

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 10, 2001

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending August 10, 2001

Messrs. C. Coones and D. Boyd were onsite observing the DOE headquarters fire protection program evaluation. Mr. Sautman was out of the office this week.

Spent Nuclear Fuel Project (SNFP): The K-West basin is currently using the manual processing tables to load spent fuel into Multi-Canister Overpack (MCO) baskets. The use of this equipment appears to have the potential to quickly and easily load the baskets' meeting the SNFP expectation for this portion of the operation. An acceleration of the MCO shipping schedule has not yet been experienced due partly to the slow tempo of operations using these tables while additional operators are trained.

Equipment problems have also continued to slow the cleaning of fuel since the maintenance outage. One of the remote manipulators has developed a hydraulic fluid leak, taking it out of service. In addition, a recurrent equipment problem with the decapping station prevented opening both canister barrels at the same time, more than doubling the cycle time for this activity. Another outage was required to implement a temporary fix while the engineering organization develops a permanent solution. Finally, one of the two new hoists used to move canisters through the fuel retrieval system separated from its monorail trolley, slightly injuring a worker. This occurred when a bolt that fastens the hoist assembly to a load cell on the trolley backed out after repeated use. It appears that the bolt locking mechanism did not fully engaged due to a interference with adjacent fillet welds and loosened as the hoist was rotated as part of normal operations. A similar problem was identified during a preuse inspection of the MCO basket hoist resulting in it also being removed from service which halted the loading of the 19th MCO. Modifications to address this issue are planned to be completed expeditiously with a return to service early next week. These issues illustrate a continuing problematic trend regarding the reliability of mechanical equipment at the SNFP. Design reviews for initial equipment designs as well as modifications need to more carefully investigate the equipment reliability and the safety impacts of failures in the future. (III-A)

High Level Waste Tank Integrity: The expert panel for double shell tank life extension briefed DOE and contractor management on their findings this week. Of the 32 actions proposed, seven were considered to be mandatory and required aggressive scheduling to maintain and extend the double shell tank's operational life. Most of these are currently being pursued by the site including the efforts to correct out of specification chemistry in tanks and to restore annulus ventilation systems to operability. Setting chemistry limits for each waste layer and having all ventilation system operational were also considered to be necessary and needed aggressive scheduling to minimize corrosion in the tanks. (III-A)

cc: Board Members