

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 8, 2005

TO: K. Fortenberry, Technical Director
FROM: D. Grover, W. Linzau, and R. Quirk, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending July 8, 2005

K Basin Closure Project (KBC): The contractor concluded the Readiness Assessment (RA) for the restart of the Fuel Transfer System. The RA team identified two prestart findings. The first was due to the operator of a hoist to conduct critical lifts was not currently qualified to operate the crane. This was due to multiple tracking systems for qualification status between site requirements and more restrictive KBC requirements. The other finding involved the failure of the Corrective Action Management System (CAMS) to prevent recurrence of an issue identified in a previous site wide hoisting and rigging assessment and Sludge Water System Operational Readiness Review. The effectiveness of CAMS to prevent recurrence of issues has been a long-standing weakness in the program.

Demonstration Bulk Vitrification System (DBVS): The Site Rep attended the kick-off of the Criticality Safety Steering Group meetings being conducted by CH2M Hill to review the criticality controls for the DBVS. After the initial discussion on the basic design of the systems and the criticality models being used, the discussion focused on the potential for consolidation of fissile material in the In Container Vitrification box (ICV). If sufficient quantities of fissile material were present during the melt, they could collect in an unsafe geometry. The proposed control was a mass limit checked by sampling of the staged waste. CH2M Hill questioned the need to make this a Technical Safety Requirement control.

The Site Reps walked-down the DBVS test facility and were briefed on the changes made to resolve problems encountered during the last ICV box test. The next test, scheduled for later this month, will focus on the structural integrity and thermal performance of the ICV box, as well as NOX generation rates before and after removal of the heat source.

Tank Farms: The retrieval of waste from C-202 has commenced using the vacuum retrieval system but was suspended due to a spurious leak detector activation. No evidence of a leak was found. The detector measures temperature change to monitor for leaks in the pump equipment enclosure. The cause of the spurious activation was determined to be cooling of the detector by air flow through the enclosure drain line when tank exhausters fans are on.

Plutonium Finishing Plant: The facility conducted the first preliminary hazards assessment session for the proposed plutonium storage facility in an existing PFP structure. The potential for on-site storage until 2035 may be needed due to the lack of progress consolidating plutonium at the Savannah River Site.

Cc: Board Members