

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 1, 2010

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending January 1, 2010

W. Linzau was off-site this week.

Waste Treatment Plant (WTP): The Office of River Protection (ORP) received a report from the Consortium for Risk Evaluation with Stakeholder Participation (CRESP) III addressing preliminary observations from their December 2009, review of waste mixing in vessels in the Pretreatment (PT) facility. Uncertainties related to mixing in vessels are the last unresolved issues raised by the Expert Flowsheet Review Team in 2006. The CRESP report notes a number of apparent problems resolving these issues, including: the failure to initially establish clear functional requirements and criteria for mixing in vessels, a failure to use prior test results or operational experience to better understand mixing in the vessels, a lack of validation of the computational fluid dynamic models of mixing, and an unclear strategy for resolving the issues. Questions raised by CRESP are similar to issues raised by the Board's staff during the last year (see Activity Reports 7/24, 8/21, 9/4, 11/6, and 11/13/09). The ORP WTP Project Manager will work full-time to resolve the mixing issues while his deputy handles all other WTP issues.

Plutonium Finishing Plant: A fire alarm actuated in the Plutonium Reclamation Facility (PRF) while workers were in the highly contaminated canyon. The false alarm, caused by the improper system restoration by the Hanford Fire Department after routine maintenance, initially led facility personnel to consider an emergency exit from the canyon. An emergency exit would likely have led to the spread of contamination, but workers quickly confirmed that there was no fire. For months, the contractor had been rigorously controlling access to the PRF while the canyon door was open as a means to prevent changes in the ventilation flow, which could result in the spread of contamination. However, this control was informal and not in the work package. Additionally, the shift manager did not realize the maintenance required entry into the PRF.

Facility Representatives (FRs): Unlike recent years when a significant number of FRs moved into management positions and reduced the number of qualified FRs, the number of fully qualified FRs increased this year. There are 32 fully qualified FRs in the field, including: 17 in the Richland Operations Office, 12 in ORP, and 3 in the Pacific Northwest Site Office (PNSO). One FR completed initial qualification earlier this year at the WTP Laboratory and Balance of Facilities. Two FRs completed their initial qualification during the last few weeks, one in the Tank Farms and the other in the Solid Waste Operations Complex. Three others are expected to complete initial qualification in the next few weeks, including one for the River Corridor Closure Project, one for Balance of Site D&D and Infrastructure, and one for the WTP PT facility. Two others are expected to complete their initial qualification in mid-2010, one in the Tank Farms and the other in the WTP PT facility. Seven FRs also completed cross qualifications at other facilities, and one who had left the FR program requalified at PNSO. The increase in the number of qualified FRs, an expected 25 percent in shortly over a year, is evidence that the local DOE office managers recognize the importance and value of having FRs as their "eyes and ears" in the field and ensuring work is performed safely.