

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 10, 2023

**TO:** Katherine R. Herrera, Acting Technical Director  
**FROM:** B. Caleca, P. Fox, N. Huntington, and P. Meyer, Resident Inspectors  
**SUBJECT:** Hanford Activity Report for the Week Ending February 10, 2023

**Solid Waste Operations Complex (SWOC):** After consideration of the conditions found during ongoing fire suppression system dry pipe internal inspections (see 1/20/2023 and 2/3/2023 reports), facility operations determined that the number of internal inspection locations derived from National Fire Protection Association (NFPA) code requirements may not be adequate to fully assess the operability of the systems. Consequently, all safety significant fire suppressions systems, including those that had been previously inspected and determined operable using NFPA 25 criteria but not flushed, have been declared inoperable. The systems will be returned to an operable status after they have had a full internal inspection or full system flush. Additionally, a Potential Inadequacy of the Safety Analyses was declared for SWOC facilities that have safety significant fire suppressions systems including the Central Waste Complex (CWC), the Waste Receiving and Processing Facility (WRAP), and T-Plant. Waste operations other than those required for inspections and flushing remain restricted in the affected areas of CWC, and introduction of radioactive waste into WRAP and T-Plant is prohibited.

**REDOX Facility:** A resident inspector observed a meeting at which the CPCCo Plant Review Committee (PRC) approved implementation of the latest revision of the REDOX safety basis. The most significant changes include the installation and operation of the new skid mounted HEPA filtered ventilation system, which will replace the existing sand filter and fans, and use of a transportable criticality alarm system, which is required for certain hazard reduction work. CPCCo has issued a timely order to preclude final tie-in and activation of the new ventilation system until an updated emergency planning hazard assessment is completed for the REDOX facility.

**242-A Evaporator:** A resident inspector observed a WRPS PRC meeting held to evaluate the unreviewed safety question (USQ) determination for low temperature conditions in the evaporator facility (see 1/5/2023 and 1/20/2023 reports). The PRC approved a positive USQ.

**Tank Farms:** The resident inspectors met with WRPS Engineers to view and discuss equipment that WRPS recently designed and fabricated to air dry the double shell tank waste transfer line encasements. Drying some of the encasements is necessary due to the discovery of standing water and corrosion (see 6/3/2022, 6/7/2022, and 7/29/2022 reports). The equipment, which includes a safety-significant relief valve, will be capable of drying up to eight AP farm transfer lines at a time. Tank farm personnel will install and start using the equipment in the coming weeks.

**105-KW Basin:** Resident inspectors performed a walkdown of the 105-KW basin. The walkdown was led by a team lead who discussed basin floor vacuuming work and the ongoing recovery from a high radiation condition that occurred while sampling material in a vertical pipe casing. The resident inspectors did not identify any significant issues and housekeeping inside the basin structure is good.