DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy J. Dwyer, Technical Director
FROM: Timothy Hunt and Rory Rauch, Pantex Site Representatives
DATE: 27 February 2009
SUBJECT: Pantex Plant Weekly Report

DNFSB Staff Activity: J. Deplitch was onsite to observe the W88 cell and mass properties operations readiness assessment.

Nuclear Safety Performance Indicators: B&W Pantex recently issued its third installment of nuclear safety performance indicators and precursor data analysis as a part of the first quarter FY09 Contractor Assurance System report. Both elements remain a work in progress. One of the primary challenges in developing nuclear safety performance indicators involves finding a metric that contains only safety-critical information (i.e., has not been diluted with mission-support indicators). For example, the system engineering staffing metric indicates a shortfall of 14 engineers below a 54 engineer minimum. Such a shortfall may prevent system engineering from accomplishing non-nuclear support work or some improvement initiatives, but adequate support for all credited nuclear safety systems is still being provided. Regarding the precursor data analysis, B&W Pantex is finding it difficult to settle on a methodology for grouping events and is waiting to establish a sufficient database of events from which to draw conclusions.

Weigh and Leak Check Station (WALS) Robot: WALS operations have used a robot in the past to minimize the dose to workers in the area. However, the robot has proven unreliable and manual operations have been used the majority of the time following WALS startup. The robot has not worked since July 2007 and requires a major upgrade for continued use. In addition, a project is underway to implement an improved WALS capability that will rely solely on manual operations. Based on these factors and a cost-benefit study performed by the radiation safety department, the ALARA committee has approved sole use of the manual process for WALS operations.

Fire System Alarm Response: Last Saturday morning, the Pantex fire department responded to a trouble alarm on a fire suppression system power supply servicing a cluster of nuclear explosive facilities. At the time, the system was declared inoperable and a limiting condition of operation (LCO) was entered. One of the required immediate actions of the LCO was to implement a fire watch or have the fire protection engineer (FPE) evaluate the situation and determine the appropriate response. For efficiency and resource availability reasons, a decision was made to attempt contacting the FPE in lieu of implementing a fire watch. It took about five hours to contact an FPE at which time it was determined that the type of alarm received did not render the fire suppression system inoperable. The inordinate amount of time to implement an LCO immediate action has compelled PXSO management to consider providing further clarification to the current definition of "immediate" in LCO statements.

Loss of Facility Power: Primary power was lost to a bay complex for four hours Thursday morning. The appropriate LCOs—for blast door interlocks and the fire system—were entered and the fire suppression system was valved down to prevent an undesirable surge upon restoration of power. Electrical loads were secured and systems were brought back on line in a controlled manner. Initial indications were that a ground fault due to a defective condenser fan motor may have caused the outage and this equipment was bypassed during the restart. About a half hour later, while the LCO was still active, power was lost again. It was temporarily restored by switching to a backup main feed to allow completion of a nuclear explosive operation in one of the bays and then troubleshooting began. Nuclear operations will not resume in the bays until the causes of the two outages are determined and resolved.