

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 27, 2009

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending February 27, 2009

Board Chairman A.J. Eggenberger and members J. Bader, L. Brown, and P. Winokur were on-site reviewing various projects, including the Waste Treatment Plant (WTP), Tank Farms, K Basin Sludge Treatment Project (STP), Plutonium Finishing Plant, and Building 324. The Board members were accompanied by staff members T. Dwyer, D. Ogg, S. Stokes, and J. Troan. The Board members also conducted walkdowns of the WTP Pretreatment Engineering Platform and the STP equipment testing. In addition, Stokes conducted reviews of WTP processes and conducted a walkdown of the WTP construction site to observe construction activities.

Waste Treatment Plant: The contractor's Project Safety Committee (PSC) approved an authorization basis amendment request (ABAR) to eliminate the requirement for environmental qualification of safety-significant (SS) equipment located in harsh environments. DOE Guide 420.1-1 requires that the associated standard, IEEE 323, be used for guidance for qualifying both safety-class (SC) and SS electrical equipment, yet the ABAR only requires qualification of SC equipment. The site rep discussed his concern with this approach with the Office of River Protection (ORP) managers who will have to approve the ABAR. This effort to reduce the WTP safety posture is consistent with other initiatives, including the reduction of material at risk (MAR) and changes to controls for hydrogen in piping and ancillary vessels.

The PSC also approved the safety evaluation of a new component classification process that was formally directed by ORP in October 2008 (see Activity Report 10/24/08). The threshold values for requiring SC and SS controls are consistent with DOE-STD-3009 and DOE-STD-1189. The implementation of this change, as well as the proposed plans to reduce the estimated MAR used in accident analysis, will significantly reduce the pedigree and number of safety-related controls in the facility design. Because this change was directed by ORP, it will be incorporated in the Preliminary Documented Safety Analyses and Safety Requirement Document without requiring formal ORP approval.

River Corridor Closure Project: The Richland Operations Office (RL) directed the contractor to resubmit an addendum to the Basis for Interim Operation for deactivation and decommission (D&D) work at Building 324 (see Activity Report 12/24/08). RL rejected the submittal because it lacked details on: how differential pressure of confinement ventilation will be maintained; step-out criteria for the SC function of the confinement ventilation system; and how the sequencing of D&D activities will affect safety systems.