

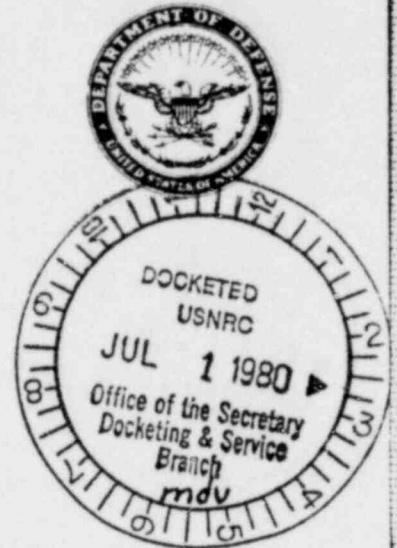
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DEPARTMENT OF THE AIR FORCE  
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26 JUN 1980

DOCKET NUMBER PR-20 (44)  
PROPOSED RULE (45 FR 20493)



Secretary of the Commission  
U.S. Nuclear Regulatory Commission  
Attention: Docketing and Service Branch  
Washington DC 20555

Dear Sir

The following comments are provided in response to the Advance Notice of Rulemaking on Certification of Personnel Dosimetry Processors (45FR20493, March 28, 1980) and Public Hearings on subject notice conducted May 28 and 29, 1980.

We support a mandatory processor certification process in concept. The attached comments support changes recommended to the Health Physics Society's draft standard for dosimetry processing services (HPSSC) as published in NUREG/CR-1064. We believe a revised standard would provide a reasonable basis for evaluating processor performance. We strongly support certification by category; establishment of a certification board to evaluate the total service provided by a processor, to act as an arbitrator between the testing laboratory and processors, and to oversee testing laboratory management; and a change in the beta exposure testing source.

Sincerely

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Chief, Aerospace Medical Consultants Div  
Office of the Surgeon General

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Comments

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## COMMENTS ON ADVANCED NOTICE OF RULEMAKING

I. The HPSSC standard has been revised to separate accident from protection exposure categories and to determine satisfactory performance by category only. We support this revision.

II. Tolerance limits in the test standard were based on a statistic which combined bias and precision into a single value which was then compared with an acceptable performance level. This proved to be unsatisfactory. The revised standard utilizes a similar statistic which is less influenced by precision. Alternate recommendations have been made for the following tolerance levels:

A. All dosimeters in the accident category shall be within  $\pm 30\%$  of the delivered dose.

B. All but one dosimeter in the protection categories shall be within  $\pm 50\%$  to pass the category.

These recommendations should be supported as fairer and allowing for the statistical nature of the testing process, as well as allowing for an occasional clerical error.

III. Recommendations have been made which propose that during the first three years:

A. Four three-month tests be offered and a processor be required to pass one of these in a calendar year. Once a category is passed, retesting in that category is not required for a year.

B. A processor may repeat testing in categories he has "failed" during a three-month test. A processor is considered to be unsatisfactory in a category only if he fails to pass any three-month test during a calendar year.

Recommend these recommendations be supported as they provide processors with the opportunity to assess their performance and make necessary adjustments.

IV. It has been proposed that certification of a processor be accomplished by a certification board based on:

A. Successful performance in the testing program.

B. Evidence of an adequate quality assurance program.

This approach is very reasonable and should be supported. Evidence to demonstrate an adequate quality assurance program should include:

1. Documented procedures for handling, processing, and interpreting dosimeters.

2. A formalized quality assurance function, organizationally independent of the processing function.

3. Documented evidence of internal exposure testing.

4. Documented evidence of interlaboratory testing.

5. Documented procedures and results for determining calibration, correction factors, dose conversion factors, and conditions.

6. A formal record keeping and audit system to insure accurate development, recording, and retrieval of exposures.

V. The HPSSC (ANSI) standard specifies  $^{90}\text{Sr}$ - $^{90}\text{Y}$  as the radioactive source to be used for beta exposure testing. This source is extremely high in energy and does not represent the most likely beta exposure environment in the nation. For the Air Force, as well as most other groups, the most likely source of beta personnel exposure involves uranium and its daughter products. This difference will likely lead to processors developing two calibration factors--one to perform the test, a second to process their own dosimeters. This may lead either to unsuccessful testing of the processor, or to a processor who can pass the test but provides poor dosimetry service. Recommend that the beta source be changed to one more representative of typical beta energies encountered in actual monitoring situations.