

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 3, 2015

TO: S. A. Stokes, Technical Director
FROM: P. Fox and D. Gutowski Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending July 3, 2015

D. Gutowski was offsite this week.

Radiochemical Processing Laboratory. The contractor declared a Potential Inadequacy in the Safety Analysis (PISA) when they determined that improved modeling is necessary to show that the facility Criticality Alarm System (CAS) can detect a criticality inside of the High Level Radiochemical Facility hot cells. The determination occurred when a recent review found that the technical analysis that supports the configuration of the CAS does not specifically model the neutron shielding capabilities of the windows and Meehanite cast iron doors associated with the hot cells. The contractor instituted additional compensatory measures to protect workers pending completion of the analysis and the related USQD.

Tank Farms. The contractor completed an unreviewed safety question determination (USQD) to resolve part of the PISA related to potential high temperatures that could damage safety significant process hoses (see Activity Reports 6/19/2015 and 6/26/2015). A negative USQD resulted when conservative calculations determined that the temperatures associated with the AN-106 pump will not exceed hose design temperature. The contractor submitted an evaluation of the safety situation to ORP and lifted restrictions on the AN-106 pump. This action restores the contractor's ability to retrieve tank C-105 waste. Restrictions remain in place for the AN-101 and C-111 pumps. Calculations are in progress to complete the USQD related to these pumps.

The contractor completed a waste transfer from tank AZ-102 to tank AW-102. An attempt to start a subsequent transfer from tank AY-101 to tank AZ-102 failed when the AY-101 pump did not start. Subsequent investigation determined that the AY-101 pump will likely require replacement. The contractor is now transferring waste from tank AP-103 to tank AZ-102.

Plutonium Finishing Plant. A safety significant firemain riser drain valve failed during testing. Workers isolated the riser, which supplies the fire sprinkler system for 242-Z and the Plutonium Reclamation Facility, to stop water flow. The contractor declared the riser inoperable and entered the appropriate limiting condition for operation (LCO) which stopped deactivation, lay-up, and hot work activities in the affected areas. The valve was subsequently replaced and the riser returned to service. The PFP has exited the LCO.

Waste Treatment Plant (WTP). ORP issued updated guidance regarding the functional classification and hazard control selection for WTP safety structures, systems, and components. The revised guidance resulted from a collaborative effort between ORP and the contractor, and is intended to clarify certain requirements contained in DOE-STD-3009-94 Change Notice 3.

The contractor completed their evaluation and documentation of the C5V ventilation control strategy for the Low Activity Waste (LAW) Facility. The evaluation determined that there are no hazards or accidents that would require the C5V ventilation system to be functionally classified as safety significant. The contractor is working to complete a similar evaluation of the LAW Facility C2V and C3V ventilation systems.