

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 11, 2000

**TO:** K. Fortenberry, Technical Director

**FROM:** M. Sautman, Hanford Site Representative

**SUBJ:** Activity Report for the Week Ending March 11, 2000

A. Plutonium Finishing Plant (PFP): PFP started weighing plutonium metal items Monday. Out of approximately 3 dozen cans weighed so far, 2 cans have been preliminarily identified as having unacceptable weight gains of 11 and 14 g. Part of the weight gain for the former may be due to several labels later applied to the can. One additional can was found with low levels of contamination on its exterior although these levels decayed considerably after a day. All of the items known to be or suspected to be in contact with plastic have been weighed and found to be acceptable. The Site Rep also reviewed the technical basis for unacceptable weight gains and found it to be reasonable. At the Department of Energy's request, PFP committed to having procedures for addressing plutonium metal in place by March 31 versus April 30.

The Site Rep observed the activity based startup review for the 3 additional furnaces to make sure that problems noted in the Board's March 3, 1999 letter with the thermal stabilization operational readiness review were avoided. This time all of the programs have been run and temperature setpoints verified. In addition, the procedure provides recovery actions in case of a temperature deviation alarm and will be modified to address recovery from other abnormal events. The process for transferring boats between rooms needs to be improved. Currently, part of the conveyor is inoperable and the operator practice of tossing a long metal tool inside the glovebox is unsafe. PFP is also taking actions to reduce the relatively high frequency of temperature deviation alarms which cause the heating cycle to stop as well as verifying that the plutonium temperature reaches 950°C. (3-A)

B. 233-S: A worker punctured his hand on a bur while attaching tape to a recently cut pipe. Skin contamination levels were initially 180 decays per minute. After decontamination, in vivo counting found 40 picocuries of Am-241 in the cut. While the worker was reportedly wearing a puncture resistant glove as required by the activity hazards analysis, the vendor advertises this as a glove for the food and pharmaceutical industry. A more robust glove (e.g., leather) might have been more appropriate. In addition, reports of the conduct of the critique were disappointing. The Site Rep also attended a pre-job brief for the process hood. This multi-hour briefing consisted of reading word-for-word all the revised steps in a 65-page procedure. Considering that this brief covered work that will not be conducted for several months it was of little value other than a gross familiarization with the work package. Steps from the first five versions were skipped although they had not been briefed since October 1999 or earlier. Reviews of the radiological engineering planning for the process hood entry found them to be acceptable. (3-B)  
cc: Board members