

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 19, 2002

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending July 19, 2002

T Plant: The DOE Operational Readiness Review (ORR) for the increase in hazard categorization and fuel removal commenced this week. The DOE-RL line management had requested that T Plant repeat the portion of the demonstration for sealing and testing of a fuel canister. These activities had been simulated in the past and issues with cleanliness control raised concerns with the ability of the plant to successfully accomplish this. Debris was observed to fall from the crane onto the fuel canister and shipping cask with small pieces also landing on the sealing surface, however the fuel canister was acceptably sealed. T Plant is evaluating methods for inspecting the sealing surface using remote video cameras and developing contingency plans in case large pieces are identified or leak tests fail. Several minor issues have been identified along with one potentially major issue. This involves operators mispositioning valves on the drying and inerting skid during both the contractor and DOE ORR demonstrations. (III-A)

Tank Farms: Last January, high-level waste being transferred through an aboveground hose-in-hose transfer line (HIHTL) leaked from the primary hose into the secondary hose. It is suspected that the leak at the flanged connection resulted from pressurized, hot water flushes to clear a line plug using parameters that may not have been bounded by qualification testing. Staff discussions at the time addressed the need to revise qualification tests, inspect the HIHTL to identify the failure mechanism, and address aging issues. Unfortunately, CH2M Hill Hanford Group (CHG) has not inspected the failed hose during the last 6 months for various reasons. The staff became concerned when they learned this week that CHG planned to start transfers at BY Farm using existing HIHTLs that met the old specifications and qualification testing requirements. Furthermore, CHG also decided to delay the inspection of the failed HIHTL to next fiscal year in order to avoid impacting saltwell pumping at nearby tanks. The Site Rep had discussions with the CHG Operations Vice President and Chief Engineer as well as the Office of River Protection (ORP) Manager and Operations Assistant Manager (AM) about staff concerns with using existing HIHTLs, especially during flushing operations, when there were questions regarding the actual failure mechanism and aging effects. The ORP Operations AM, who shared similar concerns, proposed that transfers using existing HIHTLs would not commence until CHG inspected and tested the HIHTLs in the field and performed a technical evaluation of the failure mechanisms and the ability of the existing HIHTL to operate safely during normal and contingency activities. The Site Rep believes that this approach, if implemented properly, should address staff concerns and determine safe operating parameters. (III-A)

cc: Board Members