

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy J. Dwyer, Technical Director
FROM: Timothy Hunt and Rory Rauch, Pantex Site Representatives
DATE: 20 February 2009
SUBJECT: Pantex Plant Weekly Report

Material Move Events: A causal factors analysis performed last year identified process weaknesses and 53 corrective actions to be completed by April. Despite this, manufacturing management has issued a memorandum describing its intent to treat the recent move issues with a high level of rigor to identify other precursors. Some administrative controls will be replaced by engineered controls in the Move Right system. The last three move events concerned items inadvertently left off the electronic authorization request system. The memo concludes that the Pantex material move system is working, but makes it clear that it is necessary to maintain focus on human factors, formality of operations, and control robustness to improve performance levels.

W88 SS-21 Cell Contractor Readiness Assessment (CRA): One of the pre-start findings from the recent CRA involved the discovery that two nuclear explosive operating procedures had outstanding changes that had not been approved a week after the review began. The plan of action had a prerequisite that applicable procedures were to be approved prior to the CRA commencement and the declaration of readiness stated this was accomplished. The procedures were subsequently approved before being used for the demonstrations. B&W Pantex performed a causal analysis that resulted in the conclusion that coordination and communication between the project team and senior line management was inadequate. Project managers will now verify that the procedures to be assessed are approved prior to completing the declaration of readiness.

Electrostatic Discharge (ESD) Flooring Buffer: Last week, the staff observed a metal task exhaust hood resting on the floor against the haunch in a facility with ESD flooring. This configuration had the potential to violate the documented safety analysis (DSA) requirement for a buffer between the facility wall (assumed to be at the maximum facility voltage following a lightning event) and the ESD flooring to prevent electrical coupling to a lightning sensitive component (LSC) through the floor. It was unclear whether the circular metal hood extended far enough into the haunch to violate the buffer. B&W Pantex determined the configuration observed by the staff was not in violation of the buffer, but subsequent measurements have shown that the buffer could be violated if the task exhaust hood was resting snugly against the haunch. Manufacturing management has directed a walkdown of all facilities with ESD flooring to ensure that no other metal objects violate this buffer area. In addition, production technicians are being trained to place the hood inside lightning standoff away from the haunch or placed on the wall until a new storage method that maintains positive control of the hood can be installed.

This incident is the third violation or near violation of the ESD flooring buffer in the last year. B&W Pantex is seeking a DSA rewrite to establish LSCs at a single point to ground, thus eliminating the need for an ESD flooring buffer; however, this effort could take several months.

Implementation of DOE Standard 3016: PXSO recently reviewed Los Alamos National Laboratory's (LANL) implementation of the weapon response process requirements established in DOE Standard 3016, *Hazard Analysis Reports for Nuclear Explosive Operations*. The review focused the expert elicitation in support of B53 dismantlement operations, the lone documented case of the LANL's current expert elicitation process. LANL's expert elicitation process was judged to have been effectively implemented based on adequate training of all participants, adequate configuration control of all documents associated with this process, and procedures that clearly identify the process scope and methodology. PXSO did not specifically review LANL's expert judgment or peer review processes outside the scope of this B53 expert elicitation.