

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 21, 2002

**TO:** K. Fortenberry, Technical Director  
**FROM:** D. Grover and M. Sautman, Hanford Site Representatives  
**SUBJ:** Activity Report for the Week Ending June 21, 2002

Emergency Preparedness: The site conducted the yearly emergency preparedness exercise this week. The exercise scenario involved a collision of a fuel truck with the Multi-Canister Overpack (MCO) Cask transporter. This simulated accident resulted in a breach of the MCO and a fire which dispersed a fifth of the spent fuel into the environment. The scenario called for one injured worker and radiological contamination of personnel limited only to fire fighters stabilizing the MCO. This was greatly complicated when one individual entered the contamination plume unnoticed by his coworker or supervisor and then cross-contaminated a majority of the area upwind of the event scene used by responders as a staging area. Emergency responders promptly dealt with the fire and injured worker, however, radiation control personnel (radcon) did not interview the individuals present during the accident to determine their movements or preform preliminary surveys for gross contamination. Radcon also failed to make any efforts to segregate the workers in street clothing from the emergency responders in full protective gear. These omissions resulted in the contaminated worker not being discovered for an additional hour during which he continued to move around the area contaminating equipment and personnel. Despite the dramatic increase in the radiological contamination scope, the exercise controllers maintained control of the event scene and provided realistic information to participants. The site rep observed significant improvement of the control organization in limiting unauthorized simulations and forcing participants to earn information by realistically performing their duties as compared to previous drills. (III-A)

T-Plant: The contractor Operational Readiness Review for the increase in hazard categorization and fuel removal concluded this week. The team determined that T-Plant was ready to operate upon completion of 3 pre-start findings. The findings involve meeting cleanliness control requirements, taking actions consistent with the approved USQ process, and the inventory control program implementing requirements from the safety evaluation report. (III-A)

Plutonium Finishing Plant (PFP): PFP has developed a new 4-step heating process for charring polycubes to avoid polycube ignition and filter plugging. The new rates address how the dilution air flow causes a significant difference between the temperature measured at the furnace controlling thermocouple and that seen in the boat holding the polycube. (III-A)

Recommendation 2000-2: The Phase 2 Assessment of the 222-S Analytical Laboratory of the confinement ventilation system identified 15 findings. The team concluded that portions of the exhaust system ductwork were unacceptably corroded. In addition, improper fan selection and poor duct design downstream of the building exhaust fans have caused excessive vibration resulting in cracked welds, broken anchors, and other damage. Both of these had been self-identified. (I-C)

Waste Treatment Plant: The Site Rep met with Bechtel National Inc.'s (BNI) Quality Assurance and Engineering Managers to discuss recent Office of River Protection's QA findings regarding computer spreadsheets used in structural engineering calculations. The staff will further review BNI's independent reviewer process as part of a software QA review later this summer. (I-C)

cc: Board Members