

Appendix J
From NRC's Below Regulatory Concern Policy

Table 1

Incremental Annual Dose*	Hypothetical Incremental Annual Risk**	Hypothetical Lifetime Risk From Continuing Annual Dose***
100mrem (1.0 mSv)	5x10 ⁻⁵	3.5x10 ⁻³
10 mrem (0.1 mSv)	5 x 10 ⁻⁶	3.5 x 10 ⁻⁴
1 mrem (0.01 mSv)	5 x 10 ⁻⁷	3.5 x 10 ⁻⁵
0.1 mrem (0.001 mSv)	5 x 10 ⁻⁸	3.5 x 10 ⁻⁶

* The expression of dose refers to the Total Effective Dose Equivalent. This term is the sum of the deep [whole body] dose equivalent for sources external to the body and the committed effective [whole body] dose equivalent for sources internal to the body.

** Risk coefficient of 5 x 10⁻⁴ per rem (5 x 10⁻² per Sv) for low linear energy transfer radiation has been conservatively based on the results reported in UNSCEAR 1988 (Footnote 2) and BEIR V (see also NUREG/CR-4214, Rev. 1).

III. Dose and Risk Estimation

The Commission recognizes that it is frequently not possible to measure risk to individuals or populations directly and, in most situations, it is impractical to measure annual doses to individuals at the low levels associated with potential exemption decisions. Typically, radionuclide concentrations or radiation dose rates can only be measured before the radioactive material is released from regulatory control. Estimates of doses to members of the public from the types of practices that the Commission would consider exempting from regulatory control must be based on input of these measurements onto exposure pathway models, using assumptions related to the ways in which people might become exposed. These assumptions incorporate sufficient conservatism to account for uncertainties so that any actual doses would be expected to be lower than the calculated doses. The Commission believes that this is an appropriate approach to be taken when determining if an exemption from some or all regulatory controls is warranted.

The additional views of Commissioner Curtiss and Chairman Carr's comments are attached.

Dated at Rockville, Maryland, this 22nd day of June 1990.