



DEFENSE NUCLEAR AGENCY

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Dr. Elliot Stonehill
National Cancer Institute
National Institutes of Health
Bldg 31, Room 10A52
Bethesda, Maryland 20205

Dear Dr. Stonehill:

This is in response to the request by Dr. Lowe regarding Defense Department views on elements to be treated in developing a Federal strategy for research into the biological effects of ionizing radiation. I believe there are three broad elements that should be considered, as discussed below.

The first relates to the effects that occur following exposures to ionizing radiation of any quality at any level of dose, i.e., dose-effect relationships. The concern of the public, as well as of the scientific, medical, governmental and industrial communities, is really how harmful exposures to radiation are. A better understanding of this area is required for the establishment of acceptable (perhaps unarguable) risk estimates, upon which the best standards may be based for protection purposes while assuring the maximum benefit to society from the many applications of radiation. Thus the strategy obviously must provide for obtaining enhanced knowledge in this area--effects, mechanisms and amelioration of effects. This will require the broadest range of projects in a variety of model systems, including basic, pragmatic, and epidemiological studies, in order to address the ultimate question--what are the effects on humans and what are the true risks.

Secondly, it must be recognized that there are many beneficial applications of radiation, and that it may be quite desirable to expand the uses to which radiation may be put. Thus the strategy must provide for research designed to develop new uses of radiation and to improve upon existing applications--particularly with regard to medical and health uses, while reducing unnecessary exposures to both the receiver of the radiation and the operator of the source.

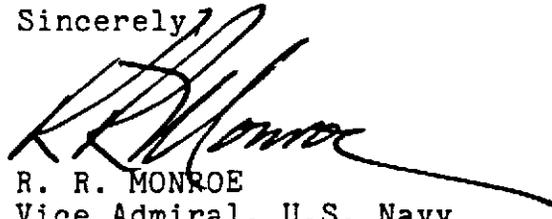
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Dr. Elliot Stonehill

The final element the strategy must accommodate concerns specific agency needs--mission-related requirements. While the preceding two elements inherently will cover many agency requirements by determining effects, providing data for developing of standards, and enhancing the uses of radiation, there will necessarily remain needs that are peculiar to an individual agency's mission. For example, NASA obviously has requirements related to the space radiation environment, whereas DoD has requirements related to effects of nuclear weapons employment. It is imperative that this be acknowledged and that the research strategy provide for support of research by an agency in furtherance of its unique needs.

As a final comment, I believe the document that is being prepared should outline an overall strategy which has the objectives of reducing the uncertainties associated with assessment of risks and defining means through which the benefits of radiation may be safely realized. The Department of Defense will provide all possible help in the development of this report.

Sincerely,



R. R. MONROE
Vice Admiral, U.S. Navy
Director