

DOCKET NUMBER  
PROPOSED RULE

PR-Misc Notice  
Reg Guide

Zoology Research Bldg.  
117 W. Johnson St.  
Madison, WI. 53706  
June 17, 1980

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

Att: Docketing and Service Branch

Dear Sir or Madam:


I have briefly reviewed the Draft Regulatory Guide and Value/Impact Statement, "Instruction Concerning Risk from Occupational Radiation Exposure," and have found it to be clearly written and much superior to all the instruction classes on radiation effects that I have ever been forced to suffer through. Most of my comments are rather picky, but I do feel that they should be incorporated into the final Guide. In particular I feel that the comments concerning Question 14 and the bibliography are particularly valid.

Please be sure to send me the citation for the Kelsey article.

Also, please keep me informed concerning programs in this area.

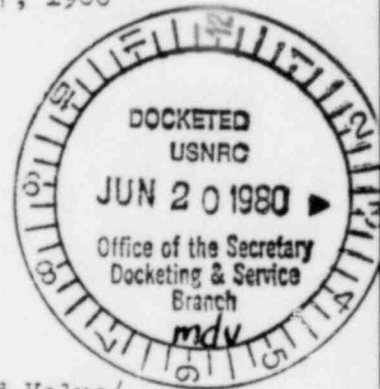
Thank you.

Sincerely,



Eric J. Boeldt

EJB:rh  
enc.



Acknowledged by card. 6/20/80. mdv.

8007100170

Comments on NRC  
INSTRUCTION CONCERNING RISK FROM OCCUPATIONAL  
RADIATION EXPOSURE

- Page 6: Question 4 should be re-arranged to read:  
"The main concern to industry workers should be the delayed incidence of cancer. Immediate or prompt effects are very unlikely since large exposures would normally occur only if there were a serious radiation accident. Accident rates in the nuclear industry have been low, and only a few accidents have resulted in overexposures. The probability of serious genetic effects in the children of workers is estimated at about one-third that of other delayed effects . . ."  
This answers the question directly rather than indirectly.
- Page 8: First paragraph, last sentence.  
The ALARA principal is not as ancient as the phrase "time honored" usually implies. The people of this country have a time-honored respect for democracy and freedom of religion, but it is hard to apply this modifier to the field of radiation protection which has barely existed for 40 years. Since the pioneers in the field of the uses of radiation (Curie, Roentgen, and others) died of radiation poisoning less than 80 years ago the use of this modifier is somewhat overbearing.
- Page 9: Last full paragraph.  
'(Most scientists would agree that 300 is a high estimate of risk and may be considered as an upper limit).'  
It should be pointed out that a few scientists consider this to be a severe underestimate, but that their views are not well substantiated. Be honest.
- Page 10: Paragraph starting with "Since cancer resulting from exposure . . ."  
A statement is made that "Several independent studies have indicated that the average loss of life . . ." A reference number from the bibliography should follow this statement. It must be remembered that engineers will be sitting through these training sessions, avoid talking down to them. Also, reference should be made to Table 2.
- Page 11: End of Question 8.  
Two sentences appearing in the text, although not exactly contradictory, seem so. They are, "At low dose levels, it is possible that the risk could be zero," and "Although the estimated increased risks of cancer are relatively low, there is a chance that they are not zero." Deleting the conditional phrase "there is a chance that" would make the paragraph more truthful and less confusing.

- Page 11: Question 9  
BEAR AND BEIR are in many ways the same committee, thus the NAS established only one advisory committee.
- Page 16: Question 14, concerning dose rate effects.  
NCRP report No. 64, Influence of Dose and Its Distribution in time on Dose-Response Relationship for Low-LET Radiation, states in its Summary (Page 1) that "It is clear from the data obtained for all endpoints examined, from cell death to tumor induction, that a reduction in dose rate in general results in a reduced biological effect." The NRC's reply to question 14 directly contradicts this statement. Although for ease of calculations the lack of a dose rate effect is conservative and often necessary, this misrepresentation is not necessary.
- Page 18: Section 18  
The first sentence is not clear. Delete "to Federal agencies." Also explain NCRP and ICRP.
- Page 22: Section 24a.  
Bibliographic data should be given for the "independent study."
- Page 28: Bibliography  
The bibliography could reasonably strike many people as being very one-sided. Although I have not fully reviewed Risk of Energy Production by H. Inhaber, I have scanned Risk of Renewable Energy Sources: A Critique of the Inhaber Report by Holdren, et al. This critique discusses so many substantial faults in Inhaber's thesis and is so emphatic that there appears to be reason to doubt the quality of Inhaber's work. Modifiers such as "incompetent", "biased", "conceptual confusions", "misreadings and misrepresentations of literature", "improper calculational procedures", "internal discrepancies", and "untenable assumptions and contentions" are used too freely for me to have strong faith in Inhaber's report. Thus, I strongly suggest that Risk of Energy Production be deleted from the bibliography.

Although I am not familiar with all the works mentioned in the bibliography, I believe all the individual authors mentioned could be considered by many people to be "pro-nuclear." Inclusion of even one article by someone not of "THE ESTABLISHMENT" would make the whole list more palatable. I suggest "The Question of Radiation Causation of Cancer in Hanford Workers", by John W. Gofman, Health Physics, Vol. 37, Nov. 1979. The article is well balanced and well written, and discusses an issue of importance to radiation workers. Also, the Hanford study, though incomplete, should receive some mention in this instruction manual

The article by Kelsey ["Comparison of Relative Risk from Radiation Exposure and Other Common Hazards", Health Physics, Vol. 31, August 1978] does not appear to exist in either Vol.31 or the August 1978 issue of Health Physics. Please send me the correct citation for the article.