

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 19, 2015

TO: S. A. Stokes, Technical Director
FROM: P. Fox and D. Gutowski Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending June 19, 2015

Board staff members F. Bamdad, D. Cleaves, and J. Meszaros were on site to observe a workshop on Plutonium Finishing Plant demolition plans. Staff member T. Champan was on site to observe the annual emergency exercise.

Emergency Preparedness. The site reps and staff observed the Hanford annual emergency field exercise. The scenario simulated a vehicle accident that resulted in four injured personnel, a spilled waste container, and fire. In addition to the facility emergency response, the exercise required response by the Hanford fire department and activation of the Hanford Emergency Operations Center. Two simulated injured personnel, one of whom was contaminated, were transported to local hospitals for treatment. The results of the exercise are being evaluated.

Tank Farms. The contractor determined that a high temperature scenario had not been analyzed for safety-significant hoses associated with three pumps. They restricted use of these pumps which suspended C-105 retrieval. The contractor postponed their determination of whether this constituted a Potential Inadequacy in the Safety Analysis (PISA) by seven working days to complete calculations. This is allowed by their procedure. The site reps believe they should have declared a PISA and completed these calculations as part of the unreviewed safety question determination. This is similar to a recent case at the 222-S Lab (see Activity Report 4/17/2015).

The contractor entered into an abnormal operating procedure (AOP) when they discovered an elevated flammable gas reading at 5% of the lower flammability reading in the headspace of tank AZ-101. Connected tanks in AY and AZ farm had readings above zero, but below 5%. Measurements later returned to zero and the contractor exited the AOP. Ventilation was running during the incident although it was inoperable per the TSRs due to AY-102 construction work. Contractor engineering believes the reading was not indicative of any unusual gas generation or release, but they are continuing their review.

Plutonium Finishing Plant. Three individuals working in a high contamination area/airborne radioactivity area were sprayed with water when a worker broke a deactivated process water pipe during installation of a containment sleeve on a nearby ventilation duct flange to support removal of the duct. None of the workers were contaminated. The contractor held a critique and has communicated to the work force that any component that must be moved or manipulated during work is an interference. Any interference will be removed before work is performed.

The contractor completed the removal of external shielding from glove box HC-9B and has started cutting activities to size reduce the glove box.

Building 324. Last week, workers reported an unexpected odor in a contaminated room at Building 324 that had recently been fogged with fixative. They exited and reported the situation. Subsequent monitoring detected ammonia and volatile organic compounds with ammonia above the short term exposure limit. The contractor believes that the large volume of fixative used in a small, unventilated room was the likely ammonia source and is further evaluating fixative usage.