

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 20, 2015

MEMO TO: Steven Stokes, Technical Director
FROM: Thomas Spatz, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending February 20, 2015

Potential Inadequacy of the Safety Analysis (PISA) for Electro-Static Discharge (ESD)

Scenario: Consolidated Nuclear Security, LLC (CNS) declared a PISA when they discovered that one ESD insult was not adequately analyzed for one weapon program. CNS Safety Analysis Engineering personnel, while performing an Unreviewed Safety Question determination for a Nuclear Explosive Engineering Procedure (NEEP), discovered that an ESD insult due to the use of an aerosol can was not analyzed in the Hazard Analysis Report (HAR). A particular weapon configuration, and corresponding steps in the NEEP, requires personnel bonding to mitigate the ESD hazard while using an aerosol can. The Safety Analysis Engineering personnel discovered that the coating on the aerosol can defeats the personnel bonding control. CNS performed an extent of condition review and found that other weapon programs adequately evaluate the ESD hazard from the aerosol can. CNS has paused the use of aerosol cans on a specific configuration of the affected weapon program.

Revised Justification for Continued Operations (JCO) for Weighing Operations in Mass Properties Facilities: The NNSA Production Office (NPO) issued a Safety Evaluation Report (SER) approving a revised JCO to resume weighing operations in the mass properties facilities with no conditions of approval or technical review comments. (See report for 9/19/2014 and 9/26/2014.) CNS revised the JCO after designing and implementing a new fixture to correct an alignment problem with one weapon program. (See report for 11/21/2014.) The JCO contains a compensatory measure to fasten units to the scale using an adaptor plate and existing mounting holes. The revision to the JCO, and associated engineering evaluation, reduced the number of mounting screws that must be used from eight to two. NPO stated that the JCO will expire in six months from the effective date of the original JCO. The Site Representative observed the procedure verification conducted by the Production Technicians in one of mass properties facilities. CNS has resumed weighing operations.

Update on Anomalous Unit Determination: On January 29, 2015, representatives from CNS Process Engineering, CNS Nuclear Explosive Safety, and the Design Agency determined that the configuration of the nuclear explosive in one facility met the anomalous unit criteria. (See reports for 1/30/2015 and 2/13/2015.) This week, CNS sent an Information Engineering Release (IER) to the Design Agency (DA) requesting the DA to determine if the anomalous condition requires a change in the weapon response information for mechanical insults due to possible changes in the sensitivity of the high explosive. The DA had not responded at the time of this report.

Update on Pause in Operations Due to Disassembly Issue: On February 11, 2015, PTs paused a nuclear explosive disassembly operation and placed the unit in a safe and stable configuration, after discovering an issue with the removal of a detonator cable assembly. CNS sent an IER to the DA informing them that CNS plans to perform a procedure on this unit that has already been approved to deal with the same issue on a different weapon program. CNS did not request weapon response information in the IER. The DA had not responded at the time of this report.