

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 25, 2020

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Miranda McCoy, Resident Inspector  
**SUBJECT:** Pantex Plant Activity Report for Week Ending December 25, 2020

**Operating Procedures:** While performing disassembly operations for one weapon program, production technicians discovered that the procedure they were working to did not include a specific tester verification table. Tester verification tables are required to be included in applicable procedures per CNS's internal Pantex writer's manual. The requirement stems from corrective actions taken to address a previous nuclear explosive safety master study finding, which outlined concerns that undetected damage or wear in cables could compromise nuclear explosive safety. In particular, the writer's manual requires a critical step and associated table for production technicians to actively inspect each piece of tester equipment independently—including, for example, the calibration date—and document the results in the table. During the event critique, participants noted that a tester table was still included elsewhere in the procedure, including in the setup steps; however, this table was not part of an applicable critical step. CNS performed an extent of condition review to ensure that the tester verification table was present in all other nuclear explosive procedures. The extent of condition review was completed last week and all other procedures had the table present. CNS production technicians did process multiple units over the course of almost two years using the procedure with the missing table.

**Facility Structure:** While performing an annual in-service inspection, CNS system engineers discovered what appeared to be a loose pipe hanger in a ramp. In investigating the pipe hanger, system engineers determined that the pipe hanger had become dislodged from its connector. CNS properly notified the plant shift superintendent, and restricted access to the affected ramp and barricaded off the area. CNS personnel completed a work order to repair the pipe hanger and initiated an extent of condition review. During the extent of condition review for the event, CNS personnel identified two additional loose conduit clamps, both in a different section of ramp. CNS personnel similarly restricted the area and completed work orders to repair the loose conduit clamps.

**Immediate Action Procedure:** Production technicians noted an acrid odor and mild discoloration on a unit while performing disassembly operations and entered their immediate action procedure. Per the procedure, the production technicians placed the unit in the workstand, suspended operations, and exited the facility. Access to the facility was then administratively locked. Nuclear explosive safety and other applicable engineering groups verified the area was safe and stable. CNS engineers were able to later enter the facility and take photographs of the unit to inform the applicable design agency on an anomalous unit determination. CNS also gathered statements from the production technicians to be provided to the design agency. Technicians noted the acrid odor immediately after unpacking the unit and prior to performing any further disassembly operations that could provide further insight as to the cause of the acrid odor. Overall, no clear cause of the odor has been determined. This week, a group composed of a CNS process engineer, CNS nuclear explosive safety representative, and design agency system engineers subsequently made the conservative decision to declare the unit anomalous.