

[DNFSB LETTERHEAD]

April 2, 1997

The Honorable Thomas P. Grumbly
Under Secretary of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585-1000

Dear Mr. Grumbly:

As a follow-on to the closure of Recommendation 91-6, *Radiation Protection for Workers and the General Public at Department of Energy (DOE) Defense Nuclear Facilities*, the Defense Nuclear Facilities Safety Board (Board) has been following the Department of Energy's (DOE) progress toward improving the functional area qualification standard for federal radiation protection personnel. DOE developed this standard, *Radiation Protection Qualification Standard for Defense Nuclear Facilities Technical Personnel*, in response to Board Recommendation 93-3, *Improving DOE Technical Capability in Defense Nuclear Facilities Programs*. This standard was also cited by DOE in response to the task in the Recommendation 91-6 Implementation Plan related to qualification and performance of federal radiation protection personnel.

Staff members of the Board had an opportunity to review the most recent draft of this standard (February 1997), and have noted that the revision has improved over the original version. However, they believe that portions of the draft standard deserve further attention before final approval by DOE. The [enclosure](#) to this letter provides some of their suggestions for your consideration.

Sincerely,

John T. Conway
Chairman

c: The Honorable Archer L. Durham
The Honorable Tara J. O'Toole
Mr. Thomas W. Evans
Mr. Joseph E. Fitzgerald, Jr.
Mr. Mark B. Whitaker, Jr.

Enclosure

Enclosure

**Comments on DOE
Radiation Protection Qualification Standard for**

Defense Nuclear Facilities Technical Personnel, Revision 1

The February 1997 version of the draft qualification standard is an improvement over the December 1995 version. The competencies that have been identified, coupled with their supporting knowledge and skills, provide a better basis for training of DOE federal radiation protection staff than was previously available. The Board staff believes that some portions of the draft standard deserve further attention before final approval by DOE, and the following suggestions are provided:

General Comments

- The basis on which competency is to be determined is not clearly specified since the supporting knowledge and/or skills statements are not requirements. There is no baseline standard for DOE Headquarters and field elements to use in establishing a program and process that will ensure all applicable personnel meet the desired level of competency. Therefore, this standard is subjective and may not support effective and consistent implementation. DOE Order 360.1, which serves as the driver for implementing this qualification standard, provides no guidance beyond stating that Headquarters and field elements must establish a program and process to ensure that personnel meet competency requirements. Some provision for implementing guidance would be appropriate.
- There are no practical factors or performance demonstrations using radiation protection processes and equipment required under this qualification standard. DOE radiation protection personnel should have adequate hands-on experience with available technology and related processes (e.g., survey and monitoring, contamination control, application of principles of ALARA for work planning, and personnel protection). This qualification is particularly necessary if individuals at DOE field elements are to perform effectively their responsibilities and functions related to "apprais[ing] facilities, procedures, and operations to determine their adequacy to protect the workers and members of the general public from the effects of ionizing radiation." If a program is to be effective in raising the technical competence and experience level of radiation protection personnel, it must include (at some point) demonstrations of such practical experience.

Specific Comments

- There are no references to nuclear explosive or nuclear weapons operations related to safety management. The following change would address this omission:
 - Paragraph 2.5: Add DOE Order 452.1, *Nuclear Explosive and Weapon Surety Program*, and DOE Order 452.2, *Safety of Nuclear Explosive Operations*, to paragraph 2.5.
- The need for radiation protection personnel to demonstrate a level of knowledge of industry standards associated with radiation-generating devices, included in the December 1995 version (Section 2.3), also was not carried over into this version. An

appropriate place for this criterion would be in Section 2.1 on the radiation protection system, since a 10 Code of Federal Regulations (CFR) 835 Implementation Guide exists on radiation-generating devices (see 10 CFR 835/C3).