

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 21, 2018

TO: Christopher J. Roscetti, Technical Director
FROM: P. Foster and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending September 21, 2018

DNFSB Staff Activity: D. Brown and T. Hunt were onsite to observe sludge loading operations in the 100-KW Basin.

Waste Encapsulation and Storage Facility (WESF): The contractor's Plant Review Committee (PRC) met to review the completion of activities associated with implementation of revision 12 of the DSA and TSR documents for WESF. The revisions address changes to the facility resulting from installation of the new K3N filter system and completion of the project stabilizing contamination in all of the facility hot cells, except G cell. The changes modify the G Cell combustible loading TSR to simplify tracking and add a new TSR that protects fire hazard analysis assumptions related to combustible loading near the G Cell windows when capsules are present in the cell. They also upgrade the safety classification of a pool cell area door from general service to defense-in-depth, since the door is credited for providing passive ventilation to the pool area if the K1 ventilation system is not operational, and downgrade the K3 ventilation system from defense-in-depth to general service since it is no longer credited as a control in any accident analysis. The changes also modify the set of design basis accidents by adding a section addressing consequences resulting from secondary accidents caused by natural phenomena hazard events and remove many of the hot cell hydrogen explosion scenarios. Lastly, the revision incorporates the standard collocated worker Chi/Q value from DOE Standard 3009. This change lowers the collocated worker consequences for design basis accidents by roughly a factor of ten. The PRC determined that the implementation activities have been adequately completed and recommended final implementation of the DSA and TSR changes.

The contractor held a Hazard Review Board (HRB) to discuss a newly developed work package to perform decontamination and painting activities in the canyon. These activities are part of an effort to prepare the canyon infrastructure to support the transfer of waste capsules to dry storage containers. A resident inspector observed the HRB and noted that the field work supervisor was knowledgeable of the work tasks and communicated the primary hazards well in the mock pre-job briefing. The HRB approved the work package.

Soil and Groundwater. Contractor management held a critique meeting to determine the facts related to the discovery of a piece of potentially contaminated piping outside of approved storage locations. The critique determined that the piping was missed during the down post of the area from a radiological buffer area (RBA) to a non-radiologically controlled area.

Waste Treatment Plant. A resident inspector walked down the Low Activity Waste facility and noted that the contractor's housekeeping is generally good. However, many equipment protection coverings are being removed. Although removal of the coverings is necessary to allow testing and transition to operations, the resident inspector notes that premature permanent removal of protective barriers could lead to unwanted equipment damage and increases the importance of housekeeping activities.