

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 23, 2002

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending August 23, 2002

Waste Treatment Plant: Joel Blackman, James Jirsa (Outside Expert), and the Site Representative reviewed field engineering and quality control records associated with Low Activity Waste Facility concrete placements and performed a field inspection of the cold joint. In addition, the staff discussed Bechtel National Inc.'s (BNI) preparation of the cold joint, BNI's technical approach for investigating the soundness of the cold joint and greater than 70/ F concrete, and their plans for mitigating the cold joint with dowels. (I-C)

Spent Nuclear Fuel Project (SNFP): A process port valve in Multi-Canister Overpack (MCO) 98 appears to have stuck in the open position due to galling. The MCO had completed the Cold Vacuum Drying (CVD) process and was being sealed to allow removal of the processing equipment and configured for transportation to the Canister Storage Building. Several unsuccessful attempts were made to break the valve free and complete closure. The MCO is currently in a safe condition with proof of dryness testing complete and a 9 to 11 psig helium backfill. However, this failure will represent a breach in the primary confinement system for the MCO if the process connections are removed. The project had not previously developed contingency plans for this situation. Detailed planning, additional equipment, and modifications to the facility authorization basis will likely be needed to safely resolve this situation. Until this situation is remedied, the CVD process bay containing this MCO will be unavailable for further production.

Concern with the potential inadvertent addition of water into this MCO has also suspended operations in the other CVD process bay. A positive USQ was identified last year concerning the potential for water drained from one MCO to flow into the second under certain conditions; the current condition is one of these. The facility is developing a JCO with additional controls to isolate MCO 98 from the systems open to the process water draining system and ensure water is not reintroduced into the MCO. The recovery plan for MCO 98 will probably also need to reverify the dryness of the fuel. DOE is expected to approve this JCO by the end of the day allowing processing in one CVD bay to continue. (III-A)

T Plant: The facility was scheduled to package the first container of spent fuel this week. However, the load cell used to ensure the fuel movement is conducted safely was experiencing an intermittent failure. This was determined to be caused by a maintenance error while modifying the equipment following the recent operational readiness reviews. Once this was corrected, the first fuel assembly lifted from the pool showed discoloration and surface roughness in the areas where the storage rack had contacted the cladding. Following air drying it appeared that these conditions were the result of adhered particulate and not damage to the assemblies. In both cases the facility management conducted recovery actions in a formal and disciplined manner. Documentation of the issue resolution and revised inspection guidance is being prepared to allow the activity to recommence next week. (III-A)

cc: Board Members