

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 23, 2015

MEMO TO: Steven Stokes, Technical Director
FROM: Thomas Spatz, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending January 23, 2015

Resolution of Positive Unreviewed Safety Question (USQ) for Assembly Stand Step Height

Update: Consolidated Nuclear Security, LLC (CNS) sent an Evaluation of the Safety of the Situation (ESS) to the NNSA Production Office (NPO) for the positive USQ declared last week. (See report for 1/16/2015.) CNS performed an engineering evaluation which showed the residual energy from a cart jumping the existing work stand step height of 1 ½” was still below the impact energy of the 95% falling man. In the new Engineering Evaluation, CNS defines the residual energy as the kinetic energy of the cart minus the potential energy of the cart due to the step height of the work stand. In the previous analysis, CNS included the kinetic energy of the 95% falling man. CNS eliminated the mass of the man from the residual kinetic energy analysis because the tooling is already analyzed for the 95% falling man impact. CNS requested authorization to resume these operations with no changes to the existing controls and no new controls. NPO issued the Safety Evaluation Report with no conditions of approval.

Positive Unreviewed Safety Question (USQ) Determination for Electro-Static Discharge

(ESD) Scenario Update: CNS declared a positive USQ determination for ESD hazards on one weapon program and sent a Justification for Continued Operation (JCO) to the NPO to perform limited operations on units in the Ultimate User configuration. (See reports for 12/19/2014, 12/26/2014, and 1/16/2015.) CNS modified an existing JCO for the kneeling technician to incorporate the new hazard and controls from this newly discovered ESD hazard. (See report for 10/7/2014.) The JCO states that the paint on the shipping container may isolate the container from the ESD environment. CNS is adding two new safety class design features to the Hazard Analysis Report; conductive tape and three bonding straps. Both design features have the functional requirement to be conductive at a prescribed resistance and voltage. CNS is also adding a Specific Administrative Control (SAC) to perform the equipment bonding. This is done by incorporating new Critical Steps in the Nuclear Explosive Operating Procedure to install the three new bonding straps and one application of the conductive tape. The JCO has an expiration date of six months after the release of the original JCO for the kneeling technician, which was released on October 7, 2014. NPO had not issued the SER at the time of this report.

This week, NNSA performed a Nuclear Explosive Safety Change Evaluation (NCE) on the proposed changes. The Site Representative observed the NCE. The NCE team had questions for the CNS project personnel related to indirect lightning effects due to the increased wire loops from the bonding straps, and any existing Significant Finding Investigations on this weapon program. The NCE team concluded with no findings, deliberation topics, or minority opinions.

Weather Related Event: The Pantex plant was closed on Thursday due to a snow storm. Pantex received snow accumulations of 10” to 14”. CNS resumed normal operations on Friday.