

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 7, 2006

TO: K. Fortenberry, Technical Director
FROM: R. Quirk and W. Linzau, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending April 7, 2006

K Basin Closure (KBC): The Richland Field Office (RL) sent a letter to Fluor Hanford, Inc. (FHI) that provided new directions for reducing KBC project risks. One risk is associated with potential differences between the design of the sludge treatment project (STP) that is nearing completion and the associated safety analysis that is still being developed. RL directed FHI to continue with the STP design consistent with the development and approval of the Preliminary Document Safety Analysis (PDSA). FHI was also directed to stop ongoing activities related to the procurement and fabrication of STP equipment until RL approves the PDSA. The letter also addresses the RL desire to accelerate the start of demolition activities at the K Basins. Potential actions mentioned in an attachment to the letter that could accelerate the transition to demolition activities include removal and transfer of the sludge to an intermediate storage location; treatment of the sludge at a location other than the K Area; sampling/characterization of the sludge and knockout pot contents that could improve sludge treatment efficiency; and changes to the basin grout and removal concept.

During a quality assurance surveillance, FHI discovered that safety-significant check valves installed in the hose-in-hose booster pump stations had non-metallic valve seats instead of the specified metallic seats. Quality questions were raised last year on the pedigree of these valves, which were supplied from a vendor that was not on the qualified supplier list. FHI plans to replace these valves to ensure they have the proper quality pedigree.

Waste Treatment and Immobilization Plant (WTP): The External Guide and Review Team (EGRT) conducted their final review of the project's strategy to address concerns with potential accumulation of hydrogen in piping and ancillary vessels (HPAV). This meeting addressed follow-up items from their review in May 2005 and recent work completed by the project. Last month, Bechtel National, Inc. submitted two authorization basis changes related to HPAV to the Office of River Protection (ORP) for their approval. The EGRT provided a number of questions and suggested follow-up actions during their exit briefing. They noted that the demand on fittings (elbows and tees) due to hydrogen ignition is not known and questioned if the plastic response of components can be confidently calculated, validated, and defended.

Last week, the project submitted the updated PDSA to ORP for their review and approval.

Washington Closure Hanford (WCH): The readiness assessment for the 118-K-1 Solid Waste Burial Ground has been rescheduled to commence April 17, 2006. The scope of work in the burial ground has been limited to exclude the remediation of the buried silos because of the higher levels of soil contamination (see last week's Hanford Activity Report). RL has decided to determine readiness for remediation of the silo separately in a future review.