

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 2, 2018

TO: Christopher J. Roscetti, Technical Director
FROM: P. Foster and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending November 2, 2018

DNFSB Staff Activity: D. Brown and T. Hunt were onsite to review 105-KW Basin sludge retrieval and T-Plant sludge storage activities.

Plutonium Finishing Plant: The Resident Inspector observed the performance of a Hazard Review Board (HRB) meeting that was convened to review the work package that the contractor will use to complete demolition of the high hazard areas of the 234-5Z structure. The HRB voted to approve the package, with comments. The Resident Inspector notes that the approval was granted without resolution of comments affecting some of the primary hazard controls contained in the work package. Additionally, as written, the work package allows work to continue with up to two million disintegrations per minute of alpha contamination in the demolition area. Although, the work package does require action to mitigate contaminated areas at lower activity levels, the work package does not require the identification of either the cause or extent of the higher contamination levels, if they occur. Failure to do so could challenge contamination control methods and result in the spread of contamination outside of established contamination control area boundaries. Finally, although the HRB meeting was formally conducted, the Resident Inspector notes that the behavior of some attendees, as well as the method used to organize the discussion, limited the free flow of comments during the meeting.

Tank Farms: Contractor management held a Joint Review Group (JRG) meeting to evaluate their readiness to extract a thermocouple from AX-103. The work package requires size reduction of the item during removal to support safe handling of the relatively fragile long-length thermocouple and prevent its buckling (see 8/4/2017 report) when it is transferred from the tank to its disposal container. The JRG approved the work package, with comments, and determined that the work team was adequately prepared to perform the removal. During the meeting, the JRG identified a scenario that could result in the thermocouple becoming stuck in the riser. The work team appeared to be prepared to prevent the event and provide an adequate response, if it occurred. However, the Resident Inspector notes that the likelihood of the event might justify the development of a contingency plan and staging of necessary equipment to ensure successful removal of the thermocouple once the evolution starts.

Waste Treatment Plant (WTP): DOE-ORP transmitted a formal response regarding the status of three Board issues regarding the design of the High-Level Waste (HLW) Facility. The topics discussed include concerns with unanalyzed melter accident scenarios, the hydrogen control strategy, and seismic classification of confinement ventilation system components. ORP considers the issues resolved.

Building 324: Contractor management held an In-progress ALARA Review (IPAR) to understand the causes of a cross-contamination event that resulted in contamination of an individual's modesty clothing. The IPAR effectively identified areas for additional investigation and potential process improvements to prevent recurrence of the event.