



Department of Energy
National Nuclear Security Administration
Washington, DC 20585
June 5, 2003

The Honorable John T. Conway
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, NW.
Suite 700
Washington, D.C. 20004

Dear Mr. Chairman:

Ambassador Brooks has asked me to respond to your letter of April 4, 2003, concerning training deficiencies at the Pantex Plant. The contractor's plans to address the six deficiencies noted in its operations are described in the enclosed letter. The National Nuclear Security Administration (NNSA) has reviewed these actions and believe they will adequately address your concerns. To further address the training deficiencies outlined in your letter we will integrate upgrading of weapon trainers at Pantex into the priorities of each weapon program.

In your letter you made the following observations about Federal oversight of the contractor's training:

- DOE O 5480.20A tasks DOE field managers to conduct periodic systematic assessments of training using a DOE standard that requires evaluations every 3 years.
- The Pantex Site Office's (PXSO's) current procedure for these assessments needs revision.
- The NNSA has conducted no assessments of training in the last 3 years.

The PXSO currently uses Readiness Assessments, Facility Representative reviews, Quality Assurance Audits, individual program assessments and for cause reviews as spot checks of the quality and effectiveness of contractor training because PXSO does not have the staff to conduct the comprehensive assessments required by DOE O 5480.20A. (Prior to the stand up of the NNSA on December 15, 2002, the Albuquerque Operations Office conducted these periodic reviews.) The review has not been accomplished in the past 3 years because the need for a triennial review was not captured in the PXSO assessment schedule or tickler file. The following actions have been/will be taken to address your concerns:

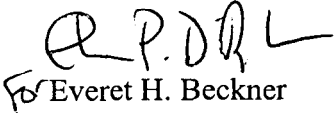
- On April 21, 2003, PXSO requested the NNSA Service Center to assist in a comprehensive assessment of BWXT's compliance with DOE O 5480.20A to be completed by July 31, 2003. The Service Center has agreed to support this request.
- PXSO is negotiating with the NNSA Service Center to incorporate a triennial review of the contractor's training program into its continuing Service Level Agreement for the current and future fiscal years.



- This assessment will be incorporated into the PXSO consolidated assessment plan.

If you have any questions, please contact me or have your staff contact Jeff Underwood at (301) 903-8303 or Steve Erhart at (806) 477-6150.

Sincerely,


Everet H. Beckner
Deputy Administrator
for Defense Programs

Enclosure

cc w/enclosure:

M. Whitaker, DR-1

J. Hirahara, SC

J. McConnell, DNFSB

W. Andrews, DNFSB

J. Deplitch, DNFSB

A. Matteucci, DNFSB

D. Glenn, PXSO

MAY 07 2003

Mr. Daniel E. Glenn, Manager
Pantex Site Operations
NNSA/DOE
P. O. Box 30020
Amarillo, Texas 79120-0020

**RE: Response to Defense Nuclear Facilities Safety Board Letter and Staff Report on
Conduct of Operations at Pantex Plant, dated April 4, 2003**

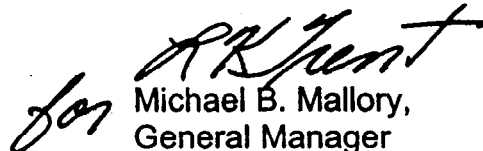
Dear Mr. Glenn:

This letter provides a response to the April 4, 2003, letter from the Defense Nuclear Facilities Safety Board (DNFSB) noting concerns with BWXT Pantex's "processes used to develop training, to evaluate personnel knowledge, to assess training program elements, and to conduct continuing training." BWXT Pantex accepts the issues and will make the necessary programmatic changes through revisions to plant standards, through modifications to the drill and continuing training programs as applicable, and through implementing a more rigorous program for training effectiveness.

The six issues and our recommended resolutions are discussed in Attachment 1. We believe that resolving the issues will create a stronger training and qualification program, which will more effectively support conduct of operations at Pantex Plant. Additionally, the BWXT Pantex Quality Assurance Division will perform an independent assessment of progress on resolving these issues. This assessment will occur in the first quarter of Fiscal Year 2004.

Should you have further questions in this matter, please contact Everett Poore, Training & Development Technologies Department Manager, at 806/477-6112.

Very truly yours,


Michael B. Mallory,
General Manager

cc: Donna J. Hampton, Human Resources, 16-12
Everett E. Poore, T&DT, 12-15A
Mike Davis, T&DT, 12-15A
Cathie Harris, Infrastructure Controls, 12-5F
Frank George, Weapons Training, 12-15B

**ATTACHMENT 1: DNFSB STAFF REPORT ISSUES AND
BWXT PANTEX RESPONSE**

- Issue 1 The BWXT procedures for training needs analysis and training development provide an adequate process for developing training. However, records examined by the staff provided insufficient evidence that all of the elements of the process had been completed.
- Response to Issue 1 The training standards governing the systematic approach to training are being revised to reflect the current process and documentation requirements. Record flowdown from these processes will be clarified, making the records more easily auditable. BWXT Pantex plant standard STD-2770, *Training*, has already been revised and is out for formal review and concurrence. The additional analysis and development standards (STD-2786, *Training Development*, and STD-2787, *Training Analysis & Design*) will also be revised to reflect the current process. All three plant standards will be revised, approved, and in place by September 30, 2003.
- Issue 2 Records of performance evaluations, comprehensive written examinations, and oral examinations indicated that these evaluations and examinations were not sufficiently comprehensive and challenging to form the basis for certification of operational personnel.
- Response to Issue 2 Programmatic certification at the Pantex Plant only applies to Manufacturing Division production technicians who perform hands-on weapons work and to their immediate supervisors. Manufacturing Division has reviewed and is enhancing the process for generating comprehensive written examinations for production personnel. A commercial test generator process has been procured and is being populated with questions pertaining to production work.
1. The test generator database will be populated with questions containing weapon programmatic, weapon specific TSRs, site TSRs, general Production Technician core requirements, safety, NES, and hazards.
 2. The test questions will be evaluated to assure valid and challenging testing for qualification, certification, and re-certification of Technicians.
 3. This process will also be used to generate random examinations to measure training effectiveness and proficiency.
 4. The implementation date for the pilot testing process is June 30, 2003, with progressive implementation (i.e., qualification testing, then certification testing, requalification testing, and recertification testing) for production technicians by August 31, 2003.

**ATTACHMENT 1: DNFSB STAFF REPORT ISSUES AND
BWXT PANTEX RESPONSE**

Issue 3 The continuing training program for operational personnel lacked essential elements (e.g., abnormal facility procedures, drills, systems to control or mitigate accidents, Technical Safety Requirements, and facility safety systems).

Response to Issue 3 The Manufacturing Division performed a drill program review and implemented enhancements in the continuing training program through drills. These include:

1. A new Manufacturing Drill Schedule was promulgated in April 2003, thereby increasing the number of divisional programmatic drills.
2. Every active weapon program, and portions of the Satellite Programs, will be drilled at least annually.
3. The current practice of monthly refresher training on emergency and abnormal procedures for both programmatic and facility issues will be continued. These will build on the systems to control or mitigate accidents and will emphasize Technical Safety Requirements and facility safety systems.
4. Manufacturing Division's guidance for conducting drills has been reevaluated. The new procedure will assure clear record keeping, metrics to measure effectiveness, and an effective method to transmit and track required actions and lessons learned to the remainder of Manufacturing Division personnel.

Additionally, for the continuing training program, Manufacturing Division will establish a Yellow Belt team to evaluate the training requirements specified in 5480.20A against current business practices. This effort will review the current production technician qualification and certification process outlined in IOP-B0019. This action will be completed no later than June 30, 2003.

Issue 4 There was no continuing training program for maintenance personnel. DOE requires continuing training for maintenance personnel in place of requalification. The lack of such a program may be a significant factor in continuing problems seen with the performance of maintenance.

**ATTACHMENT 1: DNFSB STAFF REPORT ISSUES AND
BWXT PANTEX RESPONSE**

Response to Issue 4 A comprehensive management assessment of the maintenance training program was conducted in March 2003. Criteria for the assessment were derived primarily from DOE O 5480.20A and DOE O 4330.4B. DOE O 433.1 and DOE G 433.1-1 were also referenced. They will replace DOE O 4330.4B in the next revision of the "Maintenance Section of the Mission Support Standards and Requirements Identification Document." The assessment concluded that the maintenance training program provides the mechanisms for qualification and requalification of maintenance personnel. Training technical staff is qualified to perform its functions, and the roles and responsibilities and administration processes are in place. Deficiencies were identified that affect the quality of the requalification process.

1. A job task analysis (JTA) is updated every two years for each craft discipline. Over time the JTA process has relaxed overtrain (fixed continuing training) requirements. While appropriate personnel participated in the JTA, the process did not have adequate controls to assure the appropriate selection of fixed continuing training. To resolve this issue, Infrastructure Division will (a) establish criteria for performance and review of JTAs so that the fixed elements of continuing training are appropriately identified, and (b) establish a schedule for re-evaluation of craft JTAs affecting nuclear facility maintenance and pilot the process for craft workers who maintain the fire protection systems. These actions will be accomplished by June 30, 2003.
2. There is no formal continuing training program for technical personnel who support the maintenance function. Flexible continuing training is provided but fixed training is not evaluated for craft supervisors and managers, maintenance planners, engineers, or maintenance schedulers. To resolve this issue, Infrastructure Division will (a) establish a process to document fixed and flexible continuing training for personnel who support craft work, and (b) establish a schedule to evaluate and document training requirements for technical support personnel and pilot the process with craft supervisors/managers. These actions will be accomplished by July 31, 2003.
3. On-The-Job Training (OJT) at the shop floor lacks formality. While OJT is practiced, it is not documented with some exceptions. To resolve this issue, Infrastructure Division will formalize OJT requirements with the objective of providing evidence of craft skills capabilities for consideration during the two-year requalification process. This action will be accomplished by June 30, 2003.

**ATTACHMENT 1: DNFSB STAFF REPORT ISSUES AND
BWXT PANTEX RESPONSE**

Response to Issue 4 (Cont.) 4. New equipment installations do not always provide for training or provide superficial training. To address this issue, Infrastructure Division will review existing procedures governing acquisition/installation of new equipment and submit changes to provide for adequate evaluation/implementation of training. This action will be accomplished by August 31, 2003.

Issue 5 The fidelity of the mock-up units of nuclear weapons used for training was not being maintained and is degrading. Training units, such as those for the W56, W62, W76, and W78, had worn, damaged, and broken detonator cables, connectors, and detonator mock-ups; worn joint tapes; worn and broken fill and pit tubes; worn threads and broken screws for mounting fixtures; poor bore-down materials; and inadequate mock-up for the high explosive. Some training units were no longer adequate for training and testing of personnel on nuclear weapons operations. Additionally, since the mid-1990s, DOE has not maintained the joint standing committee that addressed trainer fidelity issues for the weapons programs.

Response to Issue 5 In terms of trainer unit fidelity, Manufacturing Division will conduct a review and evaluation of all trainer units currently on-hand. This review will identify the number and condition of trainer units across all active programs. Needs will be identified for trainer unit upgrades and/or additional trainer units. Those needs and estimated costs will be provided to the BWXT Pantex Directed Stockpile Work program managers to be included in the individual program provisioning process.

Issue 6 The only contractor assessment of the training program conducted in the past 3 years was an examination of comments resulting from reviews conducted by various outside groups and contractor readiness assessments. This was not a thorough assessment and failed to note several significant deficiencies with the program. Mechanisms for assessing the effectiveness of training on operations and the need for additional training were informal.

Response to Issue 6 BWXT Pantex will address training effectiveness issues on two fronts:

1. A new, site-wide training effectiveness program is under development through an EPIC Yellow Belt team. The process will be piloted and put into place by December 31, 2003.

**ATTACHMENT 1: DNFSB STAFF REPORT ISSUES AND
BWXT PANTEX RESPONSE**

2. A Training & Development Technologies management self-assessment program will be developed using the objectives and criteria from DOE-STD-1070-94, Guidelines for the Evaluation of Nuclear Facility Training Programs. Per DOE-STD-1070-94, all objectives/criteria from the standard will be formally assessed over a three-year cycle. Initially, the program will use data from the January 6, 2003, NNSA Pantex Plant Training Findings Trend Matrix to prioritize assessment areas from DOE-STD-1070-94 to drive the management self-assessment. These data, which captured 78 training-related assessments over a three-year period, provide a place to begin looking at the overall training and qualification/certification program for Pantex Plant. This T&DT management self-assessment process will be in place by September 30, 2003.