

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 10, 2014

MEMO TO: Steven Stokes, Technical Director
FROM: Thomas Spatz, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending October 10, 2014

DNFSB Staff on Site: D. Burnfield was at Pantex this week to provide Site Representative support. C. Berg was at Pantex this week observe the W88 weapon training class.

Material Move Event: Consolidated Nuclear Security, LLC (CNS) moved track-able source items to a facility other than the facility authorized in the Integrated Program Planning and Execution (IPRO) system. CNS personnel had planned the move in IPRO the previous day, and input the destination facility as a different facility than what was on the hard-copy paperwork given to the material mover. At the event critique, CNS identified two barriers in the process that failed to prevent this event. The first barrier was that the person receiving the material did not verify the destination facility on the paperwork was the destination authorized by IPRO. The second barrier was that the newly instituted management verification also failed to identify that the destination facility on the paperwork was not the same facility as that authorized by IPRO. CNS personnel did not identify the material location in IPRO as incorrect until they attempted to move the material back to the original facility, after the material had been processed. CNS performed a simulated material move in IPRO to correct the location of the material. CNS did not exceed the material limits for any facility, and the event did not result in a Technical Safety Requirement violation.

Dosimeter Location During Assembly Operation: While observing nuclear explosive operations on one weapon program, the Site Representatives noted that the PTs were wearing their thermo-luminescent dosimeter (TLD) under their radiation protection aprons during the entire process. Prior to this observation, the Site Representatives were informed that CNS had added a safety requirement in the Nuclear Explosive Operating Procedure (NEOP) that instructs the Production Technicians (PTs) to place their TLD outside of their radiation protection aprons for certain steps. The Site Representatives discussed what had been observed with the CNS radiation protection manager, who later informed us that they were making an annotated change to the NEOP to incorporate the safety requirement right before the steps are performed.

Tritium Air Monitoring Systems: The tritium air monitoring system consists of the tritium continuous air monitors, the Radiation Alarm Monitoring System (RAMS), and the cables to connect the Continuous Air Monitoring System (CAMS) to the RAMS. The CAMS were designed and built by Becton Dickinson Diagnostic Instrument Systems, who have now become a medical technology company. The CAMS were procured in the 1970s and installed in the early 1980s. The sites technical manual is dated 1988. The CAMS have been modified since the original procurement to interface with Pantex generated software and to provide additional monitoring and a failsafe capability. The RAMS is essentially a Pantex developed micro-computer system that processes signals from the CAMS and other radiological instrumentation, initiates alarm actions, and sends the signals to a minicomputer that provides signals to the operations center. This system is also based upon 1970s technology. In discussions with the Site Representatives, CNS personnel agreed that, although reliability has been acceptable to date, based upon the age of the system, future sustainability is suspect. CNS personnel stated that a recent attempt to replace these systems was unsuccessful.