

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 11, 2008

TO: J. K. Fortenberry, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending April 11, 2008

R. Quirk was out of the office this week.

Tank Farms: The Office of River Protection (ORP) conducted an assessment of the Monitoring and Control System (MCS). The MCS is currently being used for safety-significant monitoring of leak detectors during waste transfers and will provide an automatic pump shutdown function once the whole system is put into service. The team evaluated the design, change notices, operating specifications, procedures, and quality-related documentation. In addition, they conducted walkdowns of the components in the field. The team had five findings, including the following: "Non-safety systems are connected to the MCS and are degrading performance of its safety function." The site rep asked contractor management what actions are going to take place to ensure that the safety-significant leak detection monitoring function is not compromised prior to the next waste transfer.

The site rep observed the installation of new waste retrieval equipment into tank C-109. A small bulldozer (known as the Fold-Track) with the ability to articulate to fit down the 12-inch riser was lowered into the tank in preparation for the contractor readiness assessment later this month. Significant work was conducted by the contractor to ensure the Fold-Track would fit down the riser, including operations at the Cold Test Facility and using mock-ups to test the fit in the field. Delays were experienced for a couple of days due to problems with the crane, but after resolution of the crane problems, the operation went as planned with no concerns noted.

River Corridor Closure Project: An empty waste shipping container slid off the haul truck during loading when the 7/8-inch steel cable parted at the 100-D field cleanup site. These containers, similar in size to a large construction dumpster, are used to haul contaminated debris and soil to the Environmental Restoration Disposal Facility (ERDF). When the cable parted, it recoiled from under the bed of the truck and broke the back window of the cab on the passenger side, but the driver/operator was not injured. Personnel are not allowed near the back of the truck during the loading/unloading process per instruction in the work package. The truck was new to the site and the cable didn't show signs of wear during multiple receipt inspections, but an investigation after the event determined the hydraulic force limiting device was not working. Similar events have occurred in the past, including an event at ERDF in June 2006 (see Hanford Activity Report 6/16/06). Contractor management appeared to understand the seriousness of the event and are working on corrective actions, including considering adding an inspection of the hydraulic limiting device during receipt inspections.

Waste Treatment Plant (WTP): The project revised the root cause analysis for the issues involving the black cell piping (see Hanford Activity Report 12/14/07). The document was revised to address issues arising from the extent of condition reviews and to incorporate ORP's comments. Three new root causes have been added: 1) initial resolution of the piping issue was inadequate because of management emphasis on schedule and production rates in 2004, 2) the process to manage change was inadequate with respect to implementing non-destructive examination, and 3) project culture at the time of the event resulted in a lack of rigor in requirement flow down.