

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 20, 2003

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending June 20, 2003

Board Visit: Drs. Eggenberger, Mansfield, and Matthews along with members of the technical staff visited the Waste Treatment Plant (WTP) construction site and reviewed issues associated with the WTP, Spent Nuclear Fuel Project, Plutonium Finishing Plant (PFP), and tank farms. The Board also reviewed issues with DOE oversight of contractors and implementation activities for Recommendation 2000-2. Dr. Matthews and members of the technical staff also visited the K-West Basin and PFP.

Waste Treatment Plant (WTP): The Office of River Protection (ORP) approved 80 of the 171 proposed changes to the Safety Requirements Document (SRD) safety criteria. An additional 28 were conditionally approved provided they are modified (e.g., did not accept replacement of "shall" with "should" or limiting the safety criterion to only some of the project phases). Nine of the proposed changes were withdrawn. Proposed changes dealing with the remaining 54 safety criteria remain open. These address fire protection, accident analysis, hazard control strategy selection, criticality safety, etc. The ORP Safety Evaluation Report states that the overall changes complicate many safety criteria by spreading out the regulatory drivers over numerous safety criteria. It also stated that "the safety evaluations supporting changes to these standards generally were incomplete such that extensive discussions were needed to clarify and revise the proposals to ensure adequate safety was provided. Moreover, many of the proposed changes would not have provided adequate safety. BNI must improve the quality of its safety evaluations." This observation is very relevant as ORP contemplates changes to the authorization basis maintenance process. (I-C)

Emergency Preparedness: The site conducted the yearly emergency preparedness exercise this week. The exercise scenario involved a helicopter crash and explosion adjacent to the Plutonium Reclamation Facility (PRF) at PFP. The simulated accident would result in a breach of the facility and fire which would then spread plutonium over a wide area. The scenario called for 2 workers to be injured and contaminated by the initial explosion and contamination release. Fire fighters were also expected to be contaminated. However, similar to last year's exercise, contamination control at the event scene became complicated when the first responder to the injured workers cross-contaminated himself. He then did not limit his movements and proceeded to contaminate the initial emergency response team staging area. Poor initial boundary control by the radiation control organization (radcon) led to additional individuals carrying contamination into the staging area and beyond. Barrier control was also complicated by contaminated fire suppression water flowing past the barrier requiring extension of controlled areas. Once the barrier was reset, radcon quickly identified the contamination problem and had new radcon technician arrivals to the event scene establish a well controlled clean area boundary. Also similar to last year's exercise, the control organization compensated well for the cross-contamination and limited unauthorized simulations. (III-A)