

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 1, 2010

TO: T. J. Dwyer, Technical Director
FROM: W. Linzau and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending October 1, 2010

Board staff members J. MacSleyne, B. Sharpless, J. Troan, and R. Verhaagen, and outside expert D. Volgenau were on-site reviewing the work planning and controls used by the River Corridor Closure Project.

Waste Treatment Plant (WTP): The contractor conducted an integrated safety design meeting to evaluate the response to abnormal conditions associated with the offgas system for the High Level Waste melters. The purpose of the meeting was to discuss the system flow and operability requirements. The design team concluded that the PDSA requirements for emergency power could be relaxed because the safety-class confinement ventilation system (C5V) will automatically take over upon failure of the offgas system. The Office of River Protection (ORP) nuclear safety representative noted that DOE committed to design this system with back-up emergency power in their response to Recommendation 2004-2.

The contractor completed another integrated safety design meeting to discuss quality requirements for the C5V in-bleed smoke damper. The smoke detector is categorized as safety-significant, but the contractor wants to downgrade it to non-safety.

Tank Farms: The site rep met with a member of the ORP nuclear safety organization to discuss a recently approved change to the DSA concerning overpressure protection of waste transfer lines. To protect the transfer line, the contractor ensures pressure sources cannot exceed design pressure or safety-significant relief valves are installed. The contractor discovered that the raw water flushing system could exceed design pressure (see Activity Report 7/2/10). The ORP-approved change allows the use of non-safety-related relief valves on the flush lines to protect safety-related waste transfer piping.

100K: Contractor management declared a stop work for the installation of the new fire protection water supply system when they determined that the system, which is nearing completion, did not comply with code requirements. An example is the lack of an automatic transfer to the back-up water supply upon loss of the primary source.

The site rep completed a walkdown of the K West basin and observed workers preparing to re-vacuum sludge from the North Load-Out Pit (NLOP) into an engineered container. Workers had vacuumed the bulk of the sludge in the basin in 2007 (see Activity Report 12/28/07), and the NLOP is the last area the contractor had committed to regulators to re-vacuum. Workers had already collected sludge from other areas that were not able to complete in 2007 because of interference with equipment and debris in the basin. Additionally, they vacuumed most of the sludge that had been suspended but resettled. The site rep observed some areas in the East Bay where the white floor could be seen, but most of the basin still has a thin layer of sludge.

The team designing the sludge retrieval and treatment system will also design the system to remove the material from the K West garnet filter. The planned disposal path was to the Environmental Restoration Disposal Facility, but because of its high TRU content, it will likely have to go to the Waste Isolation Pilot Project as remote-handled TRU.