

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 3, 2021

TO: Christopher J. Roscetti, Technical Director
FROM: A. Gurevitch, M. Bradisse (acting), and C. Berg (acting), Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending December 3, 2021

First Production Unit: Last week, Pantex completed the first production unit for the B61-12 life extension program.

Operations: Last month, production technicians (PT) began conducting operations on a worktable in a nuclear explosive cell with a high explosive (HE) charge that was one day past its reacceptance date. The charge was shipped from the storage facility to the cell the day before (i.e., the same day as the reacceptance date), at which point all pertinent information regarding the item was entered into the site's material tracking software system. Typically, PTs begin working with an HE charge on the same day they receive it; however, in this case, work was delayed to the following day. The PTs did not initially note that the charge was past its reacceptance date because the procedure did not include a step to check this date. PTs paused operations after the error was caught by a production planner, who noted the date in the tracking software. At the critique, production shipping personnel noted that HE charges are often delivered to nuclear facilities near the reacceptance date so they can be used before they expire. However, process engineering personnel noted that a lack of a concrete step in the procedure directing PTs to check for the reacceptance date opened unnecessary opportunities for events such as this to occur; the addition of an explicit step into the procedure was captured as a corrective action. Participants also committed to evaluate whether the tracking software could notify personnel of important upcoming dates earlier in the process. CNS will also evaluate the addition of an expiration date onto the outside of the HE container to facilitate these activities.

Facilities: In some nuclear explosive cells, the design of the installed hoist is a pivoting arm, secured while not in use using a locking mechanism attached to the wall. The primary function of this mechanism is to prevent the hoist from swinging loose inadvertently. Because the locking mechanism is attached to the wall in a nuclear explosive cell, its components are required to remain in place during design basis seismic events and is therefore credited as safety-class. Last week, while securing the hoist to the wall during operations, PTs heard a bolt detach and drop from the locking mechanism. They had performed appropriate pre-operational checks that morning and the fixture was not found to have any issues. The PTs notified their production section manager and the CNS facility representative, who entered the facility and subsequently determined that operations could continue, without receiving concurrence from facility engineering. The primary facility engineer had received a notification at approximately the same time but was off duty; he only became cognizant of the situation several days later. At this point, he requested that operations be paused in cells with this hoist design so facility engineering could review the situation. At the event investigation, participants noted that operations should not have continued without an opportunity to have facility engineering evaluate the situation; this was recorded as a gap. As corrective actions, CNS committed to check and re-torque all locking mechanism assembly bolts in cells with this hoist design, and validate the adequacy of the design calculations to ensure the mechanism's components will perform their safety function (i.e., remain attached to the wall) during a design basis seismic event.