

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 12, 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 12, 2005

T Plant: The contractor Operational Readiness Review (ORR) for the Treatment of K-East Basin North Load Out Pit Sludge was initiated on August 9, 2005. The facility identified two prestart items, formal release of the operating procedure and the issuance of environmental permits. The demonstrations were successfully completed with adequate conduct of operations observed. As of the end of the week the ORR team had identified several prestart findings. These included two nuclear safety findings, no Unreviewed Safety Question for the operating procedure and not implementing a condition of approval from a recent solid waste complex safety evaluation report. There was also an engineering finding regarding the lack of a technical basis for instrumentation used to meet waste loading criteria. The ORR is expected to conclude next week.

Tank Farms: The criteria for completion of retrieval of tank farm waste are less than one percent of tank volume remaining and reaching limits of technology. CH2MHill Hanford Group and the Office of River Protection (ORP) believe these criteria were reached for tank C-202 on August 11, 2005. Washington State concurrence with this conclusion must still be received.

222S Laboratory: During operation of a bridge crane, power cables to the crane were snagged on a metal scaffold-like structure. Two of the folds of the accordion-like cable fell onto the structure. A caution tag on the crane pendant noted that a spotter should be used to prevent this problem, but it was not addressed in the pre-job brief. Rather than delaying work until the cable supports were repaired, crane work continued. The work was halted more than an hour later when the Operations Manager learned of the problem. The structure which snagged the cables was installed to support maintenance that was completed more than a year ago but have not been removed.

Demonstration Bulk Vitrification: The melter was redesigned following a burn through of the container during testing. This week a full-size test of the redesigned melter was completed. Due to unexpected problems with supporting equipment, the melt was stopped twice, but resumed following repairs. This provided an extended opportunity to collect data on NOX generation rates after power was removed and verify that the melt can be restarted after a loss of power.

Waste Treatment and Immobilization Plant (WTP): In a letter dated August 10, 2005, ORP requested that Bechtel National, Inc. (BNI) address concerns with WTP welding and inspection activities. Specific issues that date back to early 2004 are listed in an enclosure to the letter and may indicate a decline in the quality of welding activities. A number of the more recent welding problems have been noted in site representatives' activity reports (June 24, 2005, July 15, 2005, and August 5, 2005). ORP requested a corrective action plan, an assessment of overall weld program quality and BNI's basis for continued welding operations.