DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 7, 2003

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending November 7, 2003

Tank Farms: CH2M Hill Hanford (CHG) continues to evaluate strategies to allow waste retrieval to continue without creating waste category A tanks. Continuous feed-and-bleeds may be used to accumulate waste from west tank farms in SY-102 and C farm sludges in AN-106 and AN-101. The evaporator could be used up to a specific gravity of 1.47 if the resulting solids were distributed between AW and AP farms. CHG is also investigating whether the current waste category A tanks (AN-103, 104, 105 and AW-101) and SY-103 (which has small gas releases) could be mitigated by accumulating sludge in them and removing the supernatant. Existing models indicate that this configuration should prevent future buoyant displacement gas release events, the most serious of which occur in liquid-over-solid waste configurations in saltcake tanks. Furthermore, the median gas fraction for sludge tanks tends to be very low (i.e., 0.01) and the release of their retained particle-displacing bubbles has tended to be on the order of 10 to 100 cubic feet over a period of several days. However, there is limited data on the gas retention behavior in tanks filled with sludge and the hazards of the eventual retrieval of the sludge by a to be determined method should be considered before implementing this approach. (III-A)

Waste Treatment Plant: The staff met with the Office of River Protection (ORP) to discuss their latest position on controlling changes to the Preliminary Safety Analysis Report, design, and Safety Requirements Document. Based on recent inspection findings, ORP does not believe that Bechtel is ready to approve changes to the implementing codes and standards. However, the staff does not believe the latest position addresses the concerns identified in the Board's May 29 letter. For example, the contractor would be allowed to approve and implement changes that create new design basis events (DBE), increase the frequency or consequences of analyzed DBEs, or affect how safety class controls meet their safety function without ORP approval. (I-C)

Spent Nuclear Fuel Project (SNFP): The new project director conducted a series of all hands meetings to clarify the project path forward. The SNFP goals for fuel production are to complete fuel removal from K-East Basin in March 2004, and K-West Basin in June 2004. To accomplish this, the project is being reorganized to form production-specific teams led by a senior manager for the production choke points, i.e., Fuel Transfer System production and Multi-Canister Overpack (MCO) production. The SNFP is also moving the safety and health organization to directly report to the project director rather than reporting to the production manager. (III-A)

Sludge Retrieval and Disposition Project (SRPD): This week concerns have been raised with the inerting of the sludge transportation cask. If inerting pressures are too high, > 0.8 psig, there is the potential for air to be forced into the sludge container through the HEPA filters resulting in oxygen levels in the container to be in excess of the specifications. (I-C)
cc: Board Members