

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 8, 2021

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** B. Caleca and P. Fox, Hanford Resident Inspectors  
**SUBJECT:** Hanford Activity Report for the Week Ending January 8, 2021

**Tank Side Cesium Recovery (TSCR):** After completing final inspections, the work crew has removed the electrical lock-out tag-out for the TSCR system enclosures and started contractor acceptance testing. The project team's goal is to complete testing and the operational readiness check list, and then declare readiness in early July. The project team expects delivery of the first set of three cesium removal ion-exchange columns in the coming week.

**Tank Farms:** Tank Farms Operations Contract personnel continued their efforts to retrieve waste from single-shell tank AX-104 (see 12/18/2020 and 1/1/2021 reports). Early in the week, they completed initial recirculation of AX-104 and performed a successful transfer of the tank waste and caustic mixture to double-shell tank AZ-102. They subsequently added approximately 10,000 gallons of water to the tank, continued recirculation, and performed a second transfer to AZ-102 later in the week.

A contractor team has completed an extensive and thorough analysis of unplanned ventilation shutdowns within the tank farms and the 222-S laboratory facility. Unplanned ventilation shutdowns can disrupt work activities and reduce safety. In particular, unplanned ventilation shutdowns can cause facility evacuations, create a need for additional respiratory controls or radiological access restrictions, and require unplanned limited condition for operation entries. The study included a significant data collection effort and evaluated twenty-six unplanned shutdowns that occurred in the first ten months of calendar year 2020. The team determined that the primary causes for the unplanned events are less than adequate understanding of system changes or risk associated with the changes, power losses, and equipment failures. Based on that determination, the team has proposed a set of actions designed to increase the reliability of ventilation system operations and reduce the number of unplanned shutdowns.

**Solid Waste Operations Complex (SWOC):** The safety basis approval authority determined that the evaluation of the safety of the situation (ESS) developed by the contractor adequately addresses conditions identified by DOE during a review of the SWOC documented safety analysis (see 5/29/2020 report). The approval letter notes that the ESS adequately documents an increase in potential accident consequences and states that the compensatory controls initiated by the contractor, combined with conditions of approval (see 12/25/2020 report) noted in DOE's safety evaluation report (SER) manage the risk to an acceptable level. The approval allows the contractor to modify previous DOE directed compensatory measures (see 7/31/2020 report) to support implementation of the controls identified in the ESS and SER.

**200 West Area:** A high chlorine alarm for the 283W Water Treatment Facility occurred at the site's patrol operations center (POC) prompting a take cover for the 200 West area and activation of the event coordination team. First responders were able to confirm there was no release of chlorine inside or near the facility, and the take cover was lifted. This event was similar to a false high chlorine alarm in 2019 (see 10/18/2019 report).