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DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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98-0001732



April 15, 1998

The Honorable Victor H. Reis
Assistant Secretary for Defense Programs
Department of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585-0104

Dear Dr. Reis:

It has come to the attention of the Defense Nuclear Facilities Safety Board (Board) that the Office of Defense Programs has initiated a weapons complex-wide assessment of present knowledge preservation and archiving programs. It is the Board's understanding that this assessment will also evaluate what future programs are needed to capture all information essential to the success of the Department of Energy's (DOE) stockpile management and support mission.

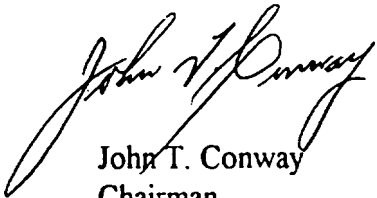
The Board is encouraged by the initiation of this assessment, as it has the potential to yield a program that could resolve concerns originally expressed in Recommendation 93-6, *Maintaining Access to Nuclear Weapons Expertise in the Defense Nuclear Complex*. The Board and the Office of Defense Programs have had a lengthy dialogue on the subject of knowledge preservation and archiving since the issuance of this recommendation. Highlighted below are those questions the new assessment, and resulting programmatic management actions, will need to address if the Board and DOE are to effect closure of Recommendation 93-6:

- There is still an urgent need to capture previously undocumented information from highly experienced individuals before they retire or are otherwise lost to the nuclear weapons enterprise. These people continue to depart the program on a daily basis, and there needs to be a formal and systematic approach in place to identify those who possess critical information, and then to capture that information.
- The knowledge and information in the weapons program that needs to be captured falls into two categories—data for immediate use (e.g., for the development of safe assembly and disassembly procedures for use at the Pantex Plant) and data that document a historical enterprise not currently being pursued (e.g., for underground nuclear testing). Both categories of data are perishable, and both therefore need to be pursued on a priority schedule.

- There is an art to effective knowledge capture, as DOE has discovered in the years since Recommendation 93-6 was issued. A structured approach to information elicitation, with input and involvement by the ultimate customers of the data (e.g., the hazard analysts), is essential if individual interviews or discussion panel sessions are to be fruitful.
- The information that is captured must be preserved in a format that supports effective retrieval and search. No storage format developed to date will preserve information forever; an effective knowledge preservation program must constantly monitor for data degradation and proactively plan for data transfer to the next generation of storage media when necessary.
- Knowledge preservation is too important to the stockpile management and support mission to continue as a fragmented program. The program to date has been dependent on widely varying perceptions of priorities within DOE and at the laboratories; uneven and often inadequate funding levels have been the result. Active oversight and strategic guidance with regard to funding by the Office of Defense Programs is essential for the program to be successful.

The Board is available to discuss these points with you or your representatives as the assessment progresses. In addition, we request that the results of the assessment be briefed to us at its conclusion. If you have any questions, please do not hesitate to call me.

Sincerely,



John T. Conway
Chairman

c: Mark B. Whitaker, Jr.