

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 26, 2006

**TO:** K. Fortenberry, Technical Director  
**FROM:** R. Quirk and W. Linzau, Hanford Site Representatives  
**SUBJ:** Activity Report for the Week Ending May 26, 2006

Tank Farms: The site rep attended the kickoff meeting for the Expert Review Panel of the Demonstration Bulk Vitrification System (DBVS). The panel consists of experts from industry and academia and is similar to a recent external review of the Waste Treatment Plant (WTP). The review is focused on identifying flaws that would prevent the system from meeting production rate and quality requirements, evaluating the technical soundness of the flowsheet, determining if the design basis is sufficient to bound the construction and operating costs, and identifying technical risks. One significant difference between the DBVS and WTP reviews is that this review will also address nuclear safety and authorization basis requirements. The final report is expected in September 2006.

The site reps attended introductory training sessions for the new work control procedures that will be implemented in the tank farms. The new approach classifies work into three categories: minor, standard, and complex. The selection of the categories is based on the complexity of the work and not the hazards as has been done previously. The site reps will review the program further to ensure that it adequately addresses safety.

A positive unreviewed safety question was declared because the position indicator for the HEPA filter isolation valve in a U-farm single-shell tank did not correctly indicate the valve position. The valve in the open position permits the flammable gases to vent out the HEPA. The Technical Safety Requirement surveillance is to verify the valve is open by checking the handle position. The error was found during aerosol testing of the filters. The contractor checked the condition of similar isolation valves and found two more cases of the same error. Flammable gas concentrations in the tanks were measured and were found to be less than 25 percent of the lower flammability limit.

Plutonium Finishing Plant (PFP): The site rep accompanied an engineer on a walkdown of the criticality alarm system (CAS) in Building 241-Z. Most of the fissile material has been removed during D&D activities. Criticality safety engineers are evaluating the possibility of removing the CAS from the building because it may meet the requirements for declaring a criticality accident incredible. The CAS components will be retained for use as spare parts in other PFP facilities.

Waste Treatment and Immobilization Plant (WTP): The site rep observed the continued application of cementitious fire protective coating on structural steel in the upper elevations of the Low Activity Waste (LAW) facility. In areas in which cementitious coatings are going to replace damaged intumescent coatings (see Hanford Activity Report from 5/5/06), the current plan is to scrape off most of the intumescent coating from the steel, sandblast off any residual coating, and paint the areas with primer to restore the steel to the original condition before application of the cementitious fire protective coating.