

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 27, 2017

MEMO TO: Steven Stokes, Technical Director
FROM: Ramsey Arnold and Zachery Beauvais, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending January 27, 2017

DNFSB Staff Activity: J. Deplitch, P. Meyer, and R. Oberreuter attended weapons training.

Emergency Response Drill: A site representative and a technical staff member observed two emergency response training drills with Fire Department (FD) and Radiation Safety (RS) personnel. The scenario involved a fork lift accident in a ramp that resulted in a contaminated waste drum spill, two critically injured employees, and an additional modestly injured employee. All three injured employees, as well as an uninjured individual, were potentially contaminated. The objective of the drills was for FD and RS personnel to practice responding to an accident with radiological contamination. Additionally, the drills allowed the FD and RS to improve their communication and interface strategies for a radiological response. Following the drills, personnel conducted productive hot-washes to self-critique, identify areas for improvement, and share best practices utilized during the drills. The Emergency Management Department will repeat the drill one more time for a third FD shift.

Potential Inadequacy of the Safety Analysis (PISA): CNS declared a PISA and paused operations on one weapon program after receiving weapon response information that showed an increased sensitivity of a component to electrostatic discharge insults. A design agency (DA) transmitted weapon response information after completing an extent of condition (EoC) analysis related to similar weapon response changes that contributed to a PISA on a separate weapon program (see 11/18/16 report). Per approved Pantex and DA processes, Pantex continued operations on the potentially impacted program until the DA finalized the weapon response information. The site representatives note that current Nuclear Security Enterprise (i.e., NNSA, Pantex, and DAs) Unreviewed Safety Question, PISA, and New Information processes allow nuclear explosive operations to continue at Pantex even though a DA indicated that weapon response information, which supports the Pantex safety analysis, may not be bounding. In this case, it also appears that Pantex is reliant on DA EoC processes to evaluate the hazards across weapon programs based on previously received weapon response information. The site representatives have discussed these observations with NNSA and CNS personnel. CNS is developing an evaluation of the safety of the situation.

Broken Hoist Component: During operations in a nuclear explosive bay, production technicians (PT) moved a crane assembly when a component fell from the crane bridge. PTs paused the crane movement and made the appropriate notifications. The facility did not have a nuclear explosive assembly in it at the time. Following the event, Pantex determined that a crane coupler chain had broken, likely due to general wear and age. Operations in all nuclear explosive facilities with pneumatic hoists have been paused, and the event was initially categorized as a safety basis non-compliance. Prior to this event, Pantex continued their issue management process for the hoist component that fell last year (see 12/15/16 and 1/6/17 reports). While unrelated, this second occurrence emphasizes the importance of understanding the causes of the two falling hoist components, as well as assuring that appropriate procurement processes and maintenance activities for all seismically-qualified components hanging in nuclear explosive facilities are in place.