

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 12, 2018

TO: Christopher J. Roscetti, Technical Director
FROM: Zachery S. Beauvais, Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending October 12, 2018

Electrical Testers: A nuclear explosive safety (NES) study group completed a NES change evaluation of proposed changes to implement the PT4176 resistance tester on one weapon program and perform certain tests away from the nuclear explosive. The PT4176, a replacement to the PT4030, is equipped with an auto-ranging feature. In their deliberations, the study group considered both the use of the PT4176 in the manual and auto-ranging modes. Additionally, they evaluated proposed changes to improve the formality of tester inspections to identify tampering. The implementation of the PT4176 and the process modifications are improvements to the overall safety of nuclear explosive operations on this program. The study group identified no findings. The NES change evaluation follows NPO approval of a related safety basis change package in September. That change package addressed weapon response discrepancies related to worker safety and falling technician hazards, previously identified as a positive unreviewed safety question, as well as the tester implementation. Operations on this weapon program remain paused until the safety basis change package is implemented.

Safety Basis: CNS recently transmitted to NPO a corrective action plan (CAP) for documented safety analysis (DSA) quality issues. The CAP follows a series of workshops between CNS and NPO leadership that identified the need for comprehensive reform to the safety basis process implemented at Pantex. The scope of the CAP includes efforts to address deficient quality in safety basis submittals, as identified in multiple NPO review comments and assessments, as well as legacy quality and compliance issues. The CAP supersedes various improvement plans that had failed to completely resolve legacy issues, including the DSA Improvement Plan. The corrective actions to address the quality of safety basis submittals include revisions to safety analysis engineering department procedures, new training for safety analysts, and commitments to propose modifications to underlying development processes. The corrective actions to address legacy issues include determining the “basis for safety for hazard scenarios that are dispositioned by low-probability arguments... and where the DSA has no controls identified,” reviewing technician trip scenarios and identifying specific controls for these scenarios, and developing strategies to address other legacy issues. Several of these actions require NPO review and concurrence prior to implementation. Most actions within the CAP are scheduled for completion by the end of fiscal year 2019.

Maintenance Work Authorization: CNS recently completed their causal analysis related to radiation alarm monitoring system maintenance performed in one facility without specific authorization (see 9/28/18 report). The causal analysis team concluded that the issue was caused by incorrect work performance due to a mental lapse. To address this cause, CNS committed to retrain the individuals involved in the event, as well as revise the maintenance procedure and associated data sheets to require the technicians to verify the facility mode, verify that the limiting conditions for operations actions have been taken, and contact the operations center prior to performing their monthly preventive maintenance. These actions are similar to the immediate corrective actions identified. CNS plans to publish and validate the revised procedures by July 2019. An extent of condition review is currently underway.