

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 22, 2011

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending July 22, 2011

Staff members R. Daniels, M. Horr, B. Sharpless, and R. White were on-site to discuss the safety basis for TRU waste operations and walk down various related facilities.

Plutonium Finishing Plant: The site rep discussed his observation with Richland Operations Office (RL) and contractor nuclear safety personnel that the material at risk analyzed for the safety basis may not be as conservative as had been previously assumed. The material holdup in the components removed during D&D for the last two and a half years has been greater than expected, which puts into question the estimates of the holdup in the facility.

Recently, facility representatives reported several instances during a short period of time where workers did not follow written work instructions. Additionally, contractor senior managers approved the root cause report for an event that led to uptakes because workers decided they could deviate from the work instructions (see Activity Report 4/29/11). The identified root cause was workers did not understand they needed to follow written work instructions, but this fails to address the lack of management responsibility for ensuring compliance with instructions.

The contractor's central safety organization performed an assessment of the implementation of the radiological (rad) work improvement plan and noted that although some progress has been made, other areas require additional attention. Among other issues, weaknesses still exist in rad work planning and the assessment team leader noted they will perform another assessment after the plan is updated to include recently generated corrective actions (see Activity Report 5/20/11).

DOE Orders: The Office of River Protection (ORP) determined that they will implement DOE Orders 422.1 and 425.1D this year (see Activity Report 7/15/11).

Review of Plutonium Solids in Tank Farms: The team conducting a review of plutonium solids in the Tank Farms provided an update to ORP (see Activity Report 4/22/11). The team has identified nine new tanks that received plutonium solids. Tank Farms have added two of these tanks to the list of tanks with restrictions on operations due to criticality concerns.

Tank Farms: The contractor learned that conservatively calculated pipe wall longitudinal stresses from water hammer events can exceed yield stress values when the water slug encounters an elbow or tee. The contractor is developing a JCO for near-term waste transfers.

Waste Treatment Plant (WTP): The contractor sponsored a technology exchange workshop on the topic of waste pre-qualification for WTP. Representatives from Savannah River National Lab provided testing approaches, sample sizes, and lessons learned from experiences gained during their waste stabilization operations.

U Plant: Last week, the contractor conducted a readiness assessment with RL oversight for the removal of the D-10 tank from the facility and transport to the Central Waste Complex (see Activity Report 4/8/11). They noted two prestart findings and one observation, but both findings were administrative and should be easily corrected prior to performing the transfer.