

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 30, 2004

TO: K. Fortenberry, Technical Director
FROM: M. Sautman, Hanford Site Representative
SUBJ: Activity Report for the Week Ending July 30, 2004

Tank Farms: In light of several radiological events at tank farms, the Site Representative had meetings with senior CH2M HILL Hanford Group (CHG) and Office of River Protection (ORP) managers as well as radiation control and work planning managers to discuss staff concerns with work planning, conduct of operations, and the feedback and improvement program. CHG issued a management directive containing compensatory measures for improving conduct of radiological operations. This directive was revised after the Board staff pointed out that it did not address work in poorly characterized environments, which was an issue with last week's high extremity dose event. The staff also believes that the emphasis needs to be on developing high quality work packages up front rather than relying on reviews by senior managers and radiation control personnel to improve the packages at the back end of the work planning process. In addition, facility representatives pointed out that the procedural requirements for what to do when the radiation work permit void limits are exceeded were not followed last week. Finally, this latest event has strong similarities to previous events where components contaminated with high-energy beta particle emitters were manually handled. ORP is not entirely satisfied with CHG's response so far and has provided CHG a list of minimum standards for resuming work. CHG management has briefed their field work supervisors, work planners, and radiation control personnel on what the expectations are for work packages, pre-job briefings, and field response to upset conditions. All medium and high risk work packages have been suspended and will not be released until reviews indicate the work packages meet current expectations. (IV)

Plutonium Finishing Plant: A criticality prevention specification (CPS) discrepancy and a Potential Inadequacy in the Documented Safety Analysis were declared after a single sample indicated a fissile mass inventory of 1393 grams for tank D5, which exceeds the 900 gram limit in the CPS. Although different analyses of this sample have produced similar results, three other samples taken from the same tank and analyzed at the 222-S Analytical Laboratory indicate an inventory 80+% less. This is closer to what the inventory logs indicate. In any case, double contingency is maintained until 20 kg is exceeded. A recovery plan has been developed to resolve the inventory discrepancy. (II)

Spent Nuclear Fuel Project (SNFP): A secondary suction valve to the skimmer system pump was found in the wrong position. This had caused the water level in the North Load Out Pit to approach the Technical Safety Requirement limit. Fuel loading this week was very slow because extremely degraded fuel resulted in water clarity issues. (II)

Waste Treatment Plant (WTP): A rack holding 12 compressed nitrogen gas cylinders rolled off a truck and landed on its side. Although none of the valves were damaged, some distribution tubing was broken and residual nitrogen gas was released. (IV)

cc: Board members