

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 17, 2016

MEMO TO: Steven Stokes, Technical Director
FROM: Ramsey Arnold and Zachery Beauvais, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending June 17, 2016

DNFSB Staff Activity: C. Berg and J. Deplitch were on site to observe a training course.

Nuclear Explosive Operations: CNS held and the site representatives observed a critique convened to better understand a nuclear explosive operation that led to an alignment issue during a deinsertion process. During a step where the reentry vehicle (RV) aeroshell was being separated from the physics package by raising the RV with a hoist lift, a flange on the physics package contacted a ring on the inside of the RV aeroshell resulting in the physics package being tipped off-center by approximately ten degrees. When this occurred, positive control was maintained on the physics package by a vacuum holding fixture, and production technicians (PT) immediately paused the operation. CNS nuclear and explosive safety (NES), process engineering, safety analysis engineering, and tooling design personnel made a safe and stable determination to free the RV from the physics package flange and then continued removing the RV with the hoist. During the critique, it was noted that the PTs appropriately followed the nuclear explosive operating procedure (NEOP). Further, a PT was observing the tight tolerance gap between the flange and ring and noticed immediately when the contact occurred. CNS process engineering developed a nuclear explosive engineering procedure (NEEP) that allowed PTs to lift the misaligned physics package with the authorized special tooling set. During the lift, the physics package realigned itself as expected and then the PTs continued the NEOP. A causal analysis was held and CNS determined that to avoid the flange from catching the ring, process engineering will revise the NEOP to raise the RV to a height that allows the RV ring to clear the physics package flange before hoisting the RV off of the workstand.

During dismantlement operations on a different program, PTs heard chattering in a workstand while raising a unit. Upon hearing the noise, PTs paused operations and made the appropriate notifications. The site representative observed CNS production, NES, process engineering, and tooling design personnel, as well as an NPO facility representative, make a safe and stable determination. At the time of the pause, the unit was secured by a support beam that attached to the top of the unit and suspended it. The personnel agreed to place the unit back into a support stand for the safe and stable configuration. To do this, the PTs raised the assembly to allow installation of the support stand to the workstand, lowered the unit into the support stand, and then removed the support beam. The site representative observed a thorough discussion between the NES, engineering, production managers, and NPO facility representatives to assure that the appropriate measures would be taken to declare the unit safe and stable. Process engineering is developing a NEEP that allows the PTs to safely transfer the unit to a different workstand before continuing the dismantlement as prescribed by the NEOP.

Infrastructure: During the week, CNS received several trouble signals from fire protection system components, most likely caused by weather (i.e., thunderstorms). In one instance, CNS entered the appropriate limiting condition for operation when a fire alarm control panel battery charger became inoperable. CNS engineering personnel noted that weather-related infrastructure issues are often a recurring event around this time of year (see reports dated 5/22/15 and 6/26/15).