

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 31, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: Zachery S. Beauvais and Miranda McCoy, Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending May 31, 2019

Technical Safety Requirement (TSR) Violation: Following a move of a cart containing a compressed gas cylinder from one facility to another, a quality assurance technician (QAT) noted that the move had occurred without the required valve protective device. A TSR specific administrative control (SAC) requires that compressed gas cylinders present in ramps shall have protective valve caps or a valve protective barrier, or the compressed gas cylinder shall be in a protective container. A production section manager (PSM) requested the move of the compressed gas cylinder with a regulator but no valve cap to an interlock, which is an allowed configuration for the interlock. A second PSM requested use of the compressed gas cylinder in a second facility, requiring transportation through a ramp. In preparing the gas cylinder for transport through the ramp, QAT personnel and the PSMs did not recognize that use of a valve cap would be required. During the fact finding, personnel involved in the event noted that the operation was non-routine for a number of reasons, and that they did not typically have responsibility for transporting partially-full compressed gas cylinders in carts between facilities.

Safety Basis: CNS safety analysis engineering declared a potential inadequacy of the safety analysis (PISA) regarding forklift seismic stability. CNS engineers determined that, dependent on lift heights and forklift loading, the center of gravity of forklifts used in staging operations could pose a topple hazard during design basis seismic events. CNS instated an operational restriction to limit the maximum lift height of the affected forklifts during applicable operations. Safety analysis engineering previously implemented the same control during transportation operations via a SAC; the operational restriction extends the control to staging operations.

In addition to this PISA, safety analysis engineering declared four PISAs in the month of May:

- *Electrostatic discharge (ESD) hazards*—Following the initial identification of ESD hazards earlier this year (see 3/29/19 report), the design agencies identified additional charge generation and ESD hazards on the same program.
- *Cart weight discrepancy*—CNS tooling and safety analysis engineers noted that the weight of a general-use cart exceeded the weight analyzed in the safety analysis (see 5/3/19 report).
- *Legacy cart weight discrepancies*—During an extent of condition review following the initial cart weight discrepancy PISA, Pantex engineers noted that assumptions regarding weights and weight distributions for some mobile special tooling were not maintained (see 5/17/19 report).
- *Unit with detonator cable assembly (DCA) extending three inches less than expected*—Earlier this year, a unit with an assumed damaged DCA was inappropriately loaded into a transportation cart and moved between facilities twice (see 5/24/19 and 5/3/19 reports).