

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 7, 2003

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending March 7, 2003

Spent Nuclear Fuel Project (SNFP): The SNFP is in the process of performing self assessments of preparations to declare readiness to begin sludge retrieval from K-East Basin. A review of completed and approved self assessment forms identified cases where the assessment did not evaluate the criteria specified by the activity readiness plan. For example, in evaluating the implementation of the emergency preparedness program, criteria to verify the adequacy of personnel performance of their duties were not assessed. The assessment instead evaluated the adequacy of the programmatic definition of these duties. While follow on actions for the self assessment required verification that additional emergency drills be conducted in accordance with the program requirements, no future assessment of the adequacy of personnel performance was required. The failure to properly conduct self assessments was also observed in the recent Fuel Transfer System readiness preparation and in that case led to number of significant findings during the subsequent Operational Readiness Reviews. (III-A)

Plutonium Finishing Plant (PFP): All polycubes have been converted to oxide and packaged in DOE-STD-3013 cans. The Site Rep observed a discussion with Materials Identification and Surveillance Program representatives about how Hanford could meet the Integrated Surveillance Plan's requirements if an alternative storage strategy was pursued. PFP would like to reduce the frequency of entries to less than once every 3-5 years by storing the corrosion surveillance cans in a different location, but this would require that the actual field conditions be accurately replicated. In addition, the Site Rep has encouraged PFP to address water infiltration issues in light of cases at 224-T and tank farms where pits were found to be flooded. (III-A)

Tank Farms: Based on promising sample dissolution test results, CH2M Hill Hanford Group (CHG) is strongly considering sluicing in multiple additions of oxalic and possibly nitric acid to C-106 to dissolve any sludge solids that remain after supernate pumping. While the Site Rep has discussed with CHG a number of technical issues (e.g., neutralization reaction, material compatibility, impacts to receiving tank, recovery plans, new accident scenarios) that will need to be addressed, they appear to be resolvable at this time. A facility representative identified that CHG did not update their work package for chemical additions to a 244-AR tank although a revised process control plan increased the molarity of NaOH and NaNO₂ by 60%. (III-A)

Waste Treatment Plant: Bechtel National Inc. (BNI) has proposed changing the control strategy from the current Important to Safety (i.e., safety design class, safety design significant, risk reduction class) to a tailored DOE-STD-3009 approach (i.e., safety class, safety significant, modified risk reduction class or defense in depth) although the Office of River Protection has questioned whether a tailored 3009 approach is consistent with safe harbor rules. BNI and ORP are discussing the criteria for safety significant controls, facility worker consequences, and implementing codes and standards. (I-C)