

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 25, 2005

**TO:** K. Fortenberry, Technical Director  
**FROM:** D. Grover and M. Sautman, Hanford Site Representatives  
**SUBJ:** Activity Report for the Week Ending February 25, 2005

Mr. Sautman was out of the office Thursday and Friday of this week.

K Basin Closure Project (KBC): The Fluor Hanford (FH) independent assessment of the KBC project management and broader scope issues effectiveness continued this week. One potential issue identified is that all the issues identified in the broader scope report were not addressed by the corrective actions. The assessment is also evaluating potential issues with the flow down of requirements into the sludge processing contract as well as the application of corrective actions to the work being performed under this contract.

The site rep observed the sludge retrieval operations and the weasel pit clean out activities. Water clarity had improved so that while operations cannot be observed from the grating level, cameras located at the bottom of the basin allowed clear observation of the operations. However, the design of the sludge retrieval vacuum heads and interference caused by the presence of the fuel canister storage racks is impeding the comprehensive coverage of the basin floor. The criterion for completion of sludge retrieval has not been developed so it is not clear that the current areas where sludge is being retrieved have been cleaned adequately. While the project recognizes this problem it is not clear that additional cleaning has been factored into the recovery plans for completion for the missed Recommendation 94-1/2000-1 Implementation Plan milestone for sludge consolidation of K-East Basin Sludge or its implications for timely completion of the milestone for transfer of sludge from K-East basin to K-West basin

Plutonium Finishing Plant (PFP): PFP identified a discrepancy between two Non-Destructive Assay (NDA) techniques for plutonium mass values of residues removed from gloveboxes as part of deactivation. The small table Segmented Gamma Scan Assay System (SGSAS) values were lower than calorimetry measurements by a factor exceeding the allowable measurement uncertainty for criticality compliance purposes. PFP suspended the use of the SGSAS and transfers of this type of material until corrective actions are taken to address the measurement method and instituted. PFP has identified the apparent cause is a difference in material characteristics being removed as part of deactivation compared to that removed as waste during operations. A contributing factor was the procedure not excluding the use of this technique for this different material. The plant also identified that an increasing discrepancy between the two measurement techniques was not communicated to all users. The potential implications of this increasing discrepancy were also not immediately recognized by the NDA scientists.

Cc: Board Members