

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 25, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: A. Holloway and C. Stott, Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending October 25, 2024

Staff Activity: C. Berg was onsite to attend demonstrations for a Nuclear Explosive Safety Study convened to assess proposed operations for a certain weapon program.

Safety Basis: Recently, during disassembly operations for a different weapon program, CNS discovered that a component had broken such that a portion remained affixed to the subassembly. When CNS production technicians were unable to easily remove the broken component, they paused operations and made the required notifications. Last week, CNS declared a potential inadequacy of the safety analysis (PISA) since this subassembly constituted a configuration not analyzed in the safety basis. As an operational restriction, CNS will continue to prohibit further disassembly operations on this unit until a path forward can be finalized and control strategy evaluated. CNS noted that similar situations have occurred in the past and existing procedures can be applied to resolve the situation. Based on conversations with site personnel, the resident inspectors note that the methodology for the proposed recovery operations could provide a safe resolution if adequately implemented.

Nuclear Explosive Facilities: This week, CNS conducted an event critique for recent subcontractor work that resulted in damage to a rampway roof with several pieces of debris falling into the structure. CNS has designated this particular rampway for transportation of nuclear explosives, nuclear material, and high explosives. Therefore, CNS credits the structure—and associated appurtenances mounted within the rampway—to remain in place during credible seismic events. During the work, the subcontractor used a power scraper to remove insulation from the roof. The subcontractor inadvertently gouged the metal roof structure multiple times and sheared bolt heads, causing the bolts and fastener hardware to fall to the rampway floor. Upon discovery, CNS personnel immediately stopped the work and barricaded the rampway. CNS had not foreseen these types of issues, so they did not analyze such hazards during work planning and require barricades to prevent transportation activities in the rampway. In response to the event, CNS conducted an operability determination and concluded that the rampway structure is still able to withstand seismic events.

During the critique, CNS discussed gaps in performance of this project, including (1) lack of CNS nuclear explosive safety (NES) personnel approval prior to performing work over a qualified nuclear explosive transportation route, (2) absence of barricades in the rampway to prevent potential hazards from falling debris, (3) miscommunication between CNS organizations during work planning concerning barricade requirements, and (4) creation of gouges in the roof during insulation removal. CNS discussed plans to require NES concurrence before recommencing this work and changing their work approval process to require NES approval for all future work activities in the material access areas. Additionally, CNS plans to include a hold point during the work planning phase to clearly denote whether barricades will be implemented. CNS construction management and facility representatives will be required to remain in daily contact to ensure barricades remain in place as needed.