

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 21, 1999

TO: G. W. Cunningham, Technical Director

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

SUBJ: Activity Report for Week Ending May 21, 1999

Mr. Ogg was out of the office this week.

A. Plutonium Finishing Plant (PFP): Mr. Arcaro reviewed a B&W Hanford Company (BWHC) proposal for achieving DOE-STD-3013 compliant packaging of its stabilized plutonium-bearing material. Because of the uncertainty associated with identifying a long-term storage facility outside of Hanford, it is prudent for BWHC and DOE-RL to package its material in double-confinement 3013-compliant containers. In the proposal, BWHC, as part of its procurement of the Bagless Transfer System, would procure a system to provide full 3013-compliant packaging. This system would be used until space available to store 3013 containers is completely used. In the meantime, modifications to existing vaults to store the remaining 3013 containers would be pursued as resources are available. Current budget submittals for Hanford show little additional resources can be expected. The success of this proposal will likely lie in BWHC's ability to achieve the stated objectives within existing resource constraints. (III.A.1)

B. Spent Nuclear Fuel Project (SNFP): Mr. Arcaro met with the new DOE-RL Site Manager Keith Klein to discuss, among other things, the SNFP. During this meeting, Mr. Klein stated his intention to accelerate fuel removal to a date earlier than the November 2000 date committed to in the Tri-Party Agreement and in the DOE's Implementation Plan for Recommendation 94-1. Mr. Klein hopes to employ an activity-based safety management system to authorize different sub-projects of the SNFP and therefore "learn by doing." This approach, similar to developing prototypes or working lead test assemblies, could provide significant acceleration. On May 20, Mr. Klein held an "all-hands" meeting for all DOE and contractor employees within the SNFP. At this meeting, Mr. Klein communicated his intention to accelerate the SNFP to all members of the project. (I.A.3)

C. Tank 101-SY Level Growth: On May 20, Lockheed Martin Hanford Company (LMHC) deployed its mechanical mitigation arm in Tank 101-SY. The objective of this deployment was to disturb the waste crust and the gas-retaining waste directly beneath the crust to induce a controlled gas release. It was hoped that this gas release would be sufficient to provide temporary mitigation of the continued level rise in the tank. Mr. Arcaro observed the operation and found it to be well-controlled and well-performed. However, the viscosity of the waste directly beneath the crust was greater than anticipated. When the arm was raised into higher regions of the waste, it could not be rotated at all. Only approximately one third of the desired region was disturbed. This disturbance released gas as expected, but as deployed, was not an effective means of mitigation. (III.A.2)

cc: Board members