

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 2, 2009

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending July 3, 2009

W. Linzau was out of the office this week.

Waste Treatment Plant (WTP): The Office of River Protection (ORP) completed an assessment of the HLW offgas treatment system design and identified four findings, four observations, and a number of follow-up items. Similar to the assessment of the LAW offgas treatment system, there was a finding for failing to integrate industrial health professionals with the design team and for failing to calculate allowable leakage. Another finding was the requirement in the PDSA for the efficiency of the high-efficiency mist eliminator was not flowed down.

Tank Farms: The site rep met with contractor and ORP managers to discuss major changes to the safety basis, including: bringing it into compliance with DOE STD-1186; incorporating the results of a reanalysis of worker hazards (see Activity Report 5/1/09); resolving the JCO for commercial grade dedication problems (see Activity Report 1/16/09); and the upgrade of the primary pressure boundary during waste transfers to safety-significant. This last change is an ORP-approved change related to the waste spill at tank S-102 but has not been implemented (see Activity Report 4/24/09). The contractor is proposing to downgrade existing safety-significant SSCs that are not associated with the primary pressure boundary, but ORP is evaluating if the leak detection system should be maintained as a TSR-level control (see Activity Report 5/29/09). The plan is to consolidate and implement all the changes at the same time. This will likely require the extension of the JCO from the end of September to the end of December 2009.

The contractor implemented the increased operational level limit for tank AP-103. Using procedures similar to those used for AP-108 (see Activity Report 4/13/07), they transferred waste into AP-103 to reach a level of 458". Operator error during subsequent efforts to flush the transfer pump in AP-104 resulted in inadvertently flushing the AP-103 pump. This increased the level in AP-103, but the waste level remained less than the maximum analyzed limit of 460".

Rather than stopping and obtaining clarification from a supervisor, an operator who was standing on a multi-level scaffold removed a cross brace support so a rope that had become fouled could be released. The scaffold shifted slightly and the brace could not be reinserted until several fellow workers on the scaffold rocked it for a few seconds. The workers stated they did not hear directions from the supervisor and an industrial safety expert to stop the rocking activity.

Contractor corporate management completed a two-week assessment of ISMS implementation and identified weaknesses in the area of conduct of operations and the corrective action program. The team concluded that within a few weeks, the Tank Operations Contractor should be ready to declare they have adequately implemented the ISMS program.

River Corridor Closure Project: A worker fell approximately 50 feet through a hatch in a crane maintenance platform, severely injuring his knee and breaking a number of bones. The accident was in Building 336, which is being prepared for demolition. The contractor stopped all field work and initiated an external investigation. The Richland Operations Office is reviewing catwalks and hatches across the site and will conduct a formal Type B investigation.