

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 19, 2014

**MEMO TO:** Steven Stokes, Technical Director  
**FROM:** Thomas Spatz, Pantex Site Representative  
**SUBJECT:** Pantex Plant Report for Week Ending December 19, 2014

**Positive Unreviewed Safety Question (USQ) Determination for Electro-Static Discharge (ESD) Scenario:** Consolidated Nuclear Security, LLC (CNS) upgraded a Potential Inadequacy of the Safety Analysis (PISA) to a positive USQ determination. The PISA was declared last week after a Hazard Analysis Task Team (HATT) identified an electrical concern and one of the Design Agencies issued an Information Engineering Release (IER) stating that this was new information concerning weapon response. (See report for 12/12/2014.) During the second week of the HATT walk down, the team identified additional electrical concerns and a second Design Agency sent an IER to Pantex. This IER states that performing electrical tests in a certain configuration presents an additional ESD concern on this weapon program. The IER includes possible additional controls to prevent the ESD hazard, but like the first IER, does not contain new weapon response information. CNS declared the positive USQ determination due to an increase in the probability of an accident previously evaluated, and an increase in the probability of a malfunction of equipment important to safety in the existing safety basis. Operations on this weapon program remain paused.

**PISA for a Specific Hoisting Operation:** While performing Readiness Verification for a high-fidelity Joint Test Assembly (JTA) operation, CNS identified an option in the procedure that raised a concern. The procedure allows the Production Technicians (PTs) to remove the lifting and rotating fixture with the hoist and either to let the weight of the JTA pull it from the fixture or to use a positive measure to remove the JTA from the fixture. The Production Technicians performing the RV chose the former. However, the JTA inert trainer unit stuck in the fixture as it was lifted approximately a half inch. When the PTs stopped raising the hoist, the JTA trainer fell that half inch. CNS declared the PISA when they discovered that the safety basis for two weapon programs did not address this specific hazard during removal of the lifting and rotating fixture. CNS paused this specific hoisting operation on two weapon programs.

**Pause in Operations due to Tooling Failure Update:** CNS heard from the manufacturer of the sprag clutch that they could not find anything wrong with the clutch. (See report for 12/5/2014.) CNS performed an Engineering Evaluation to determine the amount of travel the work stand will allow when the PT releases the handle while lowering a payload in the work stand. They discovered that, when used inappropriately, the handle spins an additional eight revolutions after being released from an initial speed of 380 revolutions per minute, with the payload dropping approximately 1.5 inches. CNS is briefing the PTs on the results of the Engineering Evaluation and the expectations to maintain control of the payload during nuclear explosive operations. Once the PTs have been briefed, operations will resume.

**Start-up of AT400-A Surveillance Activities:** NNSA transmitted the Readiness Assessment (RA) final report for the AT400-A surveillance activities to CNS. The RA team reported one pre-start finding, no post-start findings, and five observations. The pre-start finding identified a concern that procedures do not contain instructions for the technician to leave one procedure and continue operations in another procedure.