

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 27, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: A. Holloway and C. Stott, Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending December 27, 2024

Nuclear Explosive Facilities: Earlier month, while PXD infrastructure personnel were performing post-maintenance testing on an uninterruptible power supply (UPS), the UPS failed, causing a temporary loss of the emergency power for multiple nuclear explosive bays. The failure of the UPS did not result in a loss of primary facility power, and there were no injuries or equipment damage other than the UPS. In addition, the UPS system failure did affect the radiation alarm monitoring system (RAMS), which continually samples the air for potential contamination and alerts workers to evacuate the facility when detected. Of note, both the UPS and RAMS systems are not credited within the safety basis.

PXD infrastructure personnel were performing post-maintenance testing to verify functionality of the UPS after a subcontractor performed five-year preventive maintenance on the system. The post-maintenance testing involved impairing and then restoring power to the UPS. The UPS failed several minutes after power was restored, at which point PXD personnel paused maintenance activities and made the required notifications. PXD restored emergency power systems less than two hours after the UPS failure and locked out the UPS and affected electrical breakers for further evaluation.

Two days following this event, a different, nearby UPS failed, resulting in emergency power loss to other nuclear explosive bays. The same subcontractor had also recently worked on this system. PXD is working with the UPS system manufacturer to further evaluate these failures, as well as assess other UPSs in the vicinity.