Department of Energy
National Nuclear Security Administration
Washington, DC 20585

AUG 1 4 2007

The Honorable A. J. Eggenberger
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, N.W.
Suite 700
Washington, D.C. 20004

Dear Mr. Chairman:

This is in response to your letter of July 16, 2007, regarding the safe startup of weapon program activities at the Pantex Plant. Your letter discussed circumstances surrounding the startup of W76 Mod 1 operations in particular, and requested a report detailing answers to three questions.

National Nuclear Security Administration senior management understands the concerns you express in your letter, and we agree with the conceptual basis of the message. NNSA has not and does not endorse an organizational policy or operational philosophy whereby production goals or mission needs trump safety requirements, and we do not view granting exemptions to safety requirements as a matter of convenience. In reference to the case in point, NNSA made its decisions with careful consideration of maintaining an appropriate balance between competing objectives, while ensuring that operational safety would not be compromised in any way before authorization to begin operations was granted. The following discussion provides the bases for these assertions and responds to the specific issues and questions in your letter:

- "Prior to the W76 Mod 1 Nuclear Explosive Safety Study (NESS), NNSA approved an exemption to allow the NESS to begin without an approved safety basis in place."
    - The requirement for having an approved safety basis before start of the NESS is invoked in DOE Order 452.2C, *Nuclear Explosive Safety,* issued on June 12, 2006. The Order includes an explicit provision for granting exemptions to its requirements. Therefore, this NNSA action should not be interpreted as a circumvention of DOE requirements. The decision to approve the Pantex Site Office (PXSO) request for this exemption was coordinated with the Central Technical Authority (CTA), Chief of Defense Nuclear Safety (CDNS), NA-10, and NA-12, all of whom concurred with the PXSO request.
- "In addition, the NESS was conducted without the availability of important input documents, such as Engineering Analyses and Design Requirements Documents."
    - These documents support the safety basis but are not part of the required documentation set, and were available to the NESS Group (NESSG) as draft documents. The fact that they were not final versions only impacted

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the efficiency and duration of the NESS. It had no effect on the validity of the NESS, its findings, or the final control set.

- "The contractor readiness assessment (RA) for W76 Mod 1 assembly operations was also initiated prior to approval of the safety basis."
    - The contractor RA (CRA) started after the NNSA review of the DSA was complete and both conditions of approval (COAs) were known and provided to the contractor. Formal approval of the DSA occurred 4 days after the CRA started. While we agree with the basic premise that this action can be viewed as a break with the tenets of best practices, it had no effect on the safety of the operations (i.e., adequacy of controls), as the preliminary and final COAs did not impact the conduct or conclusions of the CRA.
- "Furthermore, despite line management's declaration of readiness, the contractor RA encountered procedures that contained numerous errors and discovered that some procedures could not be performed as written."
    - NNSA concedes that the number of identified procedural errors were atypical, suggesting a lower state of readiness than that anticipated by the contractor or NNSA. However, in another respect, the very discovery of all these errors is reassuring in suggesting a robust process carried out by competent and independent contractor staff as intended by process design and requirements.
- "In January 30, 2007, letter to the Deputy Secretary of Energy, the Board commended DOE's Chief Operating Officer for Environmental Management (EM) for clarifying DOE-EM's expectation that a contractor RA will not begin without an approved safety basis in place, and expressed concern that NNSA had not benefited from the lessons learned provided by DOE-EM."
    - PXSO instituted the same requirement in a local procedure (Pantex Procedure 115.1.0, *Startup and Restart of Pantex Plant Activities*) several years ago, and that requirement is still in effect. PXSO carefully considered the specifics of the situation before granting permission to the contractor to go forward with the CRA before its formal approval of the safety basis. In addition, the NNSA CTA plans to issue implementing guidance by September 30, 2007 alerting NNSA offices and contractors that it is an NNSA expectation that the safety basis and controls be finalized and approved before a CRA starts.

In the conclusion to your letter, you also asked three specific questions:

1. What specific actions will be taken by NNSA to verify that startup activities for the W76 Mod 1 project have been adequately performed?

   This action is complete.

   The CRA, NNSA RA, and NESS are all complete; all pre-start findings have been closed. Corrective action plans have been established for post-start findings. No additional start-up or review-related actions are required to authorize operations. The

NESS was conducted April 10 - 13, 17 - 20, 24 - 26, 2007. The NESSG identified one pre-start and two post-start findings. The NESSG Chair reviewed the final Documented Safety Analysis (DSA)/Safety Evaluation Report (SER) and determined there was no impact on NESS results. The pre-start finding is closed. NA-12 approved the NESS report on May 22, 2007.

The CRA was conducted May 4 - 21, 2007, and identified 20 pre-start findings. All pre-start findings are closed.

The DSA was approved on May 8, 2007.

The NNSA RA was conducted Jun 6 - 15, 2007, and identified three pre-start and two post-start findings. The pre-start findings are closed.

2. What specific actions will be taken by NNSA to ensure compliance with, and minimize exemptions to, DOE requirements and expectations during startup and restart of nuclear explosive operations at Pantex?

   NNSA weapon program start-up activities have been performed in accordance with applicable requirements. Exemption requests are rare and are granted only after careful consideration of the maturity of the related nuclear safety processes and the operation's safety basis, as well as the contractor's past performance in regard to the affected requirement.

   As mentioned earlier, PXSO Procedure 115.1.0 requires that contractors not start their CRA unless the associated documented safety analysis is approved and any conditions of approval have been resolved. In the case of W76-1 assembly operations, a deviation to that local prerequisite was approved by PXSO based on BWXT's past improved start-up performance, the requirement that all conditions from the approval of the safety analysis were closed prior to completion of the CRA, the fact that the assembly process is essentially the reverse of the disassembly and inspection process (the safety basis for which had already been reviewed and approved by NNSA), and because the safety analysis had been under change control (through the unreviewed safety question process) since it was submitted to PXSO for approval on April 6, 2007. Additionally, it is noted that PXSO's review of the W76-1 assembly safety analysis was complete, comments had been discussed with the contractor, and the PXSO approval documentation was in final preparation at the start of the CRA.

   Again, complex-wide clarifying guidance on NNSA expectations regarding the sequencing of approval of the safety basis and start of the CRA will be issued by the CTA in the near future.

3. When will the above actions be completed?

   The first action is complete. The issuance of the CTA guidance describing NNSA expectations regarding the sequencing of safety basis approval and CRA is expected by September 30, 2007.

If you have further questions, please contact me or Steve Goodrum at (202) 586-4879.

Sincerely,

Martin J. Schoenbauer
Acting Deputy Administrator
for Defense Programs

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