

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 11, 2014

TO: S. A. Stokes, Technical Director
FROM: D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending July 11, 2014

Board staff member P. Fox was onsite providing site rep support.

242-A Evaporator. The contractor completed field evolution observations and interviews for the limited scope Contractor Readiness Assessment (RA) of the 242-A Evaporator. System demonstrations that would have required the facility operators to align liquid waste feed to the evaporator as well as process upsets were performed in the facility control room simulator. All other operations required for the RA were performed in the facility. Two significant equipment problems occurred during the live plant demonstrations. On the first day of the RA, a non-credited interlock actuated which prevented start of the recirculation pump. The problem was subsequently resolved with a control system software change and operation of this pump was demonstrated. On the second day, a solenoid failure in the pump start circuitry prevented startup of the condensate pump. The contractor obtained a replacement for the failed part then repaired and retested the condensate pump start circuitry. The RA team leader was actively engaged in ensuring all lines of inquiry were pursued by the team. The RA team will complete their report and perform an out brief next week. A DOE RA will follow prior to startup.

Tank Farms. ORP issued a Safety Evaluation Report for the safety basis amendment that closes the unreviewed safety question (USQ) related to deep sludge layers in tanks (see Activity Report 5/23/2014). The approved amendment includes continued monitoring of tanks with deep sludge layers as a defense in depth control.

Site Infrastructure. Another leak was discovered in a 24-inch water line supplying river water to the 200 West Area. Leaks in these water lines are a continuing problem with several occurring this fiscal year as well as in prior years (see Activity report 6/7/2013).

Plutonium Finishing Plant (PFP). The site rep met with contractor and RL personnel to discuss the monthly surveillance of the criticality alarm system (see Activity Report 7/4/2014). The contractor concluded that the skipped step was not required from a technical stand point and agreed to evaluate what changes should be made to the procedures.

The safety basis notes that fires at PFP have significant worker consequences and there are a number of TSR specific administrative controls as well as fire sprinklers to address these accidents. A facility representative (FR) noted a number of apparent flow-down disconnects from the fire hazards analysis through the TSRs to the implementing procedures. The FR, RL safety analyst, and fire protection engineer met with the contractor to discuss these apparent issues. They concluded the problems did not represent a violation of the TSR or a USQ, but the contractor agreed to evaluate what changes need to be implemented to resolve these issues.

Waste Treatment Plant. The contractor started hazards analysis (HA) meetings to evaluate the redesign of vessels RLD-7 and 8 in the High-Level Waste (HLW) facility (see Activity Report 1/10/2014). This is the first HLW HA since they were halted last year to focus efforts on developing a Safety Design Strategy.