DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 20, 2006

TO: K. Fortenberry, Technical Director
FROM: R. Quirk and W. Linzau, Hanford Site Representatives
SUBJECT: Activity Report for the Week Ending January 20, 2006

Board staff members D. Burnfield, S. Stokes, J. Troan, and L. Zull, and outside experts D. Boyd and D. Volgenau were on-site reviewing various projects.

K East Basin: The site rep attended a critique for an event that addressed the inadvertent dropping of the prototype hydrolaser into the basin when the equipment was being staged for retrieval. The upper assembly of the hydrolaser that is normally used to support and move the hydrolaser during operation was removed in July 2005, and the lower section was left in place supported by chain falls. While moving the lower section horizontally using the overhead monorail system, the welds on both lifting points on the equipment failed and the assembly fell approximately 10 feet to the basin floor. The vendor stated that the aluminum lifting points were only designed for vertical loads. The equipment weighed approximately 375 pounds. This weight is bounded by values used for dropped loads in the K Basins Safety Analysis Report. No personnel contamination associated with the falling equipment was noted.

A worker received a deep cut on a finger during debris removal activities. There were low but measurable levels of alpha, beta, and gamma contamination on the smears used during decontamination of the wound. Preliminary results from the whole body count indicated potential internal contamination and a bioassay will be conducted. The worker was wearing cotton liners, two pairs of surgeon gloves, and a single pair of rubber canner gloves as allowed by the radiological work permit and work package procedures. The procedures have been modified to require the use of cut-resistant gloves for this type of work.

Plutonium Finishing Plant: As a result of problems identified with fissile material labeling during the last few months, an inspection of all labels was initiated. During the inspection of the labels, additional problems with the implementation of the criticality safety program (CSP) were identified, such as incorrect postings. As a result of these additional findings, the scope of the inspection was expanded by the project to include additional controls required by the CSP, such as postings and surveillance requirements. The team doing this inspection has been augmented by experienced personnel from other Fluor Hanford, Inc. projects. This new team has been finding additional problems and the expectation is that the inspection will be completed by the end of the month.

Tank Farms: The site rep observed the removal of the failed waste retrieval pump from single-shell tank C-103. The pump was being removed because it failed last month due to a ground fault in the motor. Other pumps made by the same manufacturer failed in a similar manner during pre-installation testing. The removal appeared to be performed in a safe manner with appropriate radiological protection.

cc: Board Members