

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 1, 2002

**TO:** K. Fortenberry, Technical Director  
**FROM:** D. Grover and M. Sautman, Hanford Site Representatives  
**SUBJ:** Activity Report for the Week Ending November 1, 2002

Spent Nuclear Fuel Project (SNFP): The SNFP identified that safety class limit switches for the Fuel Transfer System (FTS) at K-East Basin failed functional testing during initial performance of the TSR surveillance procedure. The reason for the failure was determined to be water intrusion into the switch housing. Inspection of the interlocks in the same location for the K-West FTS showed the same problem. The project is continuing to investigate the causes of the water intrusion. The failure of these switches also calls into the question the SNFP decision to credit construction acceptance testing to determine functionality of safety class equipment instead of performing the surveillance procedures. The staff will continue to review the causes of the switch failure and the appropriateness of crediting the construction acceptance testing to meet authorization basis surveillance requirements. (III-A)

Plutonium Finishing Plant (PFP): The Department of Energy (DOE) Headquarters approved PFP's process qualification application for stabilizing and packaging plutonium oxides. DOE - Savannah River (SR) rejected DOE - Richland's request to accept 358 outer 3013 containers welded in the "as-is" condition for storage at Savannah River and is requiring that they either be radiographed or re-canned. This affects the entire population of plutonium metal cans which were welded. DOE-SR rejected the proposal due to concerns that the cause of porosity was unequivocally known, that the maximum size and distribution of pores could be predicted, and whether the predicted pore size is acceptable. (III-A)

Rec. 2000-2: The Board's staff reviewed the status of the contractors' systems engineer and federal subject matter expert programs as well as the results of vital safety system assessments. While CH2M Hill Hanford Group and Battelle have embraced the systems engineer concept, Fluor Hanford appears to have only made token efforts to implement the recommendation.

Fire suppression system inspections to identify the extent of the pipe obstruction problems identified at the Central Waste Complex (CWC) continued this week. Inspections have been completed at the highest priority facilities, Plutonium Finishing Plant, Waste Receiving and Packaging (WRAP) and CWC. Problems have been limited to systems in one category of waste storage buildings at CWC. The effected systems have been flushed, other identified repairs made, and returned to service. Inspections of lower priority systems continue. (I-C)

Tank Farms: In response to the Board's letter on the waste feed delivery system, CHG convened an expert panel to review the data and models. It was useful to have the developer of the model present and hear how the French and other DOE sites have handled slurry transfer issues. CHG is also investigating temperature differences in the supernate of AY-102 to see whether recent condensate additions may have caused a hydroxide concentration gradient. (III-C)