inspections and any required restoration activities remain to be completed for three buildings at the Waste Receiving and Processing Facility and one at T Plant. CPCCo general service facilities are having their FSS inspected, flushed, and evaluated over the next 5 years.

Tank Farms: WRPS continues to make progress on evaluating the integrity of the double-shell tank transfer lines (see 6/3, 7/1, 7/29/2022, and 3/31/2023 reports). Transfer lines are crucial for continuing DFLAW and Retrieval operations. Four transfer lines were hydrostatically tested last month, and each passed the test with no observed leakage. Eight supernate lines and eight slurry lines in AP Farm were dried, and drying of other transfer lines in the AW and AP farms is ongoing. Performance of ultrasonic testing is estimated to be complete in September and is one of the last data inputs for the integrity assessment. The contractor is also working on a humidity sensor skid to actively monitor transfer line humidity and is planned to be deployed in late fall.

Hanford Site: Hanford Fire Department (HFD) ground ladders, aerial devices, and pump apparatus must be inspected annually by an unbiased and certified third-party to confirm compliance with relevant codes and standards. HMIS, which manages the HFD, has historically sub-contracted this work. When the most recent vendor's sub-contract ended, HMIS issued a request for proposal, which was extended several times, but did not receive any valid bidders. In mid-July a concerned HFD worker issued a "stop work" on the equipment until the overdue inspections were complete. HMIS subsequently used an expedited process to allow a third-party sub-contractor to schedule and perform the work, which is ongoing. The inspections have not identified any deficient conditions related to the equipment. HMIS management is performing a root cause analysis to identify actions necessary to prevent similar future issues.

Building 324: The resident inspectors met with DOE field office and contractor representatives to discuss proposed changes to the building 324 disposition project. The changes are considered necessary since discovery of additional contamination at the facility outside the footprint of the B Cell (see 6/30/2023 report). The discussion focused on method and sequence for the remediation, preventing contamination migration in the soil column before or during site remediation, contingency planning in case the contamination does migrate into the groundwater, and the ongoing degradation of facility systems that is making it difficult to work within the building and the impact of those problems on worker radiation exposure and safety.