

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 7, 2005

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending January 7, 2005

K Basin Closure Project (KBC): The shipment of the Large Diameter Container to T Plant was conducted this week and the LDC is currently in storage inside a T Plant canyon cell. While the level indicator showed approximately 3/4 of a cubic meter of sludge, the change in weight of the transporter indicators approximately 1/2 of a cubic meter. The discrepancy is thought to result from interference from the filter or a thick layer of high water content sludge that has significantly reduced the density of sludge from that predicted in the weight calculations. The project is preparing to attempt to fill a second LDC using revised procedures to minimize sludge clogging of the filters.

The project used polishing filters to remove suspended particulate and Ion Exchange Media to remove dissolved minerals, that caused water discoloration, to improve water clarity. As a result the project could perform a video survey of the weasel pit to evaluate the conditions that were hampering sludge retrieval. The project determined that what was thought to be a grout formation was actually a large quantity of debris intermixed with hardened sludge. The project has started to extract the debris and retrieve sludge from this area. The project also identified two cracks in the north wall of the weasel pit. Monitoring of the water level has indicated that there is no measurable leak and engineering and nuclear safety evaluations of the condition are ongoing. The DNFSB staff is monitoring the resolution of this issue and its impact of the placement of the remaining sludge consolidation containers in this pit. If main basin placement is needed, the project has determined that new containers will need to be designed as the pit containers were not designed to be free standing under accident conditions. Containers currently being fabricated for K-West basin may be able to be used.

Tank Farms: Efforts to resolve the plugging issue with the tank S-102 retrieval pump suction screen have been unsuccessful. This is causing the chemistry in the receiver tank SY-102 to be worse than planned, since the initial batches of waste retrieved from S-102 will be nitrite-rich and was expected to offset the out-of-specification waste from S-112 that is currently being sent to SY-102.

CH2M Hill Hanford Group submitted their Integrated Safety Management System Improvement Consolidated Correction Action Plan to the Office of River Protection which, among other things, addresses the issues in the Board's September 8, 2004-letter.

Cc: Board Members