

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 19, 2005

TO: K. Fortenberry, Technical Director
FROM: D. Grover, W. Linzau, and R. Quirk, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending August 19, 2005

Board Visit: Board Member Mr. Bader visited the site to review topics related to the Sludge Retrieval and Disposition Project, Demonstration Bulk Vitrification System (DBVS), and Pu-238 drum retrieval. The review included walk-downs of the K-West Basin, the Hose-in-Hose Transfer Line, the Cold Vacuum Drying Facility, T Plant, and the DBVS site and test facility.

K Basin Closure Project (KBC): The project initiated the 90 percent design review of the Mobile Solidification System (MOSS) designed by British Nuclear Group America (BNGA). The system will be used to grout and package sludge following the oxidization of uranium metal in the sludge. Fluor Hanford (FH) has not yet approved the functional requirements document for this equipment. The preliminary documented safety analysis and associated hazard analysis also have not been completed. It is not clear if it is appropriate for the design review to be conducted with these documents in a draft form. The nuclear safety reviewers identified that they need to re-evaluate the draft hazard and accident analyses to determine the functional classification for the MOSS system to support this review. These concerns have been raised with the DOE and FH.

T Plant: The contractor Operational Readiness Review (ORR) for the Treatment of K-East Basin North Load Out Pit Sludge concluded this week. The ORR team identified six prestart and two post start findings. In addition to the findings discussed in last week's activity report, there were prestart findings with radiological control and emergency preparedness practices that were not compliant with all aspects of the radiological control manual. One post start finding was that training instituted for potential beryllium contamination was not developed in accordance with the FH training program.

DBVS: CH2MHill Hanford Group (CHG) began a formal process hazard and operability analysis (HazOp) of the DBVS and the waste retrieval system. The purpose of the HazOp is to identify hazards or accident scenarios that could produce undesirable consequences for the public, on-site workers, or the environment. The major focus will be on hazards to the DBVS facility worker. The site reps attended initial meetings and noted that progress appeared slow; CHG expectations are that subsequent system reviews will be more efficient.

Waste Treatment and Immobilization Plant (WTP): The Department of Energy (DOE) is examining the need to acquire additional geophysical data using deep boreholes at the WTP site. The purpose of the work would be to reduce the uncertainties due to the use of data from one deep bore hole to establish the WTP ground motion criteria. DOE still considers the interim seismic criteria to be sufficiently conservative to continue the design of High-Level Waste and Pre-Treatment Facilities.