

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 15, 2005

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending April 15, 2005

K Basin Closure Project: During inspection of the seismic clamps on the Multi-Canister Overpack (MCO) Handling Machine (MHM) it was identified that a bolt was loose, i.e., no longer torqued to the required value. The bolts are used during maintenance and while part of an assembly identified as safety class, have no safety function. Engineering was notified of the discrepancy and an inspection of all similar bolts was undertaken. During this inspection one bolt came loose in the craftsman's hand. At this point the bolt was reinserted and hand tightened. This action hadn't been reviewed as part of the work package and the reinsertion was not performed to the appropriate installation instructions and had the potential to damage a component with safety class safety functions. The project placed the equipment out of service while the issue was resolved.

The K-East basin resolved a Potential Inadequacy with the Safety Analysis regarding live loads on the basin monorails. This has allowed them to start suspending canister storage racks from the monorail. It is hoped that this action will allow more efficient vacuuming of sludge in the future.

Clean out of the Weasel Pit has been completed and videotaping of the floor will be conducted to ensure that no cracks exist that could raise questions with the integrity of the basin under the loads from the loaded sludge containers.

Tank Farms: During the removal of a sampling drill string from tank Ay102, one section of the drill string was dropped into the tank. The cause was determined to be that the foot clamp which supports the portion of the drill string inside the tank was not properly closed when the upper portion of the drill string was disconnected. During previous operations on drill strings, the plastic contamination control bagging was cut, a strap wrench placed on the lower drill string as a secondary support, then the upper drill string disconnected. This method was determined to be no longer acceptable following a contamination event with the exposed drill string. The presence of contamination control sleeving makes the strap wrench ineffective. Therefore, the project relied solely on the foot clamp. The human factors involved in the sleeving operation and work in the tank farms was identified as a contributing cause of the improper operation of the foot clamp. The procedural controls for this activity referenced several methods to ensure support of the drill string but the actual implementation of them was a skill of the craft endeavor. The project is looking into ways to improve the human factors for work in the tank farms and to develop a redundant capture device for the drill string.

cc: Board members