

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 29, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: Zachery S. Beauvais and Miranda McCoy, Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending November 29, 2019

Severe Weather: Pantex experienced a high wind event with gusts over 60 miles per hour, prompting the National Weather Service to issue a severe weather warning for high wind as well as a “red flag warning,” indicating a combination of strong winds and low humidity that creates a favorable condition for wildland fire growth and spread. Pantex issued appropriate severe weather and personnel safety warnings and restricted movement of nuclear material moves per their technical safety requirements. Unlike March’s high wind event with slightly higher wind speeds (see 3/15/19 report)—which resulted in loss of power to several facilities, as well as damage to some facilities, including a loading dock, nuclear material warehouse, and nuclear material surveillance and storage facility—this week’s wind event did not result in any notable facility damage. Electrical safety and infrastructure personnel performed observations to verify that the electrical system and facilities were undamaged.

Safety Basis: This week, Pantex safety analysis engineers declared two potential inadequacies of the safety analysis (PISA) regarding incorrect assumptions or errors in hazard analysis reports for two separate programs:

- *Screened Hazard:* The hazard analysis report for one weapons program inappropriately listed a specific low-order hazard as screened, when it did not meet screening thresholds.
- *Incorrect Weight Assumptions:* Safety analysis engineers noted an incorrect assumption for impact analysis on a separate weapons program. The impact analysis considered impacts from a cart designed to hold a gas cylinder; however, the weight of the gas cylinder itself was not included in the total weight considered in the impact analysis. The cart is used on multiple weapon programs.

Neither PISA resulted in additional operational restrictions, as Pantex engineers determined the low-order consequences were already appropriately mitigated or prevented through the currently implemented control sets.

Nuclear Explosive Safety (NES): The resident inspectors observed NES study group members perform a NES study validation for initial operations to support a life extension program this week. NES study validations involve NES study group members observing actual nuclear explosive operations to confirm they are consistent with operations demonstrated during a NES study. The validations are a continuance of the NES study conducted in March and April of this year. The resident inspectors observed a high presence of operations management personnel. Production technicians proceeded cautiously and paused operations due to an unexpected tag on one component that indicated the component may have been for test use only, despite the component being properly marked for use. The resident inspectors also noted that the previous design for high explosive mats, which posed a tripping hazard identified in contractor and federal readiness assessments, had been replaced with a less obstructive design with beveled edges.