DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 18, 2005

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending March 18, 2005

Tank Farms: During S-112 retrieval operations, the high specific gravity alarm did not alarm per the setpoint defined in the alarm response procedure, but at a higher value, which had been used in previous software versions. Later, when engineers tried to fix this error, the human machine interface started up with the wrong version of the software. An investigation determined that old versions of the software were not being deleted from the hard drive. In addition, some alarm setpoints were allowed to be changed in the field with Engineering authorization without updating the master copy of the program. This latter version is kept in a vault and used for subsequent upgrades. An extent of condition review and procedure changes are ongoing.

The Integrated Safety Management System (ISMS) Improvement Validation Assessment did not identify any findings. The team concluded that the ISMS corrective actions had been substantially completed and the benefits of this implementation were beginning to be realized. The team also believed that a year or more of continued deliberate management attention would likely be required to assure sustained improvement and culture change. Focus areas should include task specific hazard analyses and assuring readiness to proceed with work activities.

Plutonium Finishing Plant: Some industrial hygienists (IH) took advantage of the quarterly criticality alarm system tests to take some sound level measurements although this was not integrated with personnel evaluating the system for Technical Safety Requirement compliance. A day after the system was declared operable, a review of the IH data indicated that the sound levels were too low in one of the tunnels. It appears that stacking drums along the walls of this tunnel more than a year ago changed the acoustics enough that audibility requirements were no longer being met, although this was not noticed until this week.

K Basin Closure Project (KBC): While preparing the second Large Diameter Container of North Load-Out Pit Sludge for shipment to T Plant, it was determined that an access port on the shipping cask lid would not seal within specifications. Following repeated attempts to correct this situation it was decided to switch lids between the two shipping casks to complete the transfer.

The clean out of the weasel pit has been complicated by the discovery of a layer of what appears to be loose aggregate on the floor (likely from the basin drain valve grouting effort). This material is too large to be retrieved with the current vacuuming system and the amount of material is too excessive to be retrieved piece by piece. The project is working to install an eductor pumping system that had been procured for a previous sludge retrieval design. The project plans to pump this material into a debris basket. This material would then need to be screened for the presence of fuel before determining its eventual disposition.