

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 8, 2006

**TO:** K. Fortenberry, Technical Director  
**FROM:** R. Quirk and W. Linzau, Hanford Site Representatives  
**SUBJECT:** Activity Report for the Week Ending December 8, 2006

Board member Mr. J. Bader and staff member D. Ogg were on-site this week reviewing activities at the K Basin Closure and Plutonium Finishing Plant projects as well as reviewing the status of the design of the Demonstration Bulk Vitrification System.

Washington Closure Hanford (WCH): The site rep met with contractor personnel to discuss the hazards and proposed controls associated with the remediation activities at the 618-7 burial ground (see Hanford Activity Report 11/10/06). The start of work at the burial ground is scheduled for February 2007. A number of concerns were noted during the discussion: (1) the work appears similar to activities at Idaho National Lab that experienced a drum fire in November 2005 (presence of uranium roaster oxide and the same basic remediation process), but the Idaho work was conducted in an enclosure with active HEPA ventilation; (2) the trenches have been segmented into separate work areas to stay below the Hazard Category 3 (HC-3) threshold criteria, therefore only minimal DOE oversight is required during the readiness review process; (3) the new subcontractor that will be performing the work does not have previous Hanford experience; and (4) the work controls based on detailed hazard analysis have not been defined nor have training and readiness requirements been identified.

Plutonium Finishing Plant: The project upgraded a potentially inadequate safety analysis (PISA) on the fire suppression system to a positive unreviewed safety question (USQ). The technical safety requirements (TSR) specified that the minimum pressure for the fire sprinkler system risers did not include an allowance for the water used by fire hoses.

Tank Farms: The tempo of operations in the tank farms continues to increase. Retrieval operations are ongoing for three single-shell tanks and should start at a fourth, C-108, within the next few weeks. There are more than a dozen transfers planned in the double-shell tank farms during the next year. These transfers will consolidate tank space for the single-shell tank retrievals and ensure adequate space for operations due to the delay in the startup of the Waste Treatment Plant. The planned transfers include cross-site transfers, evaporator runs, and waste level increases in two tanks in the AP farm beyond the previous level limit.

The site rep identified an error in the Operational Readiness Checklist for the new Monitoring and Control System (see Hanford Activity Report 11/22/06). The checklist, used to verify readiness, indicated that the system going into service this month did not have a safety function. The control system will be used for safety-significant leak detection during waste transfers. Contractor management said that the level of readiness preparation will not be impacted by the error. They are also ensuring the affected documents are corrected and they will determine if programmatic changes are necessary to prevent recurrence.