STANFORD UNIVERSITY MEDICAL CENTER

DEPARTMENT OF GENETICS

March 8, 1977

Mr. Robert B. Minogue
Director
Office of Standards Development
Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Minogue,

This letter concerns the petition, submitted by the Natural Resources Defense Council, Inc. in September 1975 requesting a reexamination of "radiation standards for occupational whole-body exposure".

The gist of the NRDC petition is that the current occupational standard of 5 rem/year poses an unreasonable possibility of health risks to employees and should be reduced by a substantial fraction. In view of the probabilistic and accumulative nature of these risks, a variety of formulas might well be entertained consistent with a reasonable "pricing" of the health impact of radiation exposure.

In this connection, I have been interested to learn that the NRC itself has adopted amendments to Appendix 1, 10 CFR Part 50. In particular, according to the Federal Register for September 4, 1975, page 40816, the NRC has proposed that the value of $1000 per total body man rem be adopted as the premise of a general cost benefit calculus, unless some lesser value may be demonstrated to be suitable in a particular case.

While admitting that there may be exceptional circumstances in individual cases, I would submit that the imposition of a health risk stipulated to be equivalent to $5000 per year as the accepted upper limit of occupational exposure, is not a reasonable standard, at least not unless it can be shown that there has been appropriate compensation to the exposed worker.

Without discounting the possibility of allowances for exceptional deviations, I would suggest that the expected acceptable limit be set at no greater than 1 rem per year, or preferably a smaller number, and that such a step is indispensable to be consistent with the $1000/rem guideline.

Sincerely yours,

Joshua Lederberg
Professor of Genetics