

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 1, 2013

TO: S. A. Stokes, Technical Director
FROM: D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending November 1, 2013

Tank Farms. The contractor briefed the Office of River Protection (ORP) on their failure to promptly take waste transfer lines containing fasteners with questionable quality out of service (see Activity Report 10/25/2013). The contractor believes that the vendor-issued certificate of compliance for the compression nut was sufficient to verify the important attributes of this safety-significant design feature. ORP managers found this justification inadequate and expect the contractor to perform a retroactive unreviewed safety question determination (USQD) based on data available in early October. That was when testing results for the nuts indicated that they did not meet the expected material characteristics. If this USQD is positive, the contractor will declare a TSR violation. The contractor completed a technical evaluation justifying the adequacy of the nuts in question and removed the restriction on using transfer lines. The contractor subsequently reinstated the restriction on transfer lines pending the disposition of a non-conformance report for the compression nuts.

The contractor attempted to return the failed C-107 slurry pump to its retracted position to support removal from the tank (see Activity Report 10/25/2013). The pump unexpectedly extended during this activity and returned to an extended position. The contractor used remote cameras to investigate the condition of the cable winch that controls pump extension and discovered that the cable was 'bird-caged' at the winch and at the bottom pulley.

242-A Evaporator. The site rep continued a detailed review of the safety basis changes to the 242-A Evaporator (see Activity Report 10/25/2013.) He questioned the aspects of the design which include safety-significant instruments with firmware. The contractor has asserted that these devices do not contain safety-software. The ORP Quality Assurance Manager plans to review the contractor's conclusion.

River Corridor Closure Project. The contractor held a critique to determine why a heavy equipment operator was potentially exposed to higher than anticipated airborne radioactivity levels. The worker was in the cab of an excavator and was wearing a respirator while repackaging some previously re-buried concreted drums in the 618-10 burial ground (see Activity Report 2/1/2013). Air samples taken outside the cab unexpectedly showed long-lived airborne radioactivity concentrations of more than 1 DAC. The worker's respirator was only credited for industrial safety hazards and not for radioactive work purposes. Corrective actions include changing procedures to require applying fixative to the drums each time they are handled, even if the drums had been handled previously.

Waste Treatment Plant (WTP). Representatives from ORP, the Tank Operations and the WTP contractors held an integration meeting to discuss criticality safety issues related to waste feed delivery and WTP. ORP will issue a report describing proposed paths to resolve outstanding criticality issues.

The contractor started developing control strategy documents to support the Safety Design Strategy for the High Level Waste Facility.