

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 16, 2022

TO: Christopher J. Roscetti, Technical Director
FROM: C. Berg and M. Sautman, Acting Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending September 16, 2022

Staff Activity: Mr. Sautman was on-site to provide resident inspector coverage and observed three NPO facility representative oral boards. In general, the conduct and grading of the boards was satisfactory. Mr. Sautman provided several observations to NPO management on questioning techniques, topics covered, and the grading of the boards.

Loss of Two-Person Control (TPC): Last week, a CNS Material Handler delivered weapon components requiring TPC from Production Stores to two nuclear explosive bay facilities. For the specific component involved, TPC is achieved by having two Material Handlers present during this process. When arriving at the operational facilities, the production technicians identified the discrepancy and notified appropriate personnel. CNS declared the event as a loss of TPC and, since the components were not installed, removed them from the bays. While the container for this component has a seal (i.e., tamper-indicating device), it is not credited to implement TPC. In contrast, other programs credit the container seal and do not require two Material Handlers, potentially leading to confusion. Furthermore, at the event critique, CNS participants noted that applicable procedures do not flow down the requirement to ensure two Material Handlers are present when transferring this component between facilities.

To prevent recurrence in the near-term, the Production Stores Manager briefed all Material Handlers on TPC requirements associated with this component. As long-term corrective actions, CNS will revise applicable procedures to ensure this requirement is appropriately implemented and initiate a nuclear explosive safety change evaluation to assess whether the container tamper-indicating device can be credited for TPC for this program. Based on resident inspector, NPO, and CNS participant questions, CNS also plans to examine available records to determine if such an event could have occurred previously and discuss this further during the causal analysis.

Readiness Assessment: Over the past month, CNS has conducted a contractor readiness assessment (CRA) associated with plutonium metal repackaging operations (see 1/14/22 and 8/26/22 reports). The plutonium metal is currently packaged in 3013 cans, which are in turn packaged in Type B 9975 containers. The proposed operations will involve production technicians repackaging the 3013 cans into new, certified Type B 9975 containers in preparation for offsite shipment. The operations should not involve direct exposure to nuclear material.

This week, the CRA team briefed the CNS project team on its conclusion from the readiness assessment, which consisted of demonstrations, technician and production section manager interviews, and document reviews. The team identified three pre-start findings and ten observations. The pre-start findings included (1) a few procedure issues related to executability and safety requirement implementation, (2) compliance issues with one procedure during demonstrations, and (3) inadequate training of firefighters on responding to 3013 container fires. The CRA team concluded that the proposed operations are safe and recommended proceeding to the federal readiness assessment upon closure of the pre-start findings.