

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 28, 2014

MEMO TO: Steven Stokes, Technical Director
FROM: Thomas Spatz, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending February 28, 2014

DNFSB Staff on Site: B. Laake was at the Pantex Plant this week to observe the W78 Nuclear Explosive Safety Study.

Suspect Fire Penetration Seals: Babcock & Wilcox Technical Services Pantex, LLC (B&W) declared a Potential Inadequacy in the Documented Safety Analysis and a Positive Unreviewed Safety Question (USQ) for the discovery of suspect fire penetration seals. (See report for 2/21/2014.) In addition to the polyvinyl chloride pipe concern that was identified last week, B&W's fire protection engineers have discovered shrinkage of the penetration seal material in several facilities. B&W believes the shrinkage is limited to the facilities in one building, but they had not completed the extent-of-condition review at the time of this report. B&W is preparing to submit the Evaluation of the Safety of the Situation and a Justification for Continued Operation to the NNSA Production Office (NPO).

Technical Safety Requirement (TSR) Violation for Combustible Standoff: While performing the extent of condition review of the suspect fire penetration seals, B&W fire protection engineers discovered that combustible material was located within the TSR standoff distance for thermally sensitive components. The fire protection engineers were performing the fire penetrations seal inspection and the mid-year surveillance requirement when they discovered the violation. This is similar to the TSR violation of combustible standoff requirements discovered during a previous extent of condition review. (See report for 11/30/12.) B&W established a standoff distance by moving the combustibles, pausing operations in the affected facility, and held an event critique meeting.

Safety Evaluation Report (SER) for Issue H Weapon Responses: This week, NPO released the SER for the safety basis changes associated with the release of the W76 Issue H weapon responses. This SER approved changes to six Safety Analysis Reports (SARs) and the W76 Hazard Analysis Report (HAR). The SER also closes two open Justifications for Continued Operation (JCO) and three open Evaluations of the Safety of the Situation. NPO identified seven Conditions of Approval (COAs), four of which require submittal to NPO for approval. The first COA requiring approval instructs B&W to provide clarification of the electro-static dissipative (ESD) pathway provided by the tooling to the floor and to eliminate the reference to the "stack up" of resistance from the component thru the technician to ground. The second COA requiring approval directs B&W to provide consistency in the Summary of Controls, Adequacy of Controls, and TSRs for the high-explosive floor mats used in the 100 volt environment. The third requires B&W to reconcile the lists of special tooling changes in one of the SARs. The fourth requires B&W to provide the basis for the probability of tooling failure for drop scenarios in two of the SARs. B&W had not responded to the SER COA requirements at the time of this report. NPO has not specified an expiration date for the JCO from the Positive USQ determination after the release of the Issue H weapon response values. NPO will consider the JCO expired upon implementation of the authorization basis change package.