

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 9, 1999

TO: G. W. Cunningham, Technical Director

FROM: R. Arcaro, & D. G. Ogg, Hanford Site Representatives

SUBJ: Activity Report for the Week Ending April 9, 1999

A. Plutonium Finishing Plant (PFP): It is now very likely that start-up of the prototype calciner will be delayed as much as eight weeks to allow time for resolution of a seismic issue. The contractor contends that developing the documentation to close the issue, whether it supports accepting the risk or developing seismic controls, will take as long as three months. In the interim, there is sufficient time to design and install seismic shutdown switches. Therefore, the contractor has recommended incorporating the seismic shutdown switches into the safety analysis and installing them over the next three months. The prototype calciner start-up would then be delayed to July 1999.

B. Spent Nuclear Fuel Project (SNFP): On April 8, SNFP personnel submitted to DOE-RL a position paper on resolution of the cask drop issue at KW-Basin. The following is an excerpt: "Parallel paths to resolution are being proposed. The preferred solution is based on probabilistic assessment and leak mitigation." This approach is likely to be unacceptable to DOE-RL as similar, previous probabilistic assessments for crane drops have proven to be unsupportable. The "parallel path" is a redesign of the Cask Loading System that would have a higher confidence of success, but would entail significant cost and schedule overruns.

C. Tank 101-SY Level Growth: Although an Unreviewed Safety Question exists for the level growth phenomena, as the waste level continues to rise and Lockheed Martin Hanford Company (LMHC) learns more about the phenomena, they now realize there are additional potential inadequacies in the authorization basis that must be addressed:

- The head space in the tank has been reduced to below that assumed in the safety analysis.
- A "bubble slurry" beneath the crust may release its retained gas if directly impacted by water.
- As the crust layer grows downward, it may start to impact on the suction of the mixer pump which is still being used to prevent large gas release events.

Until the waste is retrieved, LMHC has prohibited all global waste disturbing activities in the tank with the exception of mixer pump operation.

D. Meeting with the DOE Manager of the Office of River Protection: The site representatives met with Richard French, the new DOE manager of the Office of River Protection for initial introductions and discussion on site priorities. Mr. French expressed his intention to improve the effectiveness of his organization, particularly in the area of integration of privatized and non-privatized activities. The site reps provided insight into tank operations from their own experience.

E. Secretarial Visit: On April 10, Secretary Richardson is scheduled to visit the Hanford Site, meet with community leaders and make a lands usage announcement related to the Wahluke slope.

cc: Board members