

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 21, 2014

MEMO TO: Steven Stokes, Technical Director
FROM: Thomas Spatz, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending November 21, 2014

Potential Inadequacy of the Safety Analysis (PISA): Consolidated Nuclear Security, LLC (CNS) declared a PISA when they discovered an unanalyzed event for a specific weapon program. The event is the toppling of the power-free gas sample cart into an item. CNS paused power-free gas sample operations on the affected program. CNS transmitted an Evaluation of the Safety of the Situation (ESS) to the NNSA Production Office stating that the Unreviewed Safety Question (USQ) determination was negative. In the ESS, CNS determined that there is no consequence from the topple event based on existing weapon response information. CNS has resumed operations.

Loss of Electrical Power Event: CNS lost electrical power in six nuclear explosive operating facilities for approximately thirteen hours. About a month ago, CNS replaced a transformer and associated transfer gear, breakers, and relays. The night of the power loss, the operations center reported an outside temperature of 12°F. Four hours later, the relay tripped the breaker, cutting power to the affected facilities. The CNS facility representative placed two Limiting Conditions for Operation (LCOs) on the facilities; one for the blast door interlocks and one for the deluge fire suppression system. CNS contacted the manufacturer of the relay, who told them this type of relay has an issue with responding to an extremely cold temperature as if it were an over-temperature condition. The manufacturer must re-install the firmware internal to the relay to fix the problem. This is the only relay of this type in service at the plant. Until the manufacturer fixes the problem, CNS is pursuing the installation of a heating element in the cabinet containing the relay when the temperature drops below freezing to prevent a recurrence.

Pause in Operations: CNS paused operations in a facility when they discovered an alignment problem while attempting to fasten an item to the scale. CNS is operating under a Justification for Continued Operation (JCO) related to a positive USQ on the Safety Analysis Report. The JCO contains a compensatory measure to fasten the item to the scale fixture using existing mounting holes on the tooling. Until this week, CNS has only been performing weight measurements on one program. When the Production Technicians (PTs) tried to fasten an item for a different program to the scale, the mounting holes did not line up. The PTs removed the item from the scale and made the appropriate notifications. The process engineer, nuclear and explosive safety, and safety analysis personnel reported to the facility and determined that the item was in a safe and stable configuration. Process Engineering personnel prepared a nuclear explosive engineering procedure to remove the item from the facility.

Conduct of Operations: CNS held an event critique for the event where there was a slow response to verify that an outside stem and yoke (OS&Y) valve was open and locked following a sensor trouble signal received by the emergency services dispatch center (ESDC). (See report for 11/14/2014.) The ESDC personnel at the critique stated that they mistakenly thought the trouble signal was coming from a facility where planned maintenance was being performed. CNS categorized this event as a management concern in the Occurrence Reporting and Processing system.