

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 27, 2007

TO: K. Fortenberry, Technical Director
FROM: R. Quirk and W. Linzau, Hanford Site Representatives
SUBJECT: Activity Report for the Week Ending April 27, 2007

K Basins Closure: A panel of experts reviewed the results from the testing of the Sludge Treatment Project (STP) oxidation process (see Hanford Activity Report 4/6/07). The panel made recommendations for additional testing that could resolve the unexpected thickening of the oxidized sludge. One suggested test series would determine the amount of agitation that will be necessary to preclude this phenomenon. Fluor Hanford, Inc. will deliver a report to the Richland Operations Office next week that will include the panel recommendations as well as other tests that are needed to reduce the STP technical risks.

Washington Closure Hanford (WCH): The site rep observed emergency preparedness training of personnel who will sluice contaminated resin beads from three tanks in the 107-N facility and grout them in drums. This is one of the most hazardous activities that will be performed before WCH successfully completes its Integrated Safety Management System (ISMS) Phase II verification (see Hanford Activity Report 4/20/07). This training was in response to requests from the facility representative for WCH to demonstrate their ability to respond to emergency conditions. Some WCH personnel who will supervise the task had misconceptions of what their role should be during an emergency. A recent WCH self-assessment identified that facility emergency response personnel for less hazardous facilities, such as 107-N, should be trained on the use of site emergency response procedures.

Tank Farms: CH2M Hill Hanford Group (CHG) Engineering determined that starting the AP-108 transfer pump five times within a short time was not consistent with the recommendations from the manufacturer of the pump motor (see Hanford Activity Report 4/13/07). Engineering also concluded that the pump motor had not been significantly damaged by these multiple operations. Procedures will be revised to preclude further violations of the recommended limits.

CHG determined that retrieval from single-shell tank C-108 is at the limits of current technology. Almost 90 percent of the waste has been transferred to a double-shell tank using the modified sluicing system. CHG plans to continue retrieval from this tank using a mobile retrieval system later this summer and will start retrievals from tank C-109 using modified sluicing.

Analytical Technologies and Laboratories International, Inc. (ATL): As a result of an ISMS Phase II Verification Review, DOE concluded that ISMS is adequately implemented by ATL, the analytical services contractor in the 222-S Laboratory. The verification team identified one finding, seven observations, and five good practices.

Criticality Safety: Solid Waste Operations Complex (SWOC) personnel issued two criticality safety evaluation reports (CSERs) and a criticality prevention specification for waste drums (see Hanford Activity Report 4/20/07). Procedures are being modified and personnel will be retrained next week. Movement of drums containing fissile material in the SWOC can then resume. The CSER for waste boxes still requires modification.