DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 17, 2006

TO: K. Fortenberry, Technical Director
FROM: R. Quirk and W. Linzau, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending February 17, 2006

DNFSB Staff Activity: Technical staff member D. Grover was on-site reviewing the K Basins Closure Project and the plans for the Interim Secure Storage Facility (ISSF).

Plutonium Finishing Plant (PFP): During safety basis work for the ISSF, it was noted that some 3013 containers stored at PFP had fissile material quantities that exceeded the material at risk (MAR) quantities used in the Documented Safety Analysis (DSA), which resulted in a positive Unreviewed Safety Question. Roughly 1.5 percent of the stored 3013 containers have fissile material quantities greater than the MAR quantities, but all the material quantities are below the mass limit given in DOE's 3013 standard. The project is now considering options to amend the safety basis, including using the mass limits directly from the 3013 standard.

The ventilation vital safety system used to maintain Building 2736-ZB at a slight vacuum relative to the environment was shut down due to an error in the written work package instructions. The apparent cause of the event was the work package instructions did not receive an adequate technical review even though it was reported that focused reviews by various functional organizations were performed. The design authority for this system noted that design change packages, such as the change associated with this event, receive a peer review but this is not required for work package instructions for vital safety systems.

Tank Farms: Workers unknowingly exceeded a void limit while decontaminating risers for tank C-108 resulting in elevated extremity dose. The workers did not recognize they had exceeded the limit because the reported dose rates from the work area were in rad and the limits were in rem. The received dose to the extremities was not a major safety issue, but the event raises questions about conduct of operations when working in a radiological controlled area.

Workers made a temporary repair to the insulation on a cable without verifying that the circuit was isolated with a lock and tag. The cable was a 480-V power supply to a welding receptacle and was not energized because it had been locked and tagged for another job.

Waste Treatment and Immobilization Plant (WTP): A small fire occurred during construction activities at the Low Activity Waste (LAW) facility last Friday (2/10/2006). The fire was caused by quartz light being used to maintain temperature on a small concrete placement coming into contact with a piece of plywood. The fire was found and extinguished by a security guard conducting his routine patrols. In response to the fire, Bechtel National, Inc. declared the event a Management Concern, eliminated the use of wood in the tents for similar placements, and committed to sending out a safety bulletin to inform the workforce. The site rep walked down the facility and verified that wood had been replaced with steel in the tent arrangement but has yet to see the safety bulletin concerning this event.