

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 3, 2018

TO: Christopher J. Roscetti, Technical Director
FROM: Ramsey P. Arnold and Zachery S. Beauvais, Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending August 3, 2018

DNFSB Staff Activity: C. Berg observed an emergency exercise and operations.

Emergency Exercise: CNS and NPO conducted a functional exercise of their emergency response organization. The exercise scenario required fire department to respond to two event scenes—a nitric acid spill in a high explosives operating facility and a wildland fire. The exercise scenario simulated the nitric acid spill onto a can containing high explosive charges. While the incident command and executive team discussed the hazards posed by the presence of high explosives, these hazards were not fully addressed in the response activities. The emergency response organization effectively controlled both incident scenes early in the exercise timeline. This allowed the emergency response organization to demonstrate activities related to the recovery phase of the emergency. DNFSB staff members observed the actions of plant shift superintendents in the operations center, the executive team in the emergency operations center, and the incident command in the tactical operations center.

Operational Restrictions: In a letter issued to CNS last week, NPO communicated their expectations for review and implementation of operational restrictions following the declaration of a potential inadequacy of the safety analysis (PISA). In the letter, NPO stated that “operational restrictions should be conservative to ensure adequate protection to the public, the worker, and the environment,” and added that following a PISA, operations should remain paused until NPO management has completed its review of the operational restrictions and has provided comments to CNS. In recent months, CNS has struggled to effectively implement operational restrictions (see 12/21/17 and 5/4/18 reports). The most recent example involved a miscommunication of operational restrictions for electrical testers (see 7/13/18 report). CNS and NPO recently re-categorized this event as a safety basis non-compliance.

Electrical Testers: Production technicians (PT) paused nuclear explosive operations during an electrical resistance test when they determined the recorded reading was under the acceptable limit. Following the pause, tester design engineering determined that the system was functioning correctly. The tester, first authorized for use on this weapon program last month, utilizes an auto-range feature. Unlike the tester it replaced, the auto-range feature no longer requires PTs to switch between unit increments, e.g., ohms and kilohms. During a training needs review for use of the new tester, CNS training personnel did not identify the auto-range feature as a notable difference between the two testers, and the PTs were not specifically trained on this feature. CNS determined that five additional units were processed with unacceptably low readings prior to this discovery and has nonconformed the six affected units. According to conclusions presented at the critique, PTs failed to recognize the difference between ohms and kilohms, and accepted these resistance measurements on the first five units. CNS and the design agency are working to determine the cause of the unexpected resistance reading, but suspect it is related to a misunderstanding of the unit’s electrical circuitry. Tester design engineering believes that there are no detrimental effects of the tests performed and that the issue is limited to operations that use a specific cable. CNS engineering has paused use of the cable on this program.