

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 11, 2008

**TO:** T. J. Dwyer, Technical Director  
**FROM:** W. Linzau and R. Quirk, Hanford Site Representatives  
**SUBJECT:** Hanford Activity Report for the Week Ending July 11, 2008

Staff member J. Troan and outside expert D. Boyd were on-site observing the Operational Readiness Review (ORR) for the restart of spent nuclear fuel (SNF) processing activities.

Spent Nuclear Fuel Processing: DOE started the ORR for the restart of the SNF processing with operations in K West Basin, Cold Vacuum Drying Facility, and the Canister Storage Building. In general, the ORR team is conducting an adequate evaluation of the readiness to restart operations. Given the size of the team, concurrent operations in three different facilities challenged the team to provide adequate oversight of planned activities. Some demonstrations of operations were not observed by ORR team members. After the second instance of this, the site rep called the deputy team leader who took actions to ensure evolutions were evaluated. However, other evolutions had limited coverage and some team members would have benefitted from mentoring from more experienced personnel. Worker conduct of operations, particularly regarding verbatim compliance of procedures, was significantly better than was demonstrated in the contractor ORR (see Hanford Activity Report dated 6/27/08). The team expects to complete the review next week. Due to a requirement in the Plan of Action, the ORR report cannot be issued until all pre-start findings from the contractor ORR are resolved.

Waste Treatment Plant (WTP): The contractor is compiling a set of protective features for fire protection of the ventilation systems in an attempt to provide equivalency to DOE Std 1066. This work is being done in response to the Office of River Protection rejection of the contractor's request to tailor the standard and the Board's letter to DOE expressing concerns with the tailoring. The features being considered to protect HEPA filters include: ember screens and spark arrestors, mist fire suppression systems on cranes, and additional detection systems to allow isolation of fire areas. The mist system that was proposed to capture soot in the ventilation plenums is no longer being considered (see Hanford Activity Report 6/13/08).

Tank Farms: The contractor completed videotaping the interior of the SX-104 waste tank as part of the leak investigation and noted that conditions around the liquid observation well were consistent with their determination of the interstitial liquid level.

The contractor determined that the mobile retrieval system can no longer be used to aid in waste retrievals in Tank C-109. Early last month, the FoldTrack lost one of its treads (see Hanford Activity Report 6/6/08), and when operations were attempted using the remaining tread for locomotion, a hydraulic leak occurred. The contractor is preparing to switch retrieval activities to Tank C-110.

Interim Pretreatment System (IPS): The contractor made recommendations for the technologies to be used for separating solids and removing cesium from tank waste. Cross-flow filtration is the preferred technology for entrained solids filtration and ion exchange with resorcinol-formaldehyde resin is preferred for cesium separation.