

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 9, 2016

**MEMO TO:** Steven Stokes, Technical Director  
**FROM:** Ramsey Arnold and Zachery Beauvais, Pantex Site Representatives  
**SUBJECT:** Pantex Plant Report for Week Ending December 9, 2016

**DNFSB Staff Activity:** C. Berg observed operations and deliberations associated with a Nuclear Explosive Safety Study (NESS) validation, discussed a cell concrete installation project with contractor personnel, and observed an explosives training demonstration.

**Fire Damper Extent of Condition (EOC):** CNS recently transmitted to NPO a plan to perform a detailed EOC review to identify all fire dampers credited to meet safety basis or National Fire Protection Association requirements within the Zone 12 material access area (MAA). The plan was developed as a corrective action following the recent discovery of inaccessible fire dampers in a nuclear material facility (see 11/10/2016 report) and follows the declaration of a potential inadequacy of the safety analysis due to the absence of a required damper in the same facility (see 10/28/2016 report). CNS commits to perform the following actions: (1) review identified damper locations on facility drawings for every nuclear facility within the Zone 12 MAA, and validate the locations through facility walkdowns; (2) review maintenance procedures and records to verify that fire damper functional tests have been properly flowed down, the procedures can be executed as written, and that all installed dampers have been previously tested; and (3) create a library of credited fire dampers for future reference.

**Special Nuclear Materials (SNM) Radiography Procedure:** Last week, quality assurance technicians (QAT) paused execution of a general use operating procedure (OP) after questioning whether the procedure authorized work with a specific pit type. Specifically, the procedure did not reference the authorizing documents from the design agencies, as is customary, and lacked dose rates and industrial hygiene related safety requirements for two pit types. Upon further review, SNM operations management determined that the procedure had been executed several times with pit types not listed in the OP. The OP did not require changes to operational steps based on the inclusion of the additional pit types. CNS management has updated the procedure to include the additional information, plans to perform a causal analysis, and determine the appropriate corrective actions to prevent recurrence of the issue.

**NESS Validation.** A member of the Board's staff and site representative observed the NESS validation of multi-unit/multi-team operations for a specific weapon program. The validation process is intended to confirm that active nuclear explosive operations are consistent with those operations observed during the NESS, which occurred earlier this year (see 4/22/2016 and 6/10/2016 reports). During the validation, the NESS Group (NESSG) observed a limited duration of multi-unit operations and identified two concerns: (1) substantial congestion exists within the nuclear explosive bay staging area, restricting and complicating movement of personnel, tooling, and other materials within the facility, and (2) production technicians use an excessive number of component packaging procedures, leading to confusion and unnecessary complication. Additionally, during removal of a tight-fitting component from a unit, the staff member and site representative identified potential impacts that this operation may have on other operations in the facility, and communicated the observation to NESSG and process engineering. The NESSG concluded that no aspects of the observed operations impacted overall conclusions from the NESS or challenged the nuclear explosive safety standards.