

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 4, 2005

**TO:** K. Fortenberry, Technical Director  
**FROM:** B. Quirk and W. Linzau, Hanford Site Representatives  
**SUBJ:** Activity Report for the Week Ending November 4, 2005

Plutonium Finishing Plant (PFP): A number of criticality safety program deficiencies were identified during the past few weeks. These include the recent failure to verify that the criticality drains were open for two glove boxes undergoing deactivation. Deficiencies in both transportation and storage that have existed for a number of years were also identified. Although the identification of these deficiencies indicates that the program may be receiving more attention from the PFP criticality safety engineers and managers, DOE Richland Office noted that a detailed review from an external organization may be warranted.

Tank Farm Ventilation: A newly installed tank that collects condensation from the AY/AZ ventilation exhaust chiller did not function properly because of an apparent design error. The apparent cause is the lack of sufficient elevation difference to support gravity feed from the existing seal pot to the new tank. Procedures have been modified to permit operation using a bypass valve that enters the receiver tank three feet below the normal entry point. A potential weakness in the design process may exist as it did not adequately accommodate the integration of existing and new equipment, nor did it ensure the ability to test the entire flowpath.

Demonstration Bulk Vitrification System (DBVS): The project completed a review of the hazards identified during the recent process hazards and operability analysis to evaluate the consequences and functional classification of proposed controls. The project is moving to a management structure that uses the critical decision process of DOE Order 413.3, *Program and Project Management for the Acquisition of Capital Assets*. The schedule for completing construction will not be known until the design is completed and approved by DOE, but the current estimate is that the first box with actual tank waste will not be processed until late 2007.

T-Plant: The processing of K-East Basin North Load Out Pit sludge commenced and seven drums containing sludge have been grouted as of November 1, 2005. Dose rates of the sludge are lower than assumed and the on-contact dose rates for the grouted drums are below the acceptance criteria for contact handled containers.

Waste Treatment and Immobilization Plant (WTP): The Office of River Protection (ORP) instructed Bechtel National, Inc. to exclude any planning for a construction cessation of the Pretreatment (PT) and High Level Waste (HLW) facilities when preparing the Estimate at Completion. ORP management confirmed that the planning effort to allow an orderly stop of construction activities on the PT and HLW facilities for the first half of next year has been canceled. Should construction activities be stopped such planning would be needed to ensure protection of the unfinished/uninstalled structures, systems, and components.

cc: Board Members