

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 28, 2008

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending November 28, 2008

Plutonium Finishing Plant (PFP): The Richland Operations Office (RL) is reviewing the Justification for Continued Operation (JCO) submitted by the contractor for the HEPA filters that are older than 10 years (see Activity Report 11/21/08). RL is preparing a condition of approval (COA) for the JCO that would require the contractor to provide a recovery plan in 60 days that would preclude crediting the two oldest filter banks (21 and 22 years old). The COA will also stipulate that implementation of the plan will be completed within 90 days after it is submitted. Modifications to the ventilation system will be required to balance the system without these older filters. If the two oldest banks are no longer credited and the replacement of the 17-year old bank occurs in December 2008 as planned, then the oldest HEPA filter banks still being credited at PFP will be 13 years old. It is expected that the recovery plan will provide additional justification for continued use of the 13-year old filters, the length of time these filters will be required for operation, and other compensatory measures. RL senior management decided to be less prescriptive in the COA because they want to allow the contractor to devise measures that will minimize the disruption of decontamination and demolition activities while ensuring nuclear safety requirements are in place.

Last week, the off-site contracting procurement official for the 9975 shipping containers informed the project that an error occurred in interpreting the design drawing. The design authority considers these containers as non-compliant with the Safety Analysis Report for Packaging. The contractor decided to inspect the containers already loaded to verify that the non-compliant condition doesn't exist. This condition and the additional time it will take to inspect the containers could delay the completion of accelerated deinventory plans.

Tank Farms: The Potential Inadequacy in the Safety Analysis concerning how the safety-significant waste transfer isolation valves were leak tested was reclassified as a violation of the Technical Safety Requirements (see Activity Report 10/10/08). In lieu of safety-significant valves, the Documented Safety Analysis (DSA) also allows valves to be credited if: an evaluation determines that the valves prevent or limit the leakage of waste; they were installed before January 1, 2005; and compensatory actions are implemented. The contractor produced Technical Evaluations that allow the affected valves to be used as isolation valves, but it is unclear how valves installed after 2004 will be addressed. The contractor is also evaluating if leak tightness tests other than the one identified in the DSA would be more appropriate.

Waste Treatment Plant: In August 2008, the Office of River Protection (ORP) wrote a letter to the contractor expressing its concern with progress to resolve problems with inadequate mixing of vessels with pulse jet mixers. The problem was identified in the External Flowsheet Review Team report in March 2006, and the contractor identified problems in mixing selective vessels as early as 2003. Adequate mixing of the vessels is required to ensure removal of hydrogen gas that is retained in layers of settled solids. The letter asked the contractor to conduct an extent of condition (EOC) review that assesses each vessel against mixing requirements and identifies those vessels at risk of requiring design modification. ORP is reviewing the draft EOC report completed by the contractor and ORP should finish its report next week.