

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 2, 2012

**TO:** T. J. Dwyer, Technical Director  
**FROM:** W. Linzau and R. Quirk, Hanford Site Representatives  
**SUBJECT:** Hanford Activity Report for the Week Ending March 2, 2012

Staff members J. Abrefah, M. Helfrich, M. Horr, and C. Johnson were on-site to discuss the safety analysis and final design for processing the Knock-out Pot sludge.

Spent Nuclear Fuel (SNF): The contractor concluded that errors in the analysis used to establish acceptance criteria for the dryness of SNF stored in Multi-Canister Overpacks (MCOs) were unreviewed safety questions for both the Cold Vacuum Drying Facility (CVDF) and the Canister Storage Building (CSB). The contractor will tighten the acceptance criteria for MCO dryness in the CVDF Technical Safety Requirements. The contractor reviewed the results from the dryness tests for the MCOs already in the CSB and concluded the test results meet the new criteria, but it is unclear if they adequately addressed instrument uncertainty when reaching this conclusion.

Waste Treatment Plant (WTP): The site rep attended a session of the hazard analysis meetings for events involving transportation on the WTP site. After the meeting, an Office of River Protection (ORP) nuclear safety observer expressed concerns that the team has proceeded with accident analysis without conducting a basic hazard analysis. The ORP observer noted that the contractor's team was identifying nodes to be reviewed last week, and this week they presented events, estimated frequencies, and potential controls without supporting analysis. Prior to the start of the meeting, contractor management stated that the teams would be doing much of the analysis outside the formal meetings to expedite completion and would seek consensus during these sessions. The site rep agrees with ORP that it is unclear how any of these preliminary determinations were made and noted that a rigorous, systematic process was not obvious. Weaknesses in the conduct of hazard analyses continue to be an issue and may be exacerbated by efforts to expedite the process without improving the rigor applied. To date, corrective actions to strengthen the process have not been consistently effective.

Tank Farms: ORP approved a change to the safety basis that authorizes using ignition controls to prevent flammable gas accidents when removing equipment from tanks and waste-transfer-associated structures. The change will be used when the contractor removes a failed pump, which may contain 15 gallons of waste, from double-shell tank AN-106. As a corrective action for waste accumulation in the plastic sheeting the last time a pump was pulled from this tank (see Activity Report 5/13/11), the contractor will use two layers of plastic sheeting around the pump. The change to the safety basis resulted in the use of plastic sleeving that is static-dissipative.

Conduct of Operations (Con Ops): The Richland Operations Office (RL) and ORP facility representatives (FRs) noted a significant number of con ops and work management issues in reports issued this week. The RL FRs noted numerous errors in the River Corridor Closure contractor work practices and documents during their November review. They concluded that the individual findings were not significant but collectively they "suggest a disquieting trend of undisciplined and error tolerant approach to contracted work". A Tank Farms FR identified numerous errors in daily and weekly operator round sheets. The FR also noted that workers had become de-sensitized to material deficiencies in the facilities, such as by equipment being out-of-service for extended periods.