

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 13, 2018

TO: Christopher J. Roscetti, Technical Director
FROM: Ramsey P. Arnold and Zachery S. Beauvais, Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending July 13, 2018

Electrical Tester Safety: Last month, CNS administratively paused operations on one weapon program following the declaration of a potential inadequacy in safety analysis (later determined to be a positive unreviewed safety question) related to electrostatic discharge (ESD) hazards encountered during the use of a resistance tester (PT4030, see 6/21/18 report). CNS engineering later lifted these restrictions on a subset of operations (i.e., disassembly) after implementing additional production technician bonding controls. Last week, NPO approved a justification for continued operations (JCO) that would restrict the use of the PT4030 and replace it with a new, alternative tester. In their evaluation of the JCO, NPO assumed that all operations with the PT4030, on the impacted weapon program, remained paused. As part of their basis for approval, NPO stipulated that “operations associated with use of the PT4030 are paused until this JCO is approved, readiness activities are completed, and this JCO is made effective.” Upon approval, the JCO and NPO’s safety evaluation became part of the approved safety basis. CNS continued operating per their previously designated operational restrictions, and did not implement the stipulated pause on disassembly operations. NPO identified the misalignment between active operations and safety basis allowances this week, after which, CNS engineering revised the operational restrictions implemented to address ESD hazards on an electrical resistance tester to fully restrict its use. CNS is currently performing an implementation verification review for the JCO.

Fire Barriers: During the installation of fire dampers in the vacuum chamber facility, construction crews determined that the damper assemblies procured for the project were inadequately sized. Specifically, CNS procured the damper assemblies with installed ducting sleeves that extended to cover a 28” opening, where a 30” opening was present. The error was introduced in the manufacturer’s shop drawings. Although the approved project design documents specified the appropriate sleeves, and the manufacturer’s drawings disagreed with this design, CNS engineering approved the use of the discrepant design. Subcontractor construction workers are fabricating a new sleeve to correct the situation. The project is installing the fire dampers to address a discrepant-as-found condition identified in 2017 (see 9/1/17 report). The facility safety basis requires fire dampers to form part of the safety-class facility structure. Operations in the facility remains paused while the work is underway.

Electrical Equipment: During routine process observations of the warhead measurement campaign, CNS nuclear explosive safety (NES) representatives discovered a piece of unauthorized electrical equipment in a nuclear explosive cell. The presence of the equipment violated evaluation requirements applicable to all electrical equipment used in nuclear explosive areas. The equipment, an electronic label maker, was introduced to the operating area the morning of the discovery and was discovered outside of the cell round room. Production personnel used the equipment to apply identification labels to laboratory-owned equipment that is required for the operations, and identified in the operating procedures, but is not covered by Pantex labeling protocols. Upon discovery of the equipment, the NES representatives reviewed other equipment in the area and found no indications of additional issues.