

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 4, 2014

TO: S. A. Stokes, Technical Director
FROM: D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending July 4, 2014

242-A Evaporator. The contractor removed the operational restriction preventing the facility from entering Operation Mode after they implemented interim controls related to fires in the facility (see Activity Report 6/27/2014). The contractor plans to begin their readiness assessment next week.

Tank Farms. The contractor completed additional leak testing on a slurry transfer line in AW farm to determine whether the safety-significant primary line or the secondary encasement had failed. The results indicate that the primary line, which is not currently in use, has failed. A 2007 assessment of this line estimated it would not fail for another 40 years. The contractor is planning additional evaluations to determine the failure mechanism of this line and the potential for similar failures in other transfer lines.

The contractor has proposed that some safety controls that involve operator actions be designated as Safety Instrumented Alarms (SIA) rather than Safety Instrumented Systems (SIS). They also proposed that the upgrade of the double-shell tank (DST) annulus leak detectors as well as the future DST ventilation exhaust flow instruments be designated as SIAs. This would classify the instrument sensors and logic devices (e.g., relays) as safety SSCs but would not consider the operator actions in the probability of failure on demand calculation.

Waste Feed Delivery. The contractor briefed ORP personnel on their plans for upgrading spare PUREX connectors to safety-significant and rerating buried transfer lines to support future feed to the Waste Treatment Plant. Significantly higher pressures may be needed for these long transfer routes and the contractor is developing a test method to evaluate the waste transfer lines and rerate them.

Plutonium Finishing Plant (PFP). The site rep observed workers performing a TSR-required monthly surveillance of the criticality alarm system and questioned if workers were consistently skipping a required step. The surveillance procedure allows workers to complete some repetitive steps using only data sheets or another procedure with more detailed instructions. They followed the data sheets, but two data sheets were inconsistent with the detailed procedure. The shift manager and the technical authority for the system told the site rep they believed the data sheet was correct, the system was operable, and the additional procedure step was likely unnecessary. The site rep had also questioned the adequacy of this procedure last year (see Activity Report 10/4/2013).