

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy Dwyer, Technical Director
FROM: Matthew Duncan and Rory Rauch, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending October 21, 2011

Process Anomaly: B&W Pantex continues to develop the justification for continued operations (JCO) for a proposed alternative process to continue disassembly of a unit with a detonator cable assembly (DCA) that could not be removed using the currently approved process. This week, the responsible design agency (DA) for this weapon program issued weapon response to support the development of the JCO. The weapon response demonstrates that the proposed alternative process; which involves cutting, taping, and installing a protective cover over the DCA; adequately protects against a suite of newly postulated mechanical impact hazards. Moving forward, B&W Pantex plans to develop a permanent contingency process in the event that technicians encounter similar processing issues on this weapon program in the future. B&W Pantex is working with the responsible DA to develop the safety basis for such a process, generate criteria for when the contingency process would be used, and establish who is authorized to apply the criteria.

Anomalous Unit Case Study: Last March, after a particularly protracted effort to recover from a unit with a damaged DCA, senior management representatives from B&W Pantex and the DAs concluded that the process used by these organizations to recover from anomalous units was inefficient (the recovery effort for the unit in question lasted six months, see 7/1/11 report). To identify and address these inefficiencies, the PXSO manager commissioned a case study of the recovery effort for the subject anomalous unit. The case study team, which comprised DA and B&W Pantex representatives, recently briefed the NNSA Senior Management Team (SMT) on the results of their efforts. The case study team identified 18 judgments of need (JONs), the most notable of which indicated that NNSA had not established a formalized process for anomalous unit recovery. The SMT assigned B&W Pantex as the lead organization to manage the resolution of the JONs.

During the last few months, B&W Pantex experienced several additional DCA-related processing anomalies, such as the anomaly described in the first entry of this report. Though B&W Pantex was able to recover from these anomalies in a more efficient manner (in part because of the timely application of lessons learned from the first anomaly), the associated recovery efforts raised an additional question that was not addressed by the case study team. The question pertains to the DAs' role in providing weapon response for the anomaly: to what extent must the weapon configuration deviate from that analyzed in previously issued weapon response before B&W Pantex is required to request new weapon response from the DA? B&W Pantex is hesitant to seek new weapon response for what they consider to be minor deviations from previously analyzed weapon configurations because the DAs can take weeks to months to develop new weapon response information (a timeline that is primarily driven by the DA processes developed to comply with the quality requirements of DOE Standard 3016, *Hazard Analysis Reports for Nuclear Explosive Operations*). The site reps presented this question to PXSO management and the NNSA lead for DOE Standard 3016 and it has been added to the scope of the efforts to address the JONs from the anomalous unit case study.