

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 18, 2005

MEMORANDUM FOR: J. K. Fortenberry, Technical Director
FROM: Timothy Hunt and Dave Kupferer, Pantex Site Representatives
SUBJECT: Pantex Plant Activity Report for Week Ending February 18, 2005

High Explosives Anomaly. Operations in a nuclear explosive cell were suspended this week after production technicians discovered minor flaking and cracking of the main charge high explosive on the unit being processed. The unit was put in a safe and stable configuration while engineering and design agency representatives took time to evaluate the condition of the anomalous unit and determine a path forward. The work procedure was modified to redefine the criteria that the production technicians use to determine if the high explosive is damaged to the point of stopping work and seeking engineering input. Two unreviewed safety question evaluations and nuclear explosive safety determinations were performed as part of the operational recovery process. BWXT plans to provide additional engineering oversight during the resumption process, train the technicians on the procedural change, and reevaluate the areas of concern immediately prior to continuing with the dismantlement process.

On-Site Weapon Components Movement. An Office of Secure Transportation (OST) trailer containing weapon components inappropriately transited between zones while the flammable move window was open. The material on the OST trailer is identified in the Transportation Phase 2 and 3 Safety Analysis Report as precluded from movement simultaneously with flammable gas or liquid. The applicable technical safety requirement control is not yet implemented so no authorization basis violation occurred. There were no placarded quantities of flammable material being moved concurrent with subject transport. Communication for on-site material movement using OST trailers is inadequate. On-site OST shipments by Department of Energy couriers are not governed by the same requirements as BWXT transportation personnel.

Automated Guided Vehicle (AGV) NNSA Readiness Assessment. The NNSA RA was commissioned to verify the AGV process to perform pit staging, retrieval, tracking, and inventory operations. The AGV—a robotic, remotely controlled forklift—and associated systems are linked electrically and through radio frequencies to a control console. In addition to documenting seven pre-start findings, PXSO has requested BWXT reperform a portion of the contractor RA dealing with the control set applicable to the AGV activity. The team lead also noted that the contractor RA was premature and appeared to be used to achieve readiness, based on the number and scope of findings. Another perception was that the limited interval between the contractor and NNSA RAs precluded adequate time for closure of contractor identified issues.

Authorization Basis Changes. BWXT recently submitted a change proposal to PXSO that affected several authorization basis documents. PXSO approved the changes subject to 13 pre-start and 10 post-start conditions of approval. PXSO has communicated to BWXT that the sizable number of pre-start COAs, which identify control deficiencies, and post-start COAs is indicative of the substandard quality of the BWXT authorization basis development and revision processes. This is not an isolated example; a review has shown that the number of comments on initial authorization basis submittals has been on the increase.