DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 25, 2017

MEMO TO: Steven Stokes, Technical Director
FROM: Ramsey Arnold and Zachery Beauvais, Pantex Plant Resident Inspectors
SUBJECT: Pantex Plant Report for Week Ending August 25, 2017

DNFSB Activity: Vice Chairman Bruce Hamilton and staff members C. Berg, J. Deplitch, and M. Helfrich were on-site to observe an emergency preparedness and response exercise. Further, the Vice Chairman and Board staff observed nuclear explosive operations, and walked-down special nuclear material surveillance facilities, high pressure fire loop lead-in repair construction work, and the modular vacuum chamber facility.

Emergency Exercise: Pantex conducted a functional exercise that simulated the response to an onsite airplane crash resulting in multiple injuries and a facility fire. While not a full-site, full-participation exercise, emergency services and emergency response organizations (ERO) participated fully. Personnel from a nearby Bell Helicopter Textron facility simulated their response to a Bell airplane crash on-site, interfacing with CNS personnel. Local and state officials participated in the exercise as well. The day-long exercise included a portion focused on event recovery with ERO turnover, event termination, and recovery operations (i.e., removal and transport of the crashed airplane). This is the first exercise that included an extensive demonstration of recovery activities since 2011. The Vice Chairman and staff observed the event scene, all exercise phases from the emergency operation center, and multiple hotwashes.

Safety-related Construction Projects: Last week, CNS project management, project engineering, and supplier quality personnel briefed NPO and the resident inspectors on changes underway to improve the application of quality to installation of safety-related equipment. The briefing detailed process changes made to various phases of the project lifecycle, including planning, design, acquisition, construction, and project closeout. Notably, CNS management described additional expectations for defining the functions and operational requirements for safety-related systems early in the planning stages, refining the system requirements at the design stage, and performing additional field surveillances and hold point inspections. CNS will also begin specifying specific, technical qualifications for individuals who will be relied upon to perform hold point inspections. The changes come on the heels of multiple upsets on safety-related equipment installation projects at Pantex (see 6/3/16, 5/26/17 and 7/7/17 reports). CNS plans to continue identifying opportunities to improve their processes through an ongoing integrated assessment.

Nuclear Explosive Operations: Last week, production technicians (PT) executed a nuclear explosive engineering procedure (NEEP) to remove a previously stuck case component (see 8/4/17 report). Process engineering and the design agencies had been initially concerned that the binding preventing the removal of the component could have damaged a cable running through the unit. Following execution of the NEEP, PTs noted minimal damage and were able to resume their normal process. On a separate unit with a partially severed detonator cable assembly (see 5/12/17 report), NPO approved a justification for continued operations, authorizing PTs to resume disassembly operations. The proposed operations previously underwent an NCE (see 7/21/17 report). Following discussions with NPO, CNS requested additional guidance from the design agency to confirm the weapon response applied to the specific damage present on this unit. CNS plans to resume operations following an implementation verification review.