

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 11, 2000

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

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

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

A. Plutonium Finishing Plant: A Site Rep review (with assistance by Matt Moury) of the contractor and Department of Energy (DOE) Plans of Action for the magnesium hydroxide precipitation process operational readiness review (ORR) identified several cases where the justification for not assessing core requirements appeared inadequate. Based on the results of prior reviews, the contractor did not plan to review conformance with applicable DOE Orders, management programs, and line management. However, PFP management later agreed with the Site Rep's proposal that they assess these issues as they apply to the process. DOE does not plan to review the qualifications of DOE personnel or the Operations Office Oversight Program because they believe that these programs are established programs that are already periodically assessed by DOE and EH-2. This has been discussed with DOE, but has not been resolved yet.

The start of the contractor ORR has been delayed until at least next week due to issues with two tanks that will be used for storing and transferring filtrate solutions to tank farms. Based on new data, the residual solution currently in the tanks may be violating a criticality limit. PFP is now considering transferring the solution to 55-gallon drums instead. (3-A)

B. Unvented Transuranic Waste Drums: The Low-Level Burial Ground Interim Safety Basis and recent Justification for Continued Operations assumed that the frequency that an unvented drum reaches explosive concentrations with oxygen is 0.46%. However, Site Rep review of the referenced study found that the frequency was actually an order of magnitude higher at 5%. In fact, an additional 14% of the drums in the study had hydrogen >4%, but with oxygen below 5%. Overall, 37% of the drums had hydrogen concentrations above 1% (a commonly used safety level). The Site Rep presented this information to DOE and contractor personnel who are now trying to determine the basis for the previously used frequency. (1-C)

C. Spent Nuclear Fuel Project: Testing of the Cold Vacuum Drying Facility's emergency diesel was halted this week due to overheating of the diesel during its initial testing. Subsequent evaluation has determined that the cooling system was inadequately designed. This is another example of poor engineering within this project. (1-C)

D. Meeting with the Manager, Department of Energy-Office of River Protection: Mr. Stokes met with Mr. Harry Boston, the new Manager of the Office of River Protection to discuss the application of integrated safety management in the Waste Treatment Plant design. (1-C)  
cc: Board Members