

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 17, 2004

**TO:** K. Fortenberry, Technical Director  
**FROM:** D. Grover and M. Sautman, Hanford Site Representatives  
**SUBJ:** Activity Report for the Week Ending December 17, 2004

Waste Treatment Plant (WTP): Citing emerging issues with the seismic design basis, the design basis for mitigation and control of hydrogen, and commodity expense growth, the Office of River Protection has requested that Bechtel evaluate the pace of design, construction, and procurement in an effort to minimize the risk of rework and significant plant modification. The evaluation should consider options to accelerate low risk areas and consider areas of higher risk which would be prudent to retard or cease advancement. Bechtel is to recommend options for near-term project pacing given the emerging design uncertainties and long-term project pacing options given certain funding constraints.

Messrs. Stokes, Plaue, and Sautman conducted a review of the WTP mass balance, cesium ion exchange, and various issues related to hydrogen control (generation rates, mixing waste, and accumulation in pipes and ancillary vessels).

K Basin Closure Project (KBC): In the past 3 months there have been several conduct-of-operation and hazard control identification and implementation problems at the K Basins. In the past week, there were two instances on the same work package where the required radiological controls were not in place prior to breaching a contaminated system. This is similar to an occurrence at the beginning of November where a worker started moving long-handled tools prior to getting radiological surveys, resulting in skin contamination and potential contamination inhalations. Another conduct of operations violation occurred last week when two pumps were not shutdown per the procedure prior to initiating the change-out of strainer baskets, the submerged location of the strainers prevented the potential for spray releases from the strainer housing. In addition, there are cases where controls were not effectively implemented including the contamination event discussed in the October 22, 2004 activity report and exceeding restrictions on waste disposal based on water contamination levels which have resulted in the suspension of waste disposal of K Basin debris at the Environmental Waste Disposal Facility. The accumulation of waste in outdoor storage at the basin later resulted in a DOE identified potential inadequacy in the safety analysis. Following the 3 problems in the last 2 weeks KBC is evaluating the collective significance of these issues and conducting a production pause on December 16, 2004 to conduct safety meetings on these problems and communicate expectations for improved performance.

Sludge retrieval in the weasel pit has been complicated by the discovery of a grout formation in the sludge. This is expected to result in further delays in installing the sludge containers needed to complete consolidation of K-East sludge but may not impact the transfer of sludge to K-West.

Tank Farms: Retrieval of waste from tank S-112 resumed for the first time in several months. Retrieval of waste from tank S-102 began, but was shut down due to instrumentation problems.