

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 22, 2022

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** B. Caleca, P. Fox, and P. Meyer, Hanford Resident Inspectors  
**SUBJECT:** Hanford Activity Report for the Week Ending April 22, 2022

**Aging Structures Stabilization:** Contractor management held a Plant Review Committee (PRC) meeting to discuss the implementation of the hazard categorization downgrade of the Z-9 crib, which was stabilized with grout in 2021 to prevent subsidence or collapse that might release radiological material (see 1/15/21 report). The downgrade from a Hazard Category 2 facility to a less than Hazard Category 3 facility allows retirement of the existing safety basis controls, fire hazards analysis, and emergency planning hazards assessment.

**Waste Treatment Plant (WTP):** The ORP Senior Review Board (SRB) held a second meeting to discuss Revision (Rev) 10 of the High-Level Waste Facility Preliminary Documented Safety Analysis (PDSA). Analyses that support PDSA Rev 10 accident consequence estimates increased the consequences for the aircraft crash accident scenario. The change in consequences resulted from an assumption that an aircraft crash might simultaneously disable all ventilation systems which, in turn, could cause a flammable gas deflagration. The contractor recommended that DOE accept the additional risk. Before considering risk acceptance, the DOE SRB wanted to better understand whether there are potential control options or if an alternate analysis might show less risk. Contractor engineers stated that operation of a single ventilation train would substantially lower dose consequences if it could be shown to survive the event. Based on current update cycles, the contractor expects to update the PDSA at least three more times over the next two years. This event will be further evaluated prior to finalizing the safety basis.

**Hanford Site:** The Patrol Operations Center (POC) received a high chlorine alarm signal from the 283W Water Filtration Plant, a non-radiological facility with a sizable inventory of chlorine for water treatment. As a result, a take cover was initiated in the 200 West area and the Event Coordination Team was activated. Hanford Fire Department personnel responded and determined that there was no significant release, which allowed termination of the event. A subsequent inspection of the system determined that the cause of the alarm was an instrument failure; the instrument was subsequently repaired. This is the fourth case of a Chlorine alarm due to instrumentation or communication errors (see 10/18/2019, 1/8/2021, and 8/13/21 reports).

Site emergency management personnel coordinated an annual protective action drill which evaluated take cover actions by personnel in the 100, 200 east, and 200 west areas.

**242-A Evaporator:** The Tank Farm Operations Contractor PRC met to evaluate changes to the 242-A Evaporator facility Documented Safety Analysis and Technical Safety Requirements that support the use of the new transfer lines that are being installed between the 242-A facility and AW Tank Farm, and other associated pit modifications. Among other changes, the installation has added a valve that must remain open to allow a C-A-1 vessel dump path, which is important for ensuring protection against flammable gas accidents. The PRC recommended acceptance of the changes.