

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 19, 2003

**TO:** K. Fortenberry, Technical Director  
**FROM:** D. Grover and M. Sautman, Hanford Site Representatives  
**SUBJ:** Activity Report for the Week Ending September 19, 2003

Spent Nuclear Fuel Project (SNFP): DOE-Richland (RL) authorized the physical modifications to the sludge water systems to support the argon inerting control strategy for hydrogen deflagrations but did not approve the preliminary safety analysis documents. The decision to approve the work was based primarily on the minor nature of the plant modifications. RL discussed a concern regarding inconsistencies in the safety basis parameters and modeling which do not support a conclusion that a hydrogen deflagration is precluded for all potential scenarios. From discussions with RL, the approach to resolve this concern will be to reduce the degree of conservatism in the hydrogen generation calculations. (I-C)

Waste Treatment Plant (WTP): The proposed design change for the cesium ion exchange system involves a major safety strategy shift since it would allow H<sub>2</sub> gas in excess of the lower flammability limit to accumulate in the piping system prior to flushing. Bechtel National is calculating the amount of gas which they believe could be accumulated without risking a breach or release of material. (I-C)

Tank Farms: An investigation of last week's waste transfer shutdown found that the construction crew was aware of the transfer, but that transfer operations did not know about the excavation. Tank farms used to have an excavation controls administrative control prohibiting waste transfers through lines uncovered by excavation activities unless compensatory controls were in place. A transfer route walk down prior to and during waste transfers was also required. This program was removed from the authorization basis in March 2001. A Site Rep review of the existing procedure indicates that a Job Hazards Analysis of the excavation activity and radiological control review of the excavation permit were still required though. (I-C)

In response to Site Rep and Chief Engineer comments about the AW Farm exhaustor root cause analysis (see September 5 report), an additional corrective action was developed to require system health reports to identify redundant safety equipment that is not operable. (I-C)

In response to preliminary findings about the electrical near miss (see Sept. 5 report), CH2M Hill Hanford is expanding the investigation to examine their policies on manual lifting and oversight of subcontractors. Although the steel cover plates were labeled a lifting hazard and significantly exceeded the Job Safety Analysis limit, the construction crew repeatedly lifted and moved these plates above electrical equipment while being observed by their supervisor. (I-C)

Public Interaction: The Site Reps gave a presentation about the Board's role and issues at Hanford to the local officials who comprise the Hanford Communities Administrative Board.  
cc: Board Members