

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 27, 2010

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending August 27, 2010

Board staff member T. Hunt was on-site for training and site rep support.

Plutonium Finishing Plant: The site reps met with contractor management and discussed compensatory actions for recurring issues with inadequate work management and performance (see Activity Report 8/6/10). They are requiring management oversight, similar to that of a senior supervisory watch, of all intrusive work from the pre-job brief to the post-job review. Additionally, work that requires the use of supplied air respirators is still not authorized.

Tank Farms: The contractor submitted their report with the root cause and corrective actions for inadequacies noted during an Office of River Protection (ORP) assessment of the radiological controls program (see Activity Report 6/11/10). The root cause was the contractor “does not yet have sufficient organizational discipline to consistently function at the necessary level of reliability in corrective action management, radiological programs elements, and planning/conducting radiological work.” The report notes that safety culture issues that are central to the problems were being addressed for several months but will likely take a prolonged period of time to ultimately resolve. ORP is evaluating the adequacy of the report.

The site rep met with contractor personnel to discuss their conclusion that startup of retrieval of tank waste from single-shell tank C-111 did not require any level of formal readiness review. A key input to determining the level of readiness review required is the Activity Description (AD). Recently, the site rep identified discrepancies between the system described in the AD and the actual system that will be used for this activity. The contractor stated the AD is a snapshot in time and is not updated, but the startup reviewer had previously evaluated the changes and determined they did not affect the conclusion that no readiness review is required.

Tank Farms/WTP Interface: The tank farms and WTP contractors and ORP met to discuss the impact of introducing garnet fines into tank waste. The tank farms contractor is planning to cut a 42-inch-diameter hole in the concrete dome of some single-shell tanks to install waste retrieval equipment. The cut will be made using a high-pressure water jet with entrained garnet particles that will mix with waste in the tank. It appeared from the discussions that garnet will increase the rate of erosion but there is sufficient margin in the erosion allowance of the WTP piping and vessels to account for the increase. ORP has raised questions, such as the impact on valve seats, that still need to be addressed. The first use of garnet is expected to start during the next quarter.

Cold Vacuum Drying Facility (CVDF): The contractor determined that a potential inadequacy in the safety analysis (PISA) related to vehicle traffic around CVDF is an unreviewed safety question. The vehicle traffic near CVDF increased significantly as a result of construction activity and D&D work that was accelerated using ARRA funds. The compensatory measure previously established for the PISA, prohibiting operation with or processing any spent fuel, was maintained and augmented by restricting vehicle parking within 12 feet of the facility. The contractor will analyze the impact of external fires on CVDF equipment, such as contaminated HEPA filters, determine the required controls, and update the safety analysis.