

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 27, 2006

**TO:** K. Fortenberry, Technical Director  
**FROM:** R. Quirk and W. Linzau, Hanford Site Representatives  
**SUBJECT:** Activity Report for the Week Ending October 27, 2006

K Basins Closure: The Richland Operations Office (RL) verified the completion of the commitment to the Board for bulk sludge containerization in the K East Basin (see last week's Hanford Activity Report). RL concluded that the criteria in the revised implementation plan for R2000-1 were met. Project personnel estimate 28 cubic meters of sludge were captured in containers but between one and three cubic meters of sludge remained in the basin. The project is planning a workshop to determine if they need to change the baseline process to remove the remaining sludge in order to meet the endpoint criteria.

Waste Treatment Plant (WTP): The project has decided to use cementitious coatings for fire protection of the W14x90 steel columns in the Low Activity Waste (LAW) facility because of the failure of the intumescent coating during the recent Underwriters Laboratories testing (see Hanford Activity Report 10/13/06). The project has not decided on the pathforward for the smaller columns in the High Level Waste and Pretreatment facilities.

The project held an all-hands meeting for construction personnel to address a series of construction equipment collisions due to inadequate monitoring by spotters.

Washington Closure Hanford: The site rep accompanied RL personnel on a walkdown of the electrical power supplies for 105N Reactor and associated facilities. The purpose of the walkdown was to confirm that the contractor was no longer tying into the facility electrical wiring for lighting during D&D work. Earlier this month a worker inadvertently cut an energized line in 105N during asbestos removal activities (see Hanford Activity Report 10/6/06).

Plutonium Finishing Plant (PFP): The site rep accompanied contractor personnel during the annual inspection of the degraded concrete ceiling slab in the duct level of the 234-5Z building (see Hanford Activity Report 12/23/05). There was no indication of crack propagation but some evidence of additional spalling was noted. There was a significant reduction of water leakage due to efforts to seal leaks in the air handling units located on the floor above this room.

Tank Farms: Seven tanker truck loads (~35,000 gallons) of caustic solution were added to double-shell tank AY-101 to maintain the chemistry of the waste within specifications. The volume added was unusually large because the contractor was attempting to ensure the solution remained near the top of the waste by adding a less dense solution at a lower flow rate. The waste near the surface was approaching the specified limit, and prior additions of more concentrated solutions tended to sink to the bottom of the supernate. The concentration added was one molar sodium hydroxide as opposed to the more typical eight molar.