

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 18, 2005

**TO:** Kent Fortenberry, Technical Director  
**FROM:** W. Linzau and R. Quirk, Hanford Site Representatives  
**SUBJ:** Activity Report for the Week Ending November 18, 2005

A member of the Board's staff and outside experts were on-site to participate in discussions on the Waste Treatment and Immobilization Plant (WTP) draft drilling plans for the Seismic Test Borehole Project and to conduct follow-up reviews of various WTP structural issues.

Tank Farms: The Office of River Protection (ORP) directed CH2M Hill Hanford Group (CHG) to develop a plan to implement process hazard and operability analysis (PrHOA) on additional tank farm activities. This action was the result of weaknesses identified during the ORP annual assessment of Integrated Safety Management System implementation. ORP management stated that it is not necessary to perform additional hazard analysis on existing systems, but it would be appropriate to perform a PrHOA on new facilities, new retrieval systems, and before the re-use of existing systems such as the retrieval system which is planned for re-use on tank C-204.

One of the two redundant SY tank farm ventilation trains has been out of service since the failure of its HEPA filter efficiency test on January 20, 2005. The filter is scheduled for replacement on January 3, 2006. This week, a ventilation train for a different tank farm, AN tank farm, was returned to service after several months of being out of service due to the failure of HEPA filter efficiency test. Both of these ventilation systems are vital safety systems and are used to prevent the accumulation of flammable gasses in the tanks. Although only one ventilation train is required to be in service by tank farm technical safety requirements, extended out-of-service periods for the redundant train of a vital safety system (VSS) is inconsistent with good nuclear safety practices.

The site rep observed initial in-tank testing of the remote water lance (RWL) in tank S-112. The RWL is being evaluated as a tool to breakup the hard heal remaining in the tank after modified sluicing retrieval (see Hanford Activity Report 9/2/2005.)

Plutonium Finishing Plant (PFP): The site reps met with PFP management to discuss the lay-up plans for the facility and maintenance of the VSSs. PFP Management confirmed that the VSSs have remained operable. They are also developing plans to ensure that spare parts are available for future preventive maintenance activities.

PFP has drafted a revised hazard analysis that considers the future lay-up configuration. The analysis will be delivered to Richland Operations Office in the near future.

Demonstration Bulk Vitrification System (DBVS): A full scale DBVS melter test, using simulated tank waste, began on November 15, 2005 at the off-site test facility and should finish next week. Parameters to be evaluated in this test include the amount of iron pooling and the temperature of the redesigned container lid.