

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 12, 2002

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending July 12, 2002

Waste Treatment Plant (WTP): The Office of River Protection (ORP) authorized Bechtel National, Inc. (BNI) to proceed with the WTP partial construction activities this week, which includes the placement of concrete for basemats of the Low Activity Waste (LAW) and High Level Waste facilities. Problems encountered during placement of the LAW basemat this week resulted in nonconformances being declared for the high temperature of the concrete and the formation of a cold joint. The apparent lack of a tight control set appeared to have allowed the placement to continue even as conditions became more and more unfavorable. Although BNI had planned to do concrete placements on swing shift, the decision was made to do this placement during the day. This decision was made although temperatures were expected to reach 105° F (actually hit 109° F) and no ice was available. Concrete temperatures were further increased due to loading multiple shipments of new cement from trucks directly into silos when the batch plant could not maintain required capacity. In addition, delays due to crane interlock problems, resolution of safety questions, and the need to make field decisions pushed the pours further into the day. BNI design engineers made a verbal decision to allow placements up to 75° F although this concrete was to meet 70° F code requirements. BNI staff told the Site Rep that they do not believe there will be any impacts to the compressive strength due to this increase. The staff plans to review the technical basis for the decision, which was not documented until the next day. It is not clear how BNI determined this was acceptable when they were unable to define the criteria (e.g., maximum initial or final temperature, temperature increase) that would make this concrete mix unacceptable. BNI placed blankets over the pour and will be monitoring the internal temperatures. In addition, BNI has suspended all 70° F concrete placements pending an approved corrective action plan (CAP) and an operational ice plant. ORP is taking this issue very seriously and is requiring BNI to justify in a briefing next week why ORP should not issue a stop work for WTP construction. Furthermore, ORP will be approving the CAP. ORP also directed BNI to perform a technical evaluation of the cold joint, verify the soundness of the emplaced concrete, scarf out the concrete at the joint surface, and review other recent construction problems. (I-C)

Fluor Hanford Project Operations Center: DOE-RL concluded an assessment of the Fluor Hanford (FH) Project Operations Center (POC) engineering functions and support of the Spent Nuclear Fuel projects engineering organization this week. 6 issues and 5 observations were identified leading to multiple recommendations. FH POC management disagreed with several of the observations, stating that contrary to what the team had been informed during the review, procedures and processes identified as being absent were in place. Other issues involved the role of the POC in assessing compliance by the projects to POC policies and procedures, the management self assessment process not driving continuous improvement, and SNFP project and engineering management controlling engineering decision making at the senior management level where it may more appropriately be applied in the engineering organization. (I-C)

Plutonium Finishing Plant (PFP): After being shut down for nearly 3 months, the Site Rep observed the resumption of direct oxidation of polycubes using a new 4-step heating process. There was no evidence of polycube ignition or filter plugging during the char cycle. (III-A)

cc: Board Members