

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 14, 2011

**TO:** T. J. Dwyer, Technical Director  
**FROM:** W. Linzau and R. Quirk, Hanford Site Representatives  
**SUBJECT:** Hanford Activity Report for the Week Ending January 14, 2011

Board staff members M. Helfrich, M. Horr, D. Ogg, and R. Raabe were on-site to review the K Basin Sludge Treatment Project.

Waste Encapsulation and Storage Facility: The contractor concluded that dropping a large load into the pool cell was an unreviewed safety question because the existing analysis did not bound the postulated consequences. The issue, identified by DOE Office of Environment, Safety and Health Evaluations (HS-64), involves the accident analysis for a large load, such as the bridge crane over the pool cells, falling into the pool and damaging the underwater waste capsules. The HS-64 reviewers postulated that the load could also damage the non-safety-related pool cell heat exchanger, which could result in pool boiling in addition to the assumed damage to the capsules. The existing analysis used an entrainment release fraction for pool cell water at 50 degrees C; the entrainment release, and therefore consequences, would be larger if the pool was boiling.

Waste Treatment Plant: The site rep met with the contractor and Office of River Protection (ORP) to discuss resolution of quality issues associated with the welding of valves to pipe spools. In July 2009, ORP inspectors noted that the valve manufacturers' instructions had not been distributed to the piping fabrication vendors. This raised questions of the possibility of damage to valve seats when pipe spools were welded to the valve. There were thousands of commercial grade material (CM) valves and 193 quality level (Q) valves that required evaluation. The contractor evaluated the CM valves and determined that for many of the valves, the fabricators had adequate instructions or the seating material was not susceptible to heat damage. For the remaining CM valves, the contractor plans to inspect a representative sample to ensure proper fabrication. Roughly 50 Q valves still have an open question on how bolts were torqued during fabrication and the contractor has decided to inspect all of these valves.

Emergency Response: The contractors' emergency preparedness organizations and Richland Operations Office (RL) continued to discuss the observations from the drill at 12B burial ground (see last week's Activity Report). The readiness assessment team evaluating the drill documented a finding on the confusion related to command and control, but emergency management personnel did not agree that the observation was an issue. They contend that the Hanford Fire Department can take over as Incident Commander and make command decisions prior to getting a formal turnover from the Building Emergency Director who is initially in charge at the incident command post.

Plateau Remediation Contractor: The site rep observed training for the contractor's senior managers on issue management and their role in evaluating causes of events and corrective actions. This training is in response to recurring issues noted in several assessments and RL letters from last year. The training focused on how senior managers should formulate final corrective actions that are: actionable, long lasting, process-oriented, and do not create a new problem. The training also clearly noted that programmatic issues should not have corrective actions that include: issuing memos, having meetings, declaring stand-downs, reinforcing expectations, coaching, or counseling.