

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 15, 2012

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending June 15, 2012

Safety Culture: Secretary Chu visited Hanford and spoke to workers about safety culture.

100K Area: The contractor closed the final prestart item from the Readiness Assessment (RA) (see Activity Report 6/1/12) for processing knock-out pot (KOP) sludge when the Richland Operations Office approved a change to the dryness criteria in the TSR for the Cold Vacuum Drying Facility (CVDF). That afternoon, the contractor began processing the KOP sludge in the K West Basin, but still needs to implement the CVDF TSR change before any multi-canister overpack (MCO) with sludge is taken to the CVDF. The KOP sludge processing operations were performed in a controlled manner and halted when minor issues arose, but recommenced after workers and engineers resolved the issues. It was clear that the extensive testing and operator training for the operations was very helpful. The site rep noted that a potential issue with handling the copper inserts in the MCO basket should have been resolved either before or during the recent RA and not left for resolution when processing the actual sludge in the Basin.

The contractor held another in a series of recent emergency preparedness drills in the 100K Area. In general, workers responded adequately to the drill at the CVDF, and this time both the Hanford Patrol and Fire Department participated. The contractor had graded the performance at three of the recent drills, including one last week, as unsatisfactory (see Activity Report 5/4/12). The contractor acknowledged that the readiness for emergencies had degraded at 100K, and they added additional drills to the schedule to ensure workers were adequately prepared before the site's annual graded emergency exercise, which will be held next week at the CVDF. It is commendable that the contractor appears to have resolved most emergency preparedness issues at 100K, but it is unclear how much of this was influenced by the pending site graded exercise and how prepared other nuclear facilities are for major emergencies.

Lastly, the contractor's Nuclear Safety and Performance Evaluation Board (NSPEB) completed a review of the work performed by the D&D organization, almost all of which is in the 100K Area. At the outbrief, the director of the NSPEB identified a large number of significant problems, primarily in the areas of industrial safety and environmental management. He concluded work done by the D&D organization did not meet the expectation of senior management. The NSPEB did not identify any significant nuclear safety issues with D&D in the 100K Area.

Waste Treatment Plant: A new contractor team began reviewing the susceptibility of the material selected for vessels and piping to localized corrosion. A major focus area is equipment in the black cells. At the end of the two-day kickoff meeting, the team noted: the material selection for most of the equipment is likely appropriate; the technical basis for the 40-year design life for vessels and piping in the black cells is inadequate; additional inspection and testing is required during operation; operational controls to protect the assumptions in the analysis are critical for preventing localized corrosion but still need to be defined; and the project needs to address the impact of the 20-year lag between installation and startup. The team expects to issue their final report in two months.