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Mr. James M. Taylor
Executive Director for Operations
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Dear Mr. Taylor:

SUBJECT: HEALTH EFFECTS VALUATION

During the 423rd meeting of the Advisory Committee on Reactor Safeguards, July 13-14, 1995, we discussed the recent staff reconsideration of the health effects valuation. During this meeting, we had the benefit of discussions with representatives of the staff. We also had the benefit of the document referenced but it differs in some details from the presentation.

In reviewing the health effects valuation, the staff recognized the recent risk coefficients issued by the International Commission on Radiological Protection and retained the linear dose hypothesis. These were used along with the Office of Management and Budget (OMB) recommended value for a "statistical life" to arrive at an indicated increase from the present $1000/person-rem to $2000/person-rem. We were told that such a change is unwarranted because of the order-of-magnitude uncertainty in the regulatory analysis. Consequently, the staff is not proposing to change the value and is considering the following four options for proceeding on this issue:

Retain the $1000/person-rem but require discounting.

Retain the $1000/person-rem but require separate quantification of offsite property effects.

Retain the $1000/person-rem but require both discounting and separate quantification of offsite property consequences.

Retain status quo in the near term but allow use of the $2000/person-rem subject to discounting and/or separate quantification of offsite property consequences as part of optional sensitivity studies.

We believe that the change in the value is warranted and do not support any of the four options. In the interest of technical correctness, consistency in use across Federal agencies, and regulatory coherence, we recommend use of the new value of $2000/person-rem, as derived from the rounded-off product of the value of a "statistical life" ($3M) and a risk coefficient for the stochastic health effects (7.3 X 10-4 fatalities/person-rem). This value should be used as a dollar proxy for only the health effects associated with dose and should not be used (as in the past with the previous value) as a surrogate for other consequences such as

prompt fatalities and land contamination. These other consequences should be evaluated separately as suggested in the draft Federal Register Notice. The MACCS code with an updated economic model would be an appropriate tool for such an evaluation. The new value should be expressed in terms of an identified year's dollars to allow users to make their own correction for inflation. Future effects should be discounted by present worth methods.

The selection of the value of a "statistical life" is the crucial determinant of the value of the health effects conversion factor. We believe that the present most appropriate means of establishing such a value is through the willingness-to-pay approach. This, however, can give a broad range of results that leads to a basic problem of defending the selection of any value from the range. The fact that a value is a median or a mean is not an appropriate defense for its selection in this case. In the absence of knowledge of any rationale underlying the existence of such a broad range, one has little recourse but to fall back on experience and judgment. In this spirit, we propose that there are basically two sound reasons for selecting the value of $3M for a "statistical life".

1. It is specifically cited by the OMB. This is a strong step toward consistency in use across government agencies.

2. Judgment and experience show that it is an appropriate value.

In the past, the $1000/person-rem has been used to represent both exposure and land contamination costs. We believe an exercise should be conducted to develop a sample estimate using the updated MACCS code for the relative magnitude of land contamination costs for severe accidents. Such a comparison would provide guidance on the need for a review of those previous decisions that may have involved predictions of considerable land contamination.

Sincerely,

/s/

T. S. Kress
Chairman

Reference:
Letter dated March 6, 1995, from Bill M. Morris, Director, Office of Nuclear Regulatory Research, to T. S. Kress, Chairman, ACRS. Transmitted draft Federal Register Notice on Proposed Revision to the Health Effects Valuation. (DRAFT PREDECISIONAL)

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