

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 29, 2016

MEMO TO: Steven Stokes, Technical Director
FROM: Ramsey Arnold and Zachery Beauvais, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending April 29, 2016

DNFSB Staff Activity: D. Andersen was on site to observe a training course.

Tape Adhesion: CNS personnel paused operations on multiple weapon programs due to the potential for 35-account tape, specified in existing nuclear explosive (NE) processes, to not meet minimum adhesion specifications required by the design agency. 35-account material is commercial material that is authorized to be used in NE operations. After noticing a discrepancy in the results of a tape acceptance test, CNS Explosives Technology personnel discovered that the software used to gather data during adhesion tests, which was not under formal configuration management, had been outputting the maximum recorded peak for each test rather than the average. CNS management conducted a critique and is continuing to investigate the extent of the condition on tape usage since February 2015, when the software was incorrectly modified during a computer system upgrade. Along with design agency requirements, Pantex credits some 35-account tapes based on their ability to adhere to components to prevent accident scenarios; however, at this time, CNS has not identified any safety-related tape that is impacted by this error. CNS personnel have put all affected 35-account tape in a hold status and are developing a standing order to require independent verification of correct software settings before usage. Further, CNS personnel are recalculating all suspect test values since the system upgrade was performed and further analyzing the results to determine what tape would have failed and should not have been released for use in NE operations.

Lockout/Tagout (LOTO): Last month, following the completion of planned testing and upgrade work on a replacement uninterruptible power source (UPS), maintenance personnel removed a hazardous energy control (HEC) lock and repositioned the component to operational status as planned but then failed to record the action on the LOTO form as required by HEC procedures. During an NPO assessment, an assessor discovered that the configuration listed in the documentation did not match the actual configuration, i.e., no lock was applied. In this case, there was no potential for personnel exposure to hazardous energy because the equipment was in the normal operational status. The errors occurred on the UPS replacement project where incorrect field wiring caused a loss of power in a NE area (see 3/11/2016 report).

Loss of Control of Security Key: While performing a required daily check of security keys, a CNS facility representative was unable to locate a key to a NE cell. Per nuclear explosive safety requirements, this facility is maintained under two-person control which requires no single person to be allowed access to both keys at any given time. During a routine key transfer, a production technician took receipt of the key while performing NE operations in a different facility and placed the key in his lead apron rather than fixing it to his coveralls. When the operation was completed, the PT returned the apron to its storage location in the facility but forgot that the key remained in its pocket. At this point, the key was not secured so as to prohibit a single individual from gaining access to both security keys. The facility to which the missing key was assigned had been previously locked and remained locked until the key was found. Due to an increase in issues involving aspects of key control, hand-off, and facility locks in recent months, CNS is conducting a study on key control processes at Pantex.