

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 26, 2002

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending April 26, 2002

Plutonium Finishing Plant (PFP): As required by their procedure, operators shut down a furnace containing 2 polycubes when they were unable to maintain the required off-gas flow rate. Although the furnace temperature was near the bottom of the expected charring temperature range, the polycubes were later found to be significantly oxidized and one was reportedly glowing when the furnace was opened. It is suspected that the boat's temperature (and thus ramp rate) was greater than the furnace's air temperature that was being monitored and controlled. PFP is still investigating this issue. (III-A)

Tank Farms: The Phase 2 Assessment of the Primary Tank Leak Detection System ended up with 12 findings and 6 observations. The main findings addressed inconsistencies between the Safety Equipment List (SEL) and Final Safety Analysis Report, the Unreviewed Safety Question Determination for the SEL, qualification of commercial grade items to safety service, equipment that was not intrinsically safe, and inability to test the operability of some equipment. Preliminary issues identified during the AN Farm Ventilation System Phase 2 Assessment address inadequate surveillances, lack of or poor calculations, calibration problems, and control of vendor information.

The Office of River Protection (ORP) is delaying the Integrated Assessment from May to late July. This broad, 3-week assessment will include the following topics: annual Integrated Safety Management System (ISMS) update, focused review on feedback and improvement, corrective actions in response to Department of Energy Headquarters reviews, requirements management, and multiple programs (e.g., operations, quality assurance, project management, nuclear safety, etc.). ORP is also considering combining this with the Phase I ISMS Verification Review of Bechtel National Inc. In order for this large review to be effective, ORP will need to find team members who have the appropriate leadership abilities and experience. (I-C)

Waste Treatment Plant (WTP): The Hazard and Operability (HAZOP) analysis for major systems is periodically updated as the designs of these systems progress. The HAZOP analysis associated with the definitive design stage (referred to as the third cycle HAZOP) was recently conducted for the high level waste melter system. This was the first third cycle HAZOP performed for a system at the WTP. Shortly after this third cycle HAZOP was begun, the HAZOP was canceled by the coordinator because the team was having difficulty understanding how this third HAZOP was to be different from the previous two. The HAZOP team was not considering the updated information from the definitive design in their evaluation, resulting in discussions mirroring the previous two HAZOPs and yielding no new information. The conduct of this third cycle HAZOP was further complicated by combining the HAZOP with the 60 percent design review. The coordinator intends to resume the melter HAZOP after developing clearer guidance on the expectations for third cycle HAZOPs. (I-C)

F-Reactor Basin: The 11th and final spent nuclear fuel element was packaged in a shipping cask for transfer to the K-Basins this week. This will allow the removal of the final debris in the basin followed by the demolition of the remainder of the basin over the next few weeks. (III-B)

cc: Board Members