

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 4, 2006

**TO:** K. Fortenberry, Technical Director  
**FROM:** R. Quirk and W. Linzau, Hanford Site Representatives  
**SUBJECT:** Activity Report for the Week Ending August 4, 2006

K Basin Closure (KBC): Progress in vacuuming sludge from the East Bay of the K East Basin has been slow for several weeks but the project declared the completion of bulk sludge containerization in the East Bay this week. The remaining areas to be vacuumed are the Tech View Pit, the North Loadout Pit, and the southern portion of the West Bay. The visibility in the basin has increased to approximately three to four feet (see site rep weekly 7/14/06). Project personnel attribute this improvement in visibility to several factors, including not using the high volume eductor system (called the Vaughan pump) for vacuuming sludge, having two ion exchanger modules in service, and not running the flocculent and basin recirculation systems.

At the request of the Richland Field Office, Fluor Hanford, Inc. submitted a proposal for accelerating the turnover of K East Basin to the River Corridor Closure Contractor.

Tank Farms: Preliminary testing of new tank waste retrieval systems similar to the Remote Water Lance (RWL) was completed in the Cold Test Facility this week. The equipment has the advantage over the RWL in that it provides the ability to pump the waste out of the tank. Additional testing of equipment is planned for later this month, and the tank farm contractor could potentially use it to retrieve tank waste in a few months.

Fractional crystallization test equipment was installed in a hot cell in the 222-S Laboratory to evaluate using this technology with actual tank waste.

Waste Treatment Plant (WTP): The site reps met with the field geologist to view cores retrieved from corehole C4998 which showed unique geologic features, including what is believed to be a fault. The cores retrieved from 554.5 feet to 565 feet below grade showed signs of fractures filled with secondary material and broken rock (breccia), which give indications of a fault. The age and nature of the fault are yet to be determined but it is believed that additional data collected from the other deep boreholes currently being drilled will help characterize the anomaly. After additional cores were retrieved, problems were encountered due to a loss of drilling mud. The mud that provides lubrication and retrieval media for cuttings was being lost into the surrounding soil. Drilling operations had to be secured until the leakage paths were grouted. The crew is drilling through the grout so that coring operations can resume.

The Office of River Protection and Bechtel National, Inc. are resequencing the construction schedule to allow the construction of the Low Activity Waste Facility, Analytical Laboratory, and Balance of Facilities to be completed and ready for component level testing by the end of FY 2012. As part of this planning, the resumption of construction activities of the Pretreatment and High Level Waste facilities will be delayed until FY 2008.