

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 21, 2008

**TO:** K. Fortenberry, Technical Director  
**FROM:** R. Quirk and W. Linzau, Hanford Site Representatives  
**SUBJECT:** Activity Report for the Week Ending March 21, 2008

Staff members J. Blackman and S. Stokes and outside experts J. Stevenson and N. Vaidya were on-site reviewing the structural design of the Waste Treatment Plant.

Waste Treatment Plant (WTP): The staff and site reps met with the Office of River Protection and the contractor to discuss: resolution of staff comments on the summary structural reports for the Pretreatment and High Level Waste facilities, completed and planned analyses to resolve the staff's concerns with the effects of fires on the structures of the four WTP nuclear facilities, issues related to the use of seamed pipe in black cells and areas that will be difficult to reach after the plant starts, and efforts to track and close unverified assumptions in calculations.

The site rep met with the manager of the Broad Based Review (BBR) team (see Hanford Activity Reports 1/18/08 and 2/15/08) to discuss the team's progress and recent observations. Team members continue to be added and all sub-teams are at least partially staffed. Administrative actions, such as the assignment of leads for groups of sub-teams and the development of desk instructions, are being taken to ensure a consistent approach. Potential issues raised by the BBR team are being tracked in a database. The Quality Assurance (QA) sub-team noted that about 10 percent of the closure packages for older corrective action documents reviewed to date do not include sufficient documentation to support closure.

K Basin Closure: The project completed pumping the water out of the K East Basin on Wednesday. Dose levels at the grating level above the basin were about 300 mrem/hour, an order of magnitude less than estimates used for radiological planning. Filling the basin with a weak controlled density fill (CDF) commenced after making changes to the mix in the field to resolve excess viscosity problems. Filling the basin with 10 feet of CDF is a key requirement for reclassifying K East Basin as a less than Hazard Category 3 nuclear facility.

This site rep observed a training session for some technical staff who will be involved with the restart of spent nuclear fuel operations in K West and the Cold Vacuum Drying Facility. The instructor was well prepared. Attendees included personnel from engineering and QA as well as a facility representative. The safety basis was changed to reflect elimination of equipment, e.g., the fuel canister decapper and primary process table, that will not be needed to handle the remaining spent nuclear fuel.

Environmental Restoration Disposal Facility: The contractor issued their self-assessment of the response to the unexpected energetic chemical reaction during treatment of soil contaminated with mercury (see Hanford Activity Report 2/22/08). The report notes that most actions taken by the Facility Emergency Response Organization were appropriate, but it failed to follow procedures and alert the site emergency response organizations by using 911.

Solid Waste Processing Facility (SWPF): Based on Richland Operations Office direction to significantly reduce the efforts to reach critical decision (CD)-1 for the SWPF (for large package and remote-handled TRU waste), the Safety-in-Design Integration Team disbanded.