

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 27, 2016

MEMO TO: Steven Stokes, Technical Director
FROM: Ramsey Arnold and Zachery Beauvais, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending May 27, 2016

DNFSB Staff Activity: J. Mercier observed the ongoing B61 Nuclear Explosive Safety Study.

Causal Analyses: Last week, a site representative attended a Causal Analysis and Mistake Proofing (CAMP) meeting conducted to identify the cause of the recent violation of a combustible loading Technical Safety Requirement (see 5/6/2016 report). The site representative noted that participants at the CAMP were unwilling to offer broader corrective actions and unwilling to take ownership of actions specific to their organizations. An NPO participant made similar observations. Following these observations, CNS management initiated a post-review for CAMPs in order to ensure they are conducted with the appropriate rigor. This week, a CAMP conducted for issues related to tape adhesion testing was reconvened, resulting in a more credible analysis. The final set of results for this CAMP will be the first subject to a post-review.

Special Tooling: Late last week, CNS resumed operations paused by tooling failures on two weapon programs. To address the potential for a failure occurring on a tool with a rubber bladder (see 5/6/2013 and 5/13/2016 reports), CNS Production and Manufacturing Engineering implemented a temporary procedure that requires an air hose to remain connected to the tool to safeguard against deflation. The address the malfunction of a workstand and interfacing tooling on a separate program (see 5/20/2016 report), CNS removed the workstand from the facility.

Concrete and Rebar Testing: A testing subcontractor completed strength testing of rebar and concrete cores sampled from sections of nuclear explosive cell equipment area floors installed as part of a high pressure fire loop lead-in replacement project (see 11/6/2015 and 5/13/2016 reports). The rebar, taken from a similar lot to the installed material, passed the strength tests. The concrete cores failed to meet the code specified compressive strength requirement, with the average strength for each cell approximately seventy percent of the required strength. CNS Facilities Engineering is still attempting to determine what caused the greatly reduced strength of the concrete and is working to develop a path forward to correct the issue.

Maintenance Procedural Adherence: During maintenance on a linear accelerator (LINAC), maintenance technicians inappropriately left a shorting stick installed causing a burning smell to be noticed by the technicians when returning the machine to service. The shorting stick is placed in the LINAC to dissipate energy prior to performing maintenance on the equipment. When technicians detected the burning smell, they shut down the machine and a lock-out was applied. No damage to the machine has been detected and no electrical arc or personnel injury occurred.

Emergency Drill: The site representatives observed CNS conduct an emergency drill requiring all plant personnel to exercise their protective actions for a hazardous material release. A similar drill conducted in December 2015 (see 12/18/2015 report) identified deficiencies in public address system coverage, a concern identified in the 2015 full participation exercise as well, and in the staffing and training of building wardens relied upon to enact protective actions. This week's drill demonstrated improvements but identified gaps in building warden coverage persist.