

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 2, 2021

TO: Christopher J. Roscetti, Technical Director
FROM: Christopher Berg, Acting Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending April 2, 2021

DNFSB Staff Activity: In late February, the DNFSB staff presented observations to Pantex resulting from a review of training program and conduct of operations implementation. NPO and CNS briefed the staff this week on actions planned or in progress to address these observations, as well as other improvement activities.

Safety Basis: The Pantex technical safety requirements (TSR) prohibit the concurrent transportation of certain explosives and nuclear explosives/material configurations in certain areas of the plant. CNS declared a potential inadequacy in the TSRs after identifying that the implementing procedure for this TSR only requires a high explosive (HE) move window during explosive transportation along one of two routes from a specific facility (see 3/19/21 report). However, upon further review of the safety basis, CNS safety analysis engineering identified that declaration of a potential inadequacy of the safety analysis was more appropriate, and due to a potential increase in the probability of an accident, determined that this situation represented an unreviewed safety question. CNS published a justification for continued operations that—when approved—will permit movement of explosives on the one route without an HE move window.

Emergency Management: The acting resident inspector attended an emergency management agreement-in-principle (AIP) meeting last week. AIP meetings allow NPO and CNS personnel to meet with local government officials and relevant state agencies to discuss emergency exercises, community outreach, and emergency response planning. Among other topics, participants discussed personnel changes, lessons learned from recent severe weather, emergency planning zone revision actions (see 9/18/2020 report), and upcoming emergency exercises.

Nuclear Explosive Operations: In January, production technicians paused disassembly operations on one unit when noting an out-of-tolerance value during an electrical test (see 1/29/21 report). NNSA conducted a nuclear explosive safety (NES) change evaluation to assess the proposed path forward for this unit. The NES study group identified zero findings and four deliberation topics. Last week, to address two of the deliberation topics, NPO recommended that CNS integrate certain gloves into the 35-account program to ensure material compatibility. Production technicians resumed nuclear explosive operations on the unit this week.

On a separate weapon program, technicians performing assembly operations identified a component with an atypical marking, but decided to continue in the procedure—for approximately 30 steps—to reach an approved stopping point. At the event investigation, participants discussed the rationale for not pausing operations upon discovery of the abnormal situation. The technicians noted that due to humidity and two-person control requirements associated with the involved components, they determined the best option was to continue forward in the procedure. Participants also discussed the improper component marking, when it occurred, and actions taken since then to eliminate such errors. CNS process engineering is developing a nuclear explosive engineering procedure to allow resumption of operations.