

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 25, 2000

TO: K. Fortenberry, Technical Director

FROM: M. Sautman and S. Stokes, Hanford Site Representatives

SUBJ: Activity Report for the Week Ending August 25, 2000

Plutonium Finishing Plant (PFP): The contractor Operational Readiness Review (ORR) for the magnesium hydroxide precipitation process (MHPP) identified 5 pre-start findings that address procedure safety requirements, criticality safety dimensions; documentation of safety class/significant systems, structures, and components; and the action tracking system.

Recent events will temporarily preclude the use of two 241-Z tanks for storing and transferring filtrate solutions to tanks farms. Recovery from the tank D-5 criticality infraction will require the removal of plutonium from the tank by treating the tank contents to meet tank farm requirements. This week it was determined that the tank D-8 criticality safety evaluation report (CSER) does not establish 2 contingencies for the lab sinks and glovebox drains which are connected to the tank. There are no physical controls which would preclude the inadvertent introduction of fissile liquids into these sinks. Some floor and glovebox drains connected to tank D-8 are also not addressed by the CSER or sealed as required by the CSER. As a result, PFP has developed a new process for draining filtrate solutions into drums in the PFP tunnel until they can be cemented off-site. Although this new process is relatively simple and not very hazardous, this process must be in place to support hot operations of the MHPP. Otherwise the MHPP will have to shut down after just a few batches have been processed and the filtrate receiving tanks are full. It will take a few weeks before the procedures, equipments, and necessary approvals will be ready to support the start of this new process.

Although PFP's own Management Self Assessment and Startup Plans recognize the need for a process to handle filtrate solutions, this new process was excluded from the contractor's ORR. The technical staff (and some Department of Energy personnel) was very skeptical of attempts to exclude this from the ORR's scope, call it a separate activity (which then screened out as not needing any review), or place it on the list of open pre-start findings. After extensive interaction between the site reps, DOE-Richland (RL), Office of Independent Oversight (EH-2), and PFP personnel, the DOE-RL Manager decided to examine the new process as the second part of a two-phase ORR. In addition, DOE expects that the contractor will conduct their own review of the new method beforehand and that precipitation activities will not commence until a filtrate transfer method is operational. The staff believes this to be an acceptable compromise for this situation. The DOE ORR commenced Friday.

The Site Reps were also able to convince both the contractor and DOE to revise their ORR plans of actions to include core requirements that had been excluded with questionable justifications. EH-2 personnel had not reviewed these plans of actions nor were they aware of these exclusions until notified by the Board staff. As a result of all the issues discussed above, an EH-2 staffer will be at Hanford next week to examine readiness review issues.

Meeting with the Manager, Office of River Protection (ORP): Mr. Stokes met with the ORP Manager to discuss integrated safety management and the safety/health standards and

requirements related to the waste treatment plant procurement. Although no decision has been made, Mr. Boston is evaluating Board concerns and plans to address them in the upcoming contract procurement activities.

cc: Board Members