

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 12, 1999

**TO:** G. W. Cunningham, Technical Director

**FROM:** R. Arcaro and M. Sautman, Hanford Site Representatives

**SUBJ:** Activity Report for the Week Ending November 12, 1999

A. Plutonium Finishing Plant (PFP): Mr. Sautman met with PFP personnel to review their Rec. 94-1 schedules and throughput assumptions. In general, the stabilization activities are integrated and the throughputs for *operating* processes are reasonable. However, the adequacy of the completion dates is questionable for 2 reasons. First, a 61% total operating efficiency is assumed. It is surprising that DOE is not requiring that the contractor improve this over the next 5 years. Second, level loading resources is suitable for activities that can be delayed until the workers can get around to completing them. However, in this case it implies that the safety issues in Rec. 94-1 do not warrant increased resources to maximize stabilization rates. Examples of this include:

- only running 1 batch through the prototype vertical denitration calciner every 3 weeks,
- only using the cementation line as fill in work between July 2000 and October 2001, and
- installing 4 new, double capacity furnaces in 1/01, but not using them until 5/02.

PFP, however, does have an aggressive startup schedule for the next 12 months - 5 readiness reviews, including 2 readiness assessments or operational readiness reviews. This will only happen if DOE provides adequate funding, resolves problems with hiring and clearing workers, and finds enough criticality engineers. Therefore, it was discouraging to hear DOE tell the Hanford Advisory Board this week that a likely funding reduction "eliminates funding to accelerate stabilization activities in FY00" and that a \$10.4M shortfall for FY01 places "completion of stabilization activities by 10/04 in jeopardy." (3-A)

B. Tank 101-SY Transfer: DOE-ORP suspended its Readiness Assessment of the impending 101-SY transfer. During observation of a simulated transfer, DOE determined that formality of operations, communications, procedural compliance, and operator level of knowledge was insufficient to demonstrate readiness to safely perform the transfer. (3-A)

C. Catch Tank ER-311 Flammability: As reported last week, LMHC initiated an argon purge of catch tank ER-311, thought to contain a flammable gas mixture. Over the weekend, flammable gas was again detected in a riser to the tank — even after nearly 7000 cubic feet of argon was injected in the tank. Sampling over the next several hours evacuated the riser. Video of the inside of the riser revealed that a PVC riser sleeve had slipped ten feet down the riser and into the tank liquid isolating the inside of the riser from the tank head space. Vapor samples of connected piping detected argon and no flammable gas. A vapor sample of ER-311 was taken through another riser. No flammable gas was detected. Flammable gas in other isolated risers has been detected in the past. The risers are generally easy to ventilate and the risk of a burn in this configuration is low. It is likely that the head space of ER-311 was never actually flammable. (3-A)

cc: Board members