

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 9, 2018

**TO:** S. A. Stokes, Technical Director  
**FROM:** P. Fox, Hanford Resident Inspector  
**SUBJECT:** Hanford Activity Report for the Week Ending March 9, 2018

**DNFSB Staff Activity.** D. Cleaves was onsite performing resident inspector support activities and D. Brown was onsite for staff site familiarization activities.

**Plutonium Finishing Plant (PFP).** The contractor finished their draft root cause evaluation report for the December 2017 contamination spreads (see Activity Report 12/22/2017). The draft report, which was released to the public, identifies two root causes for the contamination spreads. First was an over-reliance on selective empirical data gathered during the course of, and following, demolition to make decisions regarding demolition rates and methods; second was inadequate review and evaluation of risks and consequences associated with emerging and changing conditions. The report also identifies two contributing causes for the event and identifies corrective actions to resolve both the root causes and the contributing causes. The report has been provided to DOE's Expert Panel for their review. The contractor will finalize the report after receiving and incorporating recommendations from the Expert Panel. Demolition at PFP will not resume until the causal analysis is complete, corrective actions have been implemented and determined to be effective by DOE, and the Washington State Department of Ecology and United States Environmental Protection Agency concur that the actions are sufficient to allow the continuation of work.

**105-KW Basin.** The contractor completed the Operational Readiness Review (ORR) (see Activity Reports 1/26/2018) of their readiness to retrieve sludge from the KW Basin using the new Engineered Container Retrieval and Transfer System (ECRTS). The ORR team identified two noteworthy practices, eleven pre-start findings, and seventeen improvement opportunities. The team also determined that the contractor would be prepared to safely and compliantly operate the ECRTS to retrieve sludge after they close the ORR pre-start items and complete the remaining activities on their list of open items. DOE intends to start their ORR on April 9, 2018.

**Tank Farms.** The contractor Joint Review Group (JRG) met to review work instructions and work team readiness for the removal of a pump from tank AX-102. The JRG approved the work instructions with comments, and determined that the work team was prepared to do the job.

Over the last two weeks, the contractor completed a transfer of waste from AP-108 to AW-106 and the subsequent recirculation of the waste in AW-106. These activities support the contractor's performance of an evaporator campaign that is expected to occur in June 2018.

**Low Activity Waste Pretreatment System.** The resident inspector met with the ORP LAWPS Federal Project Director to discuss proposed changes in the LAWPS design. The proposed changes represent a simplified approach that leverages existing Tank Farm and Waste Treatment Plant infrastructure. The proposed changes also include use of non-elutable resin (vice an elutable resin) in the ion exchange columns. The approach is still undergoing development and DOE expects to perform a business case analysis to support their decision in late March.