

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 6, 2002

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending September 6, 2002

Plutonium Finishing Plant (PFP): Fluor Hanford (FH) is partially addressing a concern identified in the Board's June letter about using extrapolation to estimate moisture reabsorption between weighing and final packaging. From now on, the vented convenience can will be re-weighed if the bagless transfer can cannot be welded within four hours. In addition, workers will also be entering one of the grout vaults to inspect its condition as was suggested in the same letter.

Halving the polycube batch size seems to be reducing the frequency of plugged off-gas filters that was discussed last week. FH is also modifying their furnace program to hold the furnace at 265/C for 30 minutes and reduce the ramp rate to slow down the moisture generation rate (and thus reduce the amount of condensation on the filters) during polycube oxidation. (III-A)

Tank Farms: The Site Rep has been attending Control Decision meetings where CH2M Hill Hanford Group (CHG) is developing the revised controls needed to address both steady-state flammable gas generation and gas release events (GRE). (By the way, SY-103 experienced a small GRE this week). While it is credible that the lower flammability limit can be exceeded in the headspace of some tanks, the fact that this is usually predicted to take weeks to months to occur and may often be prevented with ventilation rates just slightly above barometric breathing has allowed CHG to consider some nontraditional control strategies. Flammable gas monitoring is being heavily credited, with ventilation (either by permanent or portable systems) likely to be relied on only after elevated flammable gas concentrations are detected in double shell tanks. Since there are often a variety of actions that could be used to lower flammable gas concentrations, the Operations staff is pushing for a very flexible control strategy. The Site Rep pointed out that required action statements need to go beyond just following contractor procedures; they need to clearly define what the desired end state is and when it has to be achieved (although how to reach it may not have to be completely predefined). The Operations staff also prefers Administrative Controls (AC) in lieu of Limiting Conditions for Operations (LCO) and Safety Significant (SS) equipment. In the Site Rep's opinion, many of Operations' concerns can be better addressed by fixing implementation issues with LCO Required Actions or using a graded approach with the safety equipment list rather than trying to credit general service equipment under an AC. This has been discussed with CHG and Office of River Protection Nuclear Safety personnel who seem to have similar views. (I-C)

T Plant: T Plant has completed processing the first container of spent fuel. The neutron dose associated with the fuel is higher than expected, resulting in total dose levels slightly exceeding the transportation requirements. The fuel cask will be removed from the T Plant tunnel to complete confirmatory measurements which may also reduce the dose by eliminating reflection of the neutrons by the concrete tunnel walls. (III-A)