

December 29, 2003

William M. Beckner, Executive Director
National Council on Radiation Protection
and Measurements
7910 Woodmont Avenue, Suite 800
Bethesda, MD 20814-3095

Dear Mr. Beckner:

Thank you for the opportunity to provide comments on draft report SC 1-4 prepared by the National Council on Radiation Protection and Measurements (NCRP) entitled, "Extrapolation of Risks From Nonhuman Experimental Systems to Man." In general the NRC staff who reviewed the report stated that it is well written and the topic of radiation protection is adequately treated and accurate. Our comments are attached.

For additional information concerning the review, please contact Sheryl Burrows of my staff at (301) 415-6086 or e-mail address SAB2@nrc.gov.

Sincerely,

/RA/Cheryl A. Trottier

Cheryl A. Trottier, Chief
Radiation Protection, Environmental Risk,
and Waste Management Branch
Division of Systems Analysis and Regulatory Effectiveness
Office of Nuclear Regulatory Research

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Comments from the Nuclear Regulatory Commission on NCRP Report SC 1-4 “Extrapolation of Risks From Nonhuman Experimental Systems to Man” (draft).

1. The title of the report does not accurately reflect its contents. It is more a review of the current state of our understanding of the mechanisms of carcinogenesis, with a little radiation carcinogenesis thrown in. Extrapolation is mentioned here and there, but almost as an aside, and always very briefly, in passing. It would be helpful to change the name of the report to reflect the contents, e.g. a review of current understanding of the mechanisms of carcinogenesis, with implications for radiation protection. Unless expanded to include more extrapolation, this report will not be of much use to practicing radiation protection professionals.
2. There is a confusing and inconsistent use of acronyms in this draft. For example: the acronym CML for chronic myelogenous leukemia, is used on page 34 but not defined until page 36. On the other hand, ALL for acute lymphocytic leukemia is used and defined on both page 34 and 36. In addition, closely related cancers have similar acronyms (e.g., AML, ALL, ANLL) which makes the text difficult to follow at times. To improve the readability of the document, add an index, or attachment, that compiles of all the acronyms used in the document, with their definitions, into a single reference source.
3. Since little is discussed about extrapolation in the body of the report, it may be helpful to include a lengthy discussion of this topic in the executive summary. What is needed is a discussion of what types of data form the bases for establishing protection standards, where this data comes from, where the weakest links occur, what approaches have been used in the past to fill these gaps (we do have protection standards), and what needs to be done to strengthen these weaknesses. It would also be nice to highlight in this discussion why we need extrapolation, and what conditions or criteria would be required for a valid, or at least a usable, extrapolation.