

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 24, 2017

TO: S. A. Stokes, Technical Director
FROM: P. Fox and D. Gutowski Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending February 24, 2017

Auditors from the NRC/DNFSB Inspector General's office were onsite as part of their review of the Resident Inspector program.

Solid Waste Operations Complex. The contractor declared a PISA when they determined that the safety basis does not include a hazard evaluation for a seismic event with fire (DOE-STD-5506-2007, *Preparation of Safety Basis Documents for Transuranic (TRU) Waste Facilities*, event 25). The gap was first noted by the previous contractor in 2007 and was intended to be addressed in the 2008 documented safety analysis annual update, but appears to have been dropped in contract transition. The contractor implemented a timely order limiting the introduction of additional combustible materials into the facility until an analysis is complete.

Tank Farms. The resident inspectors observed an emergency preparedness field drill. The scenario was a large plane crash into B Farm tripping the criteria for a Site Area Emergency. The timeliness of the facility response did not match the urgency of the event, and there were weaknesses in radiological control at the scene.

The contractor informed ORP that they have reached the limits of the second technology (extended reach sluicers) for retrieval of solids from AY-102 (see Activity Report 1/27/2017). Approximately 19,000 gallons of total waste remain in the primary tank and annulus. Solids have been cleared from the presumed location of the leak site and video inspections are planned for the future once visibility through remaining liquids allows. The annulus level rebounded to approximately 12" following the most recent pumpdown. It appears to be near hydrostatic equilibrium with the primary tank.

Waste Encapsulation and Storage Facility (WESF). A resident inspector observed a mockup of activities that will be used to remediate the high radiation field in the WESF canyon (see Activity Report 12/23/2016). The mockup lacked the fidelity and rigor of those performed for the previous phase of the recovery. Although the activity did identify some necessary changes to the work procedure, the weaknesses reduced the training and discovery value of the event

Plutonium Finishing Plant. The resident inspectors have noted an adverse trend in the control of work being performed in 234-5Z. Rapidly changing radiological conditions along with the highly intrusive nature of ongoing work indicate a need for increased levels of radiological and supervisory control. The contractor is addressing this issue with their primary efforts focused on removal of hazards by isolating electrical power from the facility, work sequencing to avoid existing hazards that cannot be removed at this time, increased levels of radiological screening for routine work items, and more thorough walk downs of work areas.

DOE Headquarters Oversight. Last week, the DOE-EM Office of Standards and Quality Assurance performed a limited scope assessment of ORP staff's role in the USQ process. They identified one finding, one observation, and one recommendation.