

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 29, 2002

**TO:** K. Fortenberry, Technical Director  
**FROM:** D. Grover and M. Sautman, Hanford Site Representatives  
**SUBJ:** Activity Report for the Week Ending March 29, 2002

Tank Farms: The 2/8/02 weekly report discusses staff concerns with the response to the Hose-In-Hose-Transfer-Line primary hose leak. CH2M Hill Hanford Group (CHG) has reduced the allowable flush temperature to that previously tested. CHG will also modify future qualification tests to make them bound field operating conditions (tested water temperature increased from 130 to 180° F, duration increased from 10 minutes to 4 hours). Unfortunately, it will have taken CHG nearly 3 months from the event to perform a mockup of planned troubleshooting activities.

The Site Rep believes 2 issues with CHG's proposed authorization basis modifications need further staff review. First, for tanks in the worst flammable gas category, there is no prohibition against adding caustic if it would result in extensive precipitation and thus significantly worsen gas retention. Second, CHG believes that if waste disturbing activities are stopped when 25% of the lower flammability limit (LFL) is reached, that subsequent gas releases may increase the concentration, but will not cause 100% of the LFL to be exceeded. Thus no ignition controls are proposed even if 50 to 75% of the LFL is reached. CHG intends to change the wording of a draft administrative control after the Site Rep pointed out that it inadvertently allowed flammable gas concentrations in catch tanks to exceed 100% of the LFL as long as the gas concentrations were monitored and manned work activities were stopped. Mr. Sautman also suggested that it might be worthwhile to use the recent saltwell-pumping induced gas release event (GRE) at S-111 as a means of validating the decanting GRE model due to their similarities. (I-C, III-A)

Plutonium Finishing Plant (PFP): Because there is increasing momentum to implement an alternate storage strategy, Mr. Sautman met with the project manager responsible for deinventorying PFP to discuss how they plan to recover from a breached 3013 can, comply with 3013 surveillance criteria, and maintain Pu handling capability. PFP recognizes that 3013 cans will have to be stored in robust 3-packs or shipping containers that can handle a breached can since there is no facility ventilation. A statistically significant population of each material type would also be equipped with remote pressure monitoring capability. Furthermore, PFP realizes that the Z/ZB buildings, which house Pu stabilization and packaging equipment, will need to be maintained as long as Pu remains on site. Mr. Sautman also emphasized the need for a systematic approach that evaluates safety issues.(IIIA)

Spent Nuclear Fuel Project (SNFP): Mr. Grover discussed the issues with the hazards analysis process identified in last weeks report with SNFP personnel involved in job hazard analysis (JHA). Their responses indicated a less than adequate knowledge of the Fluor Hanford expectations for implementation of Integrated Safety Management (ISM). This included comments that the level of planning for activities could be reduced if they are to be performed routinely and controls did not need to be consistent in the hazard analysis and procedures because subject matter experts approve both documents. Mr. Grover has also identified that the SNFP management has not evaluated the adequacy of the control identification in the context of ISM. Both a recent management assessment of the hazards and controls identification process and a review of procedural control adequacy in response to the multi-canister overpack loading system occurrence failed to examine the JHA documentation, focusing instead on procedures and personnel interviews. (I-C)  
cc: Board Members