

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 31, 2015

MEMO TO: Steven Stokes, Technical Director

FROM: Christopher Berg and Benjamin Caleca, Acting Pantex Site Representatives

SUBJECT: Pantex Plant Report for Week Ending July 31, 2015

Conduct of Operations: On July 28, 2015, during a life extension-related disassembly operation, Production Technicians (PT) adjusted the height of a component on the work stand and noted an increased resistance to movement and a gap forming between the work stand and facility floor. Subsequently, PTs paused the operation and returned the component to its original position. Consolidated Nuclear Security, LLC (CNS) Process Engineering, Nuclear Explosive Safety (NES), and Authorization Basis personnel validated that the unit was placed into a safe and stable configuration. Inspection of the unit revealed that a retaining nut had not been removed by the previous work shift, resulting in this event. Of note, in the unit disassembly record, the previous work shift verified that the retaining nut was removed. CNS will develop a Nuclear Explosive Engineering Procedure for unit disposition. In addition, CNS plans to remove the work stand from the facility and inspect the apparatus.

During the event critique, CNS personnel noted potential discrepancies between training, procedures, and as-found conditions during routine operations, which may have contributed to the event. During the critique, CNS initially captured the event for the Occurrence Reporting and Processing System as a significance category (SC)-2 management concern (10 (2) SC-2). After further discussion, CNS additionally categorized the event as an SC-3 NES concern (7 (3) SC-3) due to violation of the reader-worker-checker and two-person concepts. These concepts were violated when PTs failed to successfully complete the procedural step for removing the retaining nut and improperly verified its removal.

PT3746 Tester Issue: On July 23, 2015, during a Tester Safety Specification review, Sandia National Laboratories identified that the PT3746 tester drawing and hardware contained components that did not match the recommended wattage in the design calculation. As a result, CNS paused operations involving this tester. The event was initially categorized as an SC-3 management concern (10 (2) SC-3); however, after discussions during the critique, CNS re-categorized the issue as an SC-2 NES near miss event (7 (2) SC-2) due to the utilization of unanalyzed electrical equipment during nuclear explosive operations.

In response to the event, CNS is updating the tester design drawings and has procured tester components with recommended power values. CNS is conducting an extent of condition review to evaluate all testers. Additionally, a NES Change Evaluation will be conducted early next week on CNS's proposed corrective actions. The utilization of these underrated components within the tester presented a possibility to provide unintended electrical stimuli to a unit; however, no such phenomenon is known to have occurred.

Cut and Cap Operations: On July 29, 2015, NNSA Production Office released the Safety Evaluation Report authorizing cut and cap operations on the second of two weapon programs requiring this procedure (see reports for 7/17/15 and 7/24/15). At the time of this report, operations on this weapon program utilizing this procedure have not resumed.