

HARVARD MEDICAL SCHOOL

DEPARTMENT OF RADIATION THERAPY  
DIVISION OF PHYSICS



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JOURNAL NUMBER

PROMULGED RULE

PR-20 (14)  
(45 FR 18023)

Secretary of the Commission  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Attention: Docketing and Service Branch

Dear Sir/Madam:

Attached are comments for your consideration with regard to proposed revisions to 10CFR20, Standards for Protection Against Radiation (ref: Federal Register 45, 18023, 20 March 1980).

Thank you for your consideration.

12 May 1980



Sincerely,

Kenneth R. Kase, Ph.D.

cc: Mr. Robert A. Purple  
Assistant Director  
Radiological Health  
and Standards  
Office of Standards  
and Development  
USNRC

Mr. George Holeman  
Chairman  
Radiation Protection  
Committee  
AAPM

Acknowledged by card. 5/16/80. mdv..

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Observations regarding Notice of Proposed Rulemaking

1. 10 CFR 20 does indeed need revision and updating.
2. Based on recent reports of NCRP, ICRP, and NAS BEIR Commission, there is no scientific reason for reducing the quantitative radiation protection standards with regard to external dose. Continued efforts toward actual radiation dose reduction and implementation of the ALARA principle are very appropriate and must be encouraged. Quantitative "Investigational Levels" promulgated for guidance in the development of ALARA programs are appropriate but must be understood as guides and not regulatory limits. Therefore, I do not believe they should be put into the CFR.
3. Protection Principles are reasonable and adequate and continued assumption of linear/no threshold dose effect relationship is satisfactory for protection purposes.
4. Standards for exposure - (1) "Special provisions for limiting the exposure to susceptible groups": This possibility should certainly be considered, but I think there will be great difficulties in defining such groups in general once one moves beyond pregnant women and minors. An adequate ALARA program will adequately limit exposures so that "special groups" need not be provided for separately.  
  
(2) Derived standards: MPC and contamination limits should be specified. Annual limits of intake is a good concept, but it would be almost impossible to verify compliance even for occupational exposures, much less for the general public. ALI should not be in the regulations.  
  
(3) Effluent release limits: such limits are needed, but again, ALARA guidelines do not belong in the regulations.

5. Requirements for a protection program: The most important requirement listed under this section is for training. This requirement should specify in some detail the requirements for persons handling and using radioactive material, of course. Equally important should be requirements for persons who establish and manage radiation protection programs. If the training required by the regulations is adequate, the detailed specification of monitoring, surveying, instrument maintenance techniques, etc. which tend to creep into regulations and limit reasonable flexibility would not be necessary.
6. SI units should be used in any update of 10 CFR 20.

In summary, an update of 10 CFR 20 is needed. I would encourage greater emphasis on training requirements and less emphasis on specifying rigid procedures and techniques for carrying out a radiation protection program. I am definitely opposed to specifying numerical guidelines in the CFR whether it be for personnel exposure, effluent release or any other part of the program. Any numerical values appearing in the CFR should be regulatory limits and not guides.