

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 28, 2025

TO: Technical Director
FROM: Pantex Plant Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending March 28, 2025

Staff Activity: This week, the acting Associate Technical Director for Field Operations and the Board's cognizant engineer were onsite to attend site activities, receive updates on recent issues, conduct walkdowns of nuclear explosive facilities, and provide resident inspector support.

Categorical Exclusion for Supplemental Equipment: Last month, PFO transmitted its approval of the categorical exclusion for adding, changing, or removing supplemental equipment used in defense nuclear facilities. Pantex uses the term supplemental equipment to describe any item that is introduced into nuclear facilities, such as cells, bays, and transportation routes, that is not directly associated with the processing of a nuclear explosive. This equipment includes items such as flashlights, radiation detectors, and cameras. DOE Guide 424.1-1C, *Implementation Guide for Use in Addressing Unreviewed Safety Question Requirements*, defines a categorical exclusion as a group of changes "determined to present no reasonably foreseeable capability for creating [an unreviewed safety question]." The DOE guidance includes examples of categorical exclusions that include changes confined to administrative areas, procedures whose content cannot affect safety basis conclusions, and procedures affecting only non-nuclear portions of facilities. Previously, the Pantex contractor established a safety management program for supplemental equipment that requires the evaluation of such equipment to identify hazards with respect to potential mechanical, electrical, thermal, and chemical insults and then implement controls. With this approval, PFO is allowing PXD to modify the supplemental equipment list if it meets the criteria of this safety management program, without an unreviewed safety question determination. In its safety evaluation report, PFO states that this hazard analysis may result in unacceptable consequences and that PXD is expected to identify and evaluate appropriate controls to mitigate the hazards. PFO approved the categorical exclusion, concluding that changes to supplemental equipment procedures and activities cannot credibly result in an unreviewed safety question, based on PXD's hazard analysis processes and the rigor of the supplemental equipment program.

Conduct of Operations: Last week, PXD production technicians utilized an incorrect alignment plate during nuclear explosive operations in a special purpose facility. The alignment plate had been installed during a previous operation on one unit; however, the plate was not removed and replaced prior to transitioning to similar operations on a different unit. During the investigation, PXD operations personnel noted that the operating procedure does not direct technicians to remove the alignment plate after these operations to preclude this possibility. Additionally, the procedure directs installation of the alignment plate only if it is not already installed. The technicians confirmed that an alignment plate was installed but did not verify the correct tooling number on the plate, and subsequently continued with the operation. Technicians on the next shift discovered the discrepancy. After relevant design agencies confirmed the unit parameters were within specifications, operations on the unit resumed. PXD plans to evaluate alignment plate steps in the operating procedure. The resident inspectors also questioned whether additional human performance improvements could be applied to these similar plates.