

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 10, 2008

**TO:** T. J. Dwyer, Technical Director  
**FROM:** W. Linzau and R. Quirk, Hanford Site Representatives  
**SUBJECT:** Hanford Activity Report for the Week Ending October 10, 2008

Tank Farms: The contractor declared a Potential Inadequacy of the Safety Analysis (PISA) because safety-significant waste transfer isolation valves were not leak tested in accordance with the standard identified in the Documented Safety Analysis (DSA). The valves were tested with water rather than air or nitrogen as required by the standard. The DSA permits the use of testing equivalent to the standard, but no documentation of the equivalency of the testing to the standard has been located. The contractor restricted the use of these valves for isolation until the valves are demonstrated to meet the criteria of the DSA. The problem with the testing was discovered during the investigation of a problem noted in a recent letter from the Board that questioned the appropriateness of the standard specified in the DSA, which is for control valves, not isolation valves.

The site rep observed a critique for the loss of safety-significant ventilation in the SY Tank Farm. Workers were approved, using a minor work package, to investigate an abnormal differential pressure (DP) indication for flow through a HEPA filter. Contrary to requirements in the contractor's work control program, workers decided to troubleshoot the problem rather than simply investigate. Troubleshooting requires more work planning, including a clearer definition of the work and review by Engineering. In the process of installing a test gage, which involved opening the equalizing valve, a low DP was measured by the installed facility instrument and this resulted in a signal to trip the running exhaust fan. Workers did not believe that there was a trip associated with this instrument. It was reported that the documentation of the system was confusing and unclear, yet the piping and instrumentation drawing for the system clearly noted that the fan would trip on low DP. Inappropriate use of minor work packages was an issue with the waste spill from tank S-102.

The new Tank Operations Contractor (TOC) is conducting a root cause analysis of problems with crane operations in the tank farms during the last six months. The most recent event occurred prior to contract transition and involved an uncontrolled retraction of the boom while moving a cover plate over a valve pit in C Farm. The crane in question had experienced problems during prior operations but only now are detailed investigations being conducted. Crane operations and maintenance are not performed by the TOC but are under the site infrastructure contractor. The TOC prohibited the use of this crane in the tank farms. The root cause analysis is targeted for completion by early November.

Waste Treatment Plant (WTP): The DOE Office of Independent Oversight commenced an inspection of the WTP. This week, the team was briefed on the project and conducted tours of the construction site. The team will focus on the facility safety systems and the contractor's work controls, as well as Office of River Protection oversight.

K Basins Closure (KBC): The Hazard Review Board (HRB) evaluated a work package for sludge characterization work that started before contract transition but not completed. HRB members were somewhat unfamiliar with the details of operations in the K West Basin but asked appropriate questions and rejected the package until changes were made.