

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 13, 2017

**MEMO TO:** Steven Stokes, Technical Director  
**FROM:** Ramsey Arnold and Zachery Beauvais, Pantex Plant Resident Inspectors  
**SUBJECT:** Pantex Plant Report for Week Ending October 13, 2017

**Electrical Outage:** Pantex maintenance and subcontractor personnel initiated an electrical outage impacting much of Zone 12 South to support system upgrades. Nuclear explosive operations (NEO) are suspended in many facilities until the outage is completed. Due to the outage, workers are reliant on the use of portable generators to perform work with electrical tools. Production personnel identified that a subcontractor wheeled a portable generator through ramp areas adjacent to NEO bays. The portable generator has a 7 gallon fuel tank and contained approximately 2.5 gallons of combustible fuel at the time. The presence of this quantity of fuel does not exceed limits specified by the Pantex safety basis, however, construction management held a stand-down with subcontractor personnel to reinforce expectations for minimizing combustibles while on-site. As a standard practice, construction subcontracts include provisions restricting subcontractors from introducing combustible material above safety basis limits.

**NEO Authorization:** Process engineering and the design agencies developed a path forward to address a damaged cable, recently encountered during NEO bay (see 9/29/17 report). Safety analysis engineering (SAE) initially processed the condition as a potential inadequacy of the safety analysis. Following receipt of an information engineering release from the design agency that confirmed the condition is bounded by existing weapon response, SAE determined the condition represents a negative unreviewed safety question, and transmitted an evaluation of the safety of the situation to NPO. Process engineering developed a temporary procedure directing production technicians to continue with normal NEOs, including installing a dielectric plastic cover over the damage to prevent electrical insults. Contractor nuclear explosive safety (NES) personnel evaluated the proposed operations and concluded that it remained within the existing authorization due to NES rules being previously verified. Manufacturing plans to execute the temporary procedure once the electrical outage is completed.

**One Point Safety:** A recent NES study identified pieces of special tooling that had not been evaluated for their potential impacts to one point safety of the unit. Following the study, NPO directed CNS to perform an extent of condition review to ensure all tooling, on all weapon programs, has been evaluated for its impacts on one point safety. Tooling design engineering personnel performed a causal analysis for why the pieces of tooling had escaped their internal processes and presented their planned actions to identify and evaluate additional tooling. The proposed actions include developing a list of all tooling that is subject to design agency one point safety review and verifying that each identified tooling design has been evaluated.

**Authorization Basis (AB) Guidance:** NPO transmitted interim guidance to the Pantex Manager on implementing AB development activities for NEOs. The guidance, issued last month by the NNSA Assistant Deputy Administrator for Stockpile Management (NA-12), describes roles and responsibilities of Pantex, design agency, and NNSA personnel in developing hazard analyses and weapon responses in support AB documentation. The guidance encourages concurrent engineering for the different groups involved in solving NEO safety challenges, while considering hierarchy of controls. NNSA intends to incorporate the interim guidance into a requirements document, the development of which is currently underway.