

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 26, 2007

TO: K. Fortenberry, Technical Director
FROM: R. Quirk and W. Linzau, Hanford Site Representatives
SUBJECT: Activity Report for the Week Ending October 26, 2007

Waste Treatment Plant (WTP): The site reps met with personnel from the Office of River Protection and the contractor to discuss the status of the problems found with piping fabricated for the black cells in the High Level Waste and Pretreatment facilities (see Hanford Activity Report 10/19/07). The project has identified a significant number of piping sections fabricated without the required volumetric inspection of the welds. The contractor is still doing their investigation of the problem, but they believe the number of non-compliant segments could approach 1,000, of which most are not installed in either facility. None of the non-compliant piping currently identified have a safety function and were therefore fabricated as commercial material (CM). The contractor has put a hold on all black cell piping isometric drawings, fabrication, and shipments. This problem was identified in April 2007, but initial indication of quality control problems with these pipe segments dates back to January 2006. Poor review of the extent of condition and corrective action management resulted in only recently understanding the scope of the problem. The contractor committed to doing a root cause analysis, but they currently believe the contributing causes were unclear specifications in the procurement documents and an inadequate questioning attitude demonstrated by the vendor providing CM equipment.

K Basins Closure: The site rep performed a walkdown of the K East Basin as it was being prepared for placing a grout cap on the basin and pit floors, sludge containers, and debris baskets. The purpose of the grout cap is to immobilize the remaining sludge before the basin water is pumped out for treatment and disposal. During the walkdown, the site rep observed that three of the four ion exchange modules (IXMs) had been removed from the facility, the sand filter had been turned off in preparation for removal of the sand by sluicing, and the basin floor was prepared to receive grout. The grout cap, approximately one foot thick, was successfully placed over a three-day period.

The plan to complete deactivation and demolition includes replacing the basin water with a low-strength controlled density fill (CDF). The placement of the CDF is a key step for the proposed downgrade of the facility to less than hazard category 3.

Richland Operations Office (RL): The site rep met with RL management to discuss proposed changes to the organization in preparation for managing the two new contracts. If approved by DOE headquarters, there would be three project groups and two primary support groups.

Large Package and Remote-Handled Waste Packaging Facility: This project has received DOE approval of its mission need (CD-0). This project is designed to provide the capabilities at Hanford to treat contact- and remote-handled mixed low-level and TRU waste. This facility is needed to prepare large packages for disposal of these waste streams on-site and at the Waste Isolation Pilot Plant.