

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 22, 2016

MEMO TO: Steven Stokes, Technical Director
FROM: Ramsey Arnold and Zachery Beauvais, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending July 22, 2016

Work Planning: The deluge fire suppression system in a non-nuclear, explosives development facility inadvertently activated releasing considerable quantities of water into the facility. At the time of the event, production technicians were power washing areas of the facility to remove lubricating oil accidentally spilled last week. Afterward fire protection engineering performed troubleshooting and determined that water ingress into the manual deluge pull station caused an electrical short that actuated the deluge system. The release of water introduced the possibility for electrical shock hazards in the facility. Electrical safety personnel conducted a controlled facility walkthrough to ensure safe reentry following the event. As part of the pre-job briefing, the supervisor warned the technicians to not direct the spray toward the ultraviolet flame detectors or exposed wiring but did not note the possibility for deluge release due to water entering the pull station; however, it is unclear whether plant personnel were previously aware of this possibility. CNS conducted and a site representative attended a critique on this event. Infrastructure personnel acknowledged that neither a job safety hazard analysis nor an electrical safety walkdown had been performed prior to authorizing the work. Following questions from the site representative, the critique determined that the production technicians performing the work had not previously used a pressure washer as part of their official responsibilities nor had they received specific training on its use.

Transportation: Last week, CNS identified that a safeguards transport trailer was not properly secured. The trailer did not contain a nuclear explosive; however, the general use procedure for securing this load is the same as that used for nuclear explosive cargo. Based on the use category of the procedure, placekeeping was not required to ensure the step was performed accurately. CNS transportation personnel discovered the trailer in this configuration four days after it was initially loaded. The trailer remained locked during this time.

Analysis of Technical Safety Requirement (TSR) Violations: Following a series of recent TSR violations (see 5/16/2016, 6/10/2016 and 6/24/2016 reports), Pantex senior management commissioned the CNS Production Support division to analyze trends related to the TSR violations that occurred from fiscal year 2014 to present and identify possible recommendations to prevent recurrence of similar events. During that time period, 21 TSR violations occurred. Overall, the annual number of TSR violations has decreased over the analyzed period despite a recent uptick. The most frequent violations were related to unauthorized or inappropriately executed material moves and combustible loading requirements. The analysis concluded that the number of material move violations has decreased since its peak, following completion of a series of corrective actions including an in-depth review of the process for performing material moves. In contrast, the analysis concluded that many challenges to properly implementing combustible loading controls remain. It recommended that CNS convene a focused team of subject matter experts to identify long-term solutions to prevent combustible loading violations. The analysis also recommended reinvigorating TSR awareness efforts plant wide, incorporating TSR adherence topics into periodic safety shares, and potentially initiating a plant wide formality of operations campaign.