

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 26, 2023

TO: Katherine R. Herrera, Acting Technical Director
FROM: C. Stott and C. Berg (acting), Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending May 26, 2023

Technical Safety Requirement (TSR) Violation: The Pantex TSRs state that combustibles introduced into a facility for support activities—such as maintenance—shall be controlled as transient combustibles. When materials-of-concern (e.g., nuclear explosives) are brought into the facility, transient combustibles are required to remain under the direct control of an individual, such that the person is continuously aware of its location and are close enough to rapidly take possession of it.

Earlier this month, CNS Special Mechanical Inspectors (SMI) entered a nuclear explosive cell to perform preventive maintenance on the fire protection system and other equipment. The SMIs successfully completed the maintenance activities, but upon exiting the cell, they inadvertently left a stopwatch hanging from a fire extinguisher. The stopwatch is allowed to be used during the preventive maintenance; however, when materials-of-concern were reintroduced into the cell, this item was considered an uncontrolled transient combustible and resulted in a TSR violation. Approximately five days after nuclear explosive operations recommenced in the facility, an NPO facility representative discovered the stopwatch.

At the event investigation, CNS participants acknowledged multiple missed opportunities to mitigate the incident, including when various groups walked down the facility but did not identify the transient combustible. These organizations included the SMIs and facility management prior to releasing the facility to perform operations, as well as production technicians during their pre-operational checks. Additionally, during the investigation, CNS personnel noted that the stopwatch did not have a label indicating it was approved Category Two electrical equipment (i.e., electrical equipment not intended to connect to nuclear explosive electrical circuitry but may come into contact with the unit). As a result, CNS also categorized the incident as having an adverse effect on nuclear explosive safety due to the presence of unauthorized or unanalyzed equipment. To prevent recurrence of a similar event, the site plans to conduct a causal analysis and develop necessary corrective actions.

Special Tooling: Last week, CNS declared a Stop Work Event in a nuclear explosive bay due to a failure of the upper trunnions of the workstand. While the upper trunnions were not in use at the time of discovery, the production technicians and other organizations suspected that this degradation may impact the ability of the workstand to perform its safety functions. In response, CNS personnel executed a procedure to remove the unit from the workstand. Additionally, they applied a “Do Not Use” tag to prevent further use of the equipment and subsequently removed the workstand from the facility for in-depth investigation. At the Production Tooling Warehouse, qualified personnel inspected the workstand and determined it could fulfill all its functional requirements. However, upon further discussion during the event critique, CNS management determined that general instructions within the operating procedure were utilized to inappropriately manipulate the workstand prior to discovery of the degradation. Due to this disciplined operations issue, CNS recategorized the incident as a management concern.