

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 18, 2016

MEMO TO: Steven Stokes, Technical Director
FROM: Ramsey Arnold and Zachery Beauvais, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending November 18, 2016

DNFSB Activity: Board member Sean Sullivan was onsite November 16-17. During the visit, Mr. Sullivan and the site representatives observed nuclear explosive operations on multiple weapon programs and walked down high explosive facilities.

Technical Safety Requirement (TSR) Violation: During swing shift, a Pantex facility representative (FR) failed to enter into a limiting condition for operations (LCO) prior to authorizing preventive maintenance (PM) that impaired the wet pipe fire suppression system to a nuclear material processing facility. The PM included a surveillance requirement for special mechanic inspectors (SMI) to close and reopen a post indicator valve (PIV) located in an equipment room separate from the nuclear facility. The maintenance supervisor requested authorization to perform this PM after the work discussed at the facility turnover meeting was completed ahead of schedule. The FR authorized the execution of the equipment room PM without knowing manipulation of the PIV would affect the nuclear facility. Although all action statements of the LCO were already in effect, the FR did not formally enter the LCO. After the SMIs had already performed the PIV manipulation, the day shift FR normally assigned to this facility contacted the swing shift FR and stated that an LCO entry was required to complete the work. The swing shift FR then took immediate action to pause the maintenance operation, notify the operations center that a TSR violation had occurred, and enter the LCO.

Updated Weapon Response: Safety analysis engineering declared a potential inadequacy of the safety analysis (PISA), later determined to be a positive unreviewed safety question (USQ), for operations on one weapon program following the release of updated weapon response information earlier this week. The weapon response information was developed for an upcoming weapon alteration but is applicable to currently authorized nuclear explosive operations as well. Specifically, the new weapon response communicates an increased sensitivity of an explosive component to potential mechanical impacts. As a result, the likelihood of mechanical release and worker safety hazards resulting from such insults increases appreciably for multiple weapon configurations. Nuclear explosive operations on this program have not been conducted since completion of the fiscal year 2016 cycle this summer, and are currently paused.

Tester Safety: Pantex management has paused all operations involving three separate pieces of electrical test equipment, used across multiple weapon programs, following concerns with the ability of the equipment designs to meet electrical grounding requirements. Specifically, the safety basis explicitly requires the use of metallic cases on electrical testers. The applicable tester drawings, which predate the safety basis requirement, do not reflect this restriction, and testers with both metallic and non-metallic cases are in use across the plant. Safety analysis engineering determined this condition represents a non-compliance with the safety basis. Tester technicians are currently performing an extent of condition review to identify all tester copies that may be out of compliance, and Pantex electrical engineers are determining if the non-metallic materials in use will be able to effectively meet the safety basis requirements.