

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 10, 2022

TO: Christopher J. Roscetti, Technical Director
FROM: A. Gurevitch, Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending June 10, 2022

Nuclear Explosive Safety (NES): This week, a NES change evaluation (NCE) was conducted for a specific nuclear explosive program to assess a proposed CNS plan to use a newly designed retrieval tool in conjunction with the remaining portion of an assembly stand's rotating T-handle that had broken off (see 3/18/22 report). The NES study group (NESSG) members reviewed presentations and observed in-person demonstrations and use of the actual tool on a stand in a training facility. The resident inspector attended and noted no concerns with use of the tool or the process. Further, the resident inspector noted that the teamwork between PX tooling design engineers, the machinists who fabricated and engaged the retrieval tool, and the production technicians who operated the tool, demonstrated that the tool successfully performed as designed. The NCE memo documented zero findings or minority opinions, and two deliberation topics (DT) related to magnets and extent of condition, but with no NES concerns. NPO transmitted a letter to CNS stating no actions were required for any DTs. The retrieval tool was used at the end of the same week and a CNS NES employee reported that the process operation was successfully completed. CNS discussed plans to conduct a failure analysis and will evaluate the need for a review of the design of the stand's rotating handle and an extent of condition.

Blast Door Interlock (BDI) Override: On Sunday, Pantex fire department personnel responded to a nuclear explosive bay for a trouble alarm in the fire detection system. No active nuclear explosive operations were occurring. After responding to the alarm, fire department personnel experienced difficulties with the facility access control system. Security personnel informed them to "crash out" of the facility. The fire department personnel understood this direction as depressing a specific facility switch, allowing egress from the facility. Unbeknownst to them, this switch overrides the BDI—a safety class control ensuring only one blast door can be open at a time to prevent potential impacts to nuclear material and nuclear explosives. Instead of using this switch, the expectation was that they would exit the facility without using the access control system. As a result of this confusion, fire department personnel did not notify CNS facility representatives of the overridden BDI. The following day, NPO and CNS facility representatives identified the BDI override indicator had triggered for that nuclear explosive bay. The CNS facility representative immediately entered the appropriate limiting condition for operation for the bay and subsequently restored BDI functionality. At the event investigation, CNS discussed breaks in the communication chain and differences in expectations for facility egress. As candidate corrective actions, participants proposed conducting a needs analysis to determine if new training is needed, and briefing fire department personnel on the BDI override process. Additionally, NPO questioned whether the day-long lack of BDI functionality constituted a violation of the technical safety requirements. CNS personnel indicated that it was not, stating that they considered the time of discovery to be when the CNS facility representative became aware of the impaired safety system, after which the individual immediately took the appropriate actions. Instead, the event was categorized as a performance degradation of a safety class system when required to be operable. CNS has scheduled a causal analysis for this event, and will invite participants from the fire department, security, and other relevant organizations.