

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 30, 2003

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending May 30, 2003

Spent Nuclear Fuel Project (SNFP): In an effort to align resources to meet site-wide commitments Fluor Hanford (FH) is developing an acceleration plan which would complete fuel removal from K-East Basin by November 2003 and K-West by February 2004. This achievement would allow the majority of the SNFP workforce to transition to other facilities, e.g., Plutonium Finishing Plant, to support their acceleration goals. This would also allow additional time to conduct activities to meet K-East sludge removal and decommissioning milestones. The approach would require additional staff in the near term to transition K-East from an alternate work schedule to around-the-clock operations. Minor facility and process modifications would also be needed to improve efficiency. (III-A)

After the suspension of the contractor Operational Readiness Review, the contractor performed an engineering review of the Sludge Water System that identified 180 items which need to be addressed. The project stated that 10 of these were still being evaluated for a resolution approach. Three other items will require modification to the system to replace of 3 pressure relief devices, a pressure indicator, and a section of above water piping. (I-C)

Tank Farms: CH2M Hill Hanford Group (CHG) is considering using a 2-mode approach for defining the applicability of Technical Safety Requirements for Single Shell Tanks depending on what activities were being performed (i.e., storage/maintenance or retrieval). While the concept appears sound, CHG was hoping that a diffusion analysis would allow flammable gas controls to be eliminated for SSTs unless tank waste was being retrieved. However, a Board staff review of the draft scoping calculation identified that a conversion error led to the hydrogen diffusion rate being overestimated by a factor of 22,400. (I-C)

Waste Treatment Plant: Bechtel National Inc. (BNI) is evaluating whether the cost and complexity benefits outweigh the increased risk of switching from a urea reactor system to an anhydrous ammonia system (2-6000 gallon tanks) for supplying ammonia to the Low Activity Waste Facility. The Site Rep was encouraged that BNI is investigating issues like boiling liquid expanding vapor explosions, blast walls, and the use of water fog/deluge systems before making a decision to pursue this modification.

High temperatures this week led to a partial truckload of concrete being rejected after the concrete temperature rose above 70° F when a delay was encountered. BNI will be starting placements very early in the morning or at night in the near future. (I-C)

Plutonium Finishing Plant (PFP): High-chloride oxides containing 30-50% Pu are being washed, but it is taking an extra 2 wash cycles. Thermal stabilization of the washed oxides is resulting in frequent shutdowns due to low off-gas flow and other corrosion-related difficulties. (III-A)