

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 15, 2017

TO: S. A. Stokes, Technical Director
FROM: P. Fox and D. Gutowski, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending September 15, 2017

J. Abrefah, K. Amundson, B. Caleca, D. Cleaves, R. Jackson, D. Minnema, and C. Scheider were on site to review PUREX Tunnel grouting and Building 324 radiological safety.

Tank Farms. The contractor Plant Review Committee met to consider several changes to the tank farm DSA and TSR documents. The most significant change applies to tank AY-102. Since the tank contains only residual waste, active ventilation is no longer necessary to prevent flammable gas hazards caused by steady-state or induced gas release events. Consequently, controls designed to ensure active ventilation flow for the tank will no longer apply and the tank will be excluded from flow monitoring upgrades that were developed based on Board Recommendation 2012-2. The tank will still be monitored for flammable gas accumulation on an annual basis. In addition, based on recent updates to the steady-state flammable gas release rate calculation, flammable gas monitoring frequency for three single-shell tanks were increased.

The contractor performed a tabletop emergency preparedness drill simulating a sitewide seismic event. Participants included personnel from the Tank Farms, Effluent Treatment Facility, 222-S Laboratory, as well as Mission Support Contractor personnel representing the Hanford Fire Department, Hanford Patrol, and Emergency Operations Center. The scenario knocked out site power and severely curtailed available communications methods. Facility damage included partial collapses of the REDOX and PUREX canyons and a fire in the 2101M warehouse. The goal of the activity was to find opportunities to improve the Tank Farms Contractor's plans and procedures for response to severe events.

Plutonium Finishing Plant. Conditions necessary to lift a recent stop work (see Activity Report 8/11/2017) were met and the stop work was lifted. Additionally, an alternate water supply has been established to replace the damaged fire main system (see Activity Report 9/1/2017) and the project team completed the final ready for demolition checklist for 234-5Z. The demolition team subsequently started demolition of the Analytical Laboratory section of 234-5Z.

Waste Treatment Plant (WTP). ORP transmitted a letter to DOE-EM submitting their technical basis for resolution of the Board's safety issue regarding uncertainty in the WTP spray leak methodology.

ORP authorized the contractor to perform design, procurement, and construction of specific new and upgraded safety-significant structures, systems, and components (SSCs) to support Direct Feed Low Activity Waste prior to completion and approval of the new PDSA (see Activity Report 7/27/2017).

PUREX Plant. The contractor performed a Hazard Review Board chair review of a work package change that supports installation of the trench boxes that will allow placement of the instrumentation and grout risers. Placement of the trench boxes is expected to occur next week.