DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 15, 2007

TO: K. Fortenberry, Technical Director
FROM: R. Quirk and W. Linzau, Hanford Site Representatives
SUBJECT: Activity Report for the Week Ending June 15, 2007

Board Members J. Bader, L. Brown, J. Mansfield and P. Winokur and staff members D. Ogg and J. Troan were at the site to be briefed on the K Basin Closure Project, Plutonium Finishing Plant, Solid Waste Operations and Disposal, River Corridor Project, and Tank Farms. The Board and staff performed walkdowns of the demonstration bulk vitrification test facility, T Plant, Waste Encapsulation and Storage Facility, and buildings 325 and 327.

Technical Risk Reduction: Both the Office of River Protection and the Richland Operations Office (RL) are performing Technical Readiness Assessments (TRAs) on their major development projects to reduce technical risks. The TRA process determines if the critical technology elements (CTEs) are at a sufficient level of maturity for incorporation in the final design. The first TRA completed was a combined report for the Low Activity Waste Facility, Analytical Laboratory, and Balance of Facilities at the Waste Treatment Plant (WTP). The report revealed that in general the CTEs were at or near the required level of maturity. The TRAs for the Pretreatment Facility and High Level Waste Facility are near completion. Most of the WTP issues noted in the TRAs were previously noted by other reviews, such as the one by the External Flowsheet Review Team. A technical maturity plan is being developed to address the issues noted by the WTP TRAs as well as issues raised during other reviews. The technical maturity plan and remaining TRAs should be issued this summer.

A TRA for tank waste mission completion, which includes supplemental tank waste treatment, was also drafted and is in the final review process. The CTEs for the bulk vitrification system were determined to be more mature than those for other supplemental treatment options.

RL and Fluor Hanford, Inc. plan to perform a TRA for the Sludge Treatment Project.

300 Area Laboratories: There was a spread of plutonium-238 from a sealed source in the 326 building. The sealed source was manufactured in the 325 building but did not meet consensus standards for sealed radiological sources. At least four workers were exposed and the contamination was spread to a worker's off-site office and home. Recovery actions are underway.

Tank Farms: The contractor declared a Technical Safety Requirement (TSR) violation when it was discovered that a double-shell tank retrieval pump did not have a lock on the breaker. The pump was installed more than two years ago, but the work was stopped due to budget constraints. Due to the abrupt stoppage of work, the drawings were not updated to indicate that pipe jumpers and electrical connections were completed. TSR controls, including requirements for a lock on the breaker or functioning leak detectors, were required because the pump was considered capable of being used for waste transfers.