

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 2, 2002

**TO:** K. Fortenberry, Technical Director  
**FROM:** D. Grover and M. Sautman, Hanford Site Representatives  
**SUBJ:** Activity Report for the Week Ending August 2, 2002

Waste Treatment Plant (WTP): Bechtel National Inc. (BNI) submitted their root cause analysis and corrective action plan (CAP) for the Low Activity Waste basemat concrete placement and cold joint. BNI concluded that the root cause was that the batch plant was not capable of producing concrete at the required rate while maintaining a delivery temperature of 70° F at the point of discharge when ambient temperatures exceeded 95°F. In the Site Rep's opinion, the success of the CAP will depend heavily on BNI improving their oversight of their subcontractors and management taking more ownership when authorizing work. The corrective actions establish Go/No-Go criteria and identify way to improve pre-planning and batch plant operations in hot weather. The nonconformance report (NCR) dealing with the increase from 70°F to 75°F recommended the use of the concrete "as is" based on engineering's determination that the batch plant was in control of concrete placement temperatures since it was predictable within a 5°F band ( i.e., <75° F). This seems a bit premature without any confirmatory field sample results. The cold joint NCR is requiring that the preparations for the cold joint include removing cement and other latencies from exposed rebar and embeds, removing loose material with chipping or high pressure water, and a 14day continuous moisture cure. The cold joint's soundness is to be verified by identifying loose material, inspecting for cracks, and taking sample cores. ORP also imposed a series of additional conditions that limit the times and sizes of placements and added Go/No-Go criteria to be verified within 1 hour of the start of placement. The Site Rep attended a placement planning meeting Thursday where the BNI Construction Manager decided to delay the resumption of 70° F placements until next week due to the implementation status of their corrective actions. A review of the new Special Instructions for Construction Work Packages found them to be a substantial improvement from what was previously performed. The Board staff also conducted a review of the WTP Pretreatment Facility safety basis. (I-C)

Plutonium Finishing Plant (PFP): With the exception of 1 drum of organic solution, PFP has completed stabilizing all of their solutions by either a) precipitating, thermally stabilizing, and packaging the resulting oxide into DOE-STD-3013 compliant cans or b) repackaging solutions for direct discard at WIPP. However, PFP has not taken representative samples of their solution oxides for the Materials Identification and Surveillance Program as required by DOE-STD-3013 Quality Assurance criteria despite a Board letter highlighting this issue. (III-A)

Spent Nuclear Fuel Project (SNFP): The project identified that a spacer used to transmit lateral forces during the design basis earthquake (DBE) was not fabricated and installed in either the K-East or West Basin. The project is conducting an engineering analysis to determine the effect this omission will have on the equipment performance during the DBE. The project expects to complete an Unreviewed Safety Question evaluation of the situation by Monday. (I-C)

Tank Farms: Saltwell pumping continued to be impacted by elevated flammable gas levels in a few tanks (e.g., hand held meters measured up to 31% of the lower flammability limit in U-108) although the restart of active ventilation at SX farm should help there. (III-A)

cc: Board Members