

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 5, 2016

**TO:** S. A. Stokes, Technical Director  
**FROM:** P. Fox and D. Gutowski Hanford Site Representatives  
**SUBJECT:** Hanford Activity Report for the Week Ending August 5, 2016

Board Chairman Connery was onsite with staff members M. Bradisse and D. Cleaves to visit RL, ORP, and PNSO facilities, observe operations, and meet with senior managers. Key items from the trip included efforts to resolve Waste Treatment Plant technical issues, Plutonium Finishing Plant demolition plans, treatment of K Basin sludge, and high level waste infrastructure. The Chairman also met with the Washington Department of Ecology's Nuclear Waste Program Manager and several members of the Hanford Advisory Board.

**Wildland Fire.** A wildland fire originating offsite spread onto the Hanford Arid Lands Ecology Reserve adjacent to the 200W area. It did not cross state highway 240 or impact any nuclear facilities. The threat to Hanford was largely eliminated on Monday following a backburn on Rattlesnake Mountain. By the end of the week, the fire was 95% contained.

**Waste Treatment Plant (WTP).** The contractor submitted an engineering study to ORP to support closure of the hydrogen in vessels technical issue. The study evaluates all pulse jet mixed vessels currently installed in the Pretreatment facility and the proposed Standard High Solids Vessel concept. For non-Newtonian and high-solids Newtonian waste, as is expected in the Standard High Solids Vessels, the study proposes a control strategy to prevent hydrogen accumulation. ORP is evaluating the study.

The WTP Joint Test Group (JTG) met to review a functional test that will result in initial energization of the WTP switchgear building (Building 87). The switchgear building provides non-safety related medium voltage power to WTP facilities. The meeting was formal, and the attendees were well prepared and asked meaningful questions during the review. The site rep notes that overall execution of JTG meetings has improved which indicates that ongoing ORP and contractor efforts (see activity report 3/18/2016) in this area are effective.

**Plutonium Finishing Plant.** The Plutonium Reclamation Facility (PRF) canyon crane wire rope was found to be degraded during a periodic inspection. The contractor believes the damage occurred when the wire rope came off of the hook block reaves while lifting a canyon strongback earlier this year. Based on the short remaining life of the PRF canyon crane and after performing a technical evaluation, the contractor decided to continue use of the crane with the rope in a degraded condition. Current planning shows five remaining lifts before the crane is prepared for removal during demolition of the facility. All of the lifts are expected to be less than 400 pounds. Normal operating procedures exclude personnel from the canyon during crane lifts and damage to the facility from a dropped 400 pound load would be minimal.