

# memorandum

H41

DATE: APR 30 1987

REPLY TO  
ATTN OF: EH-35

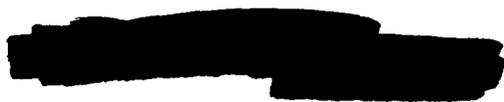
SUBJECT: Comments on Draft DOE 5480.XX, "Radiation Protection of the Public and the Environment"

TO: Joseph Fitzgerald, Acting Director  
Office of Safety Policy

It makes no sense to oppose an avalanche, but for the record the following comments are provided on the policy aspects of DOE 5480.XX. For many years the agencies stated policy was to issue radiation protection standards to protect the public and the environment. These standards were derived from Federal requirements recommended by the Federal Radiation Council (FRC) and approved by the President in 1960. In a memo signed by William A. Vaughan, August, 1985, this policy was changed to state: "It is DOE policy to follow the guidance of the National Council on Radiation Protection and Measurements (NCRP) to the fullest extent practicable...". If approved, the draft DOE Order goes further. The draft states: "It is the policy of DOE to adopt and implement radiation protection standards that are consistent with the recommendations of the NCRP and the ICRP and the guidance and standards issued by the EPA". The basic numerical dose limit in the draft is based upon ICRP recommendations. I question this new policy for the following reasons:

1. EPA recommendations that are approved by the President are more than guides and standards, they are Federal Regulations having the force of law.
2. Within the Health Physics community the void in leadership in development of regulations at the Federal level has been referred to as "the mess in radiation protection". The basic policy and Federal Regulations issued by FRC in 1960 have never been revised. This is an incredible state of affairs. The patent neglect of the standard setting process at the Federal level is in part DOE's responsibility. Agencies including DOE that could have assisted in obtaining a uniform approach to radiation protection have withheld their assistance from those interagency initiatives that have attempted to provide a mechanism for coordinating such revisions. I expect that the Committee on Interagency Radiation Research and Policy Coordination (CIRRPC) will likewise not be allowed to bring sense and reason to radiation protection. Member agencies identified the need for updated Federal policy and regulations as their highest priority problem area in radiation protection in a CIRRPC survey. See attached material. CIRRPC is working on lower priority issues because these same agencies are guarding their perogatives and particularly there are members of EPA, DOE, and NRC staff who prefer to work in this vacuum wanting no interference from any interagency coordination group. This is bureaucracy at its absolute worst.

EP files

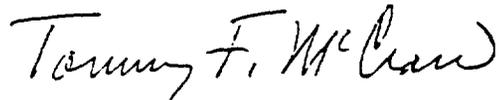


Problems - Inconsistent Stds.

3. According to their published reports neither ICRP nor NCRP intended that their recommendations be adopted directly as regulations without any further consideration. Has anyone checked with NCRP and ICRP to see if they would be comfortable with the draft policy statement?
4. The Federal Radiation Council of the 1960's and 70's insulated U.S. Federal Agencies having radiation protection responsibilities from ICRP and NCRP recommendations. The reason this was needed was clearly stated by Dr. Lauriston Taylor, Chairman of NCRP, in a memorandum to the NCRP Executive Committee: "Most recent reductions have not been based upon direct knowledge of health hazards but on the technology which has made reduced exposure practical and economically feasible". I suggest DOE should not support the contention implied in the draft policy that only members of ICRP and NCRP committees are wise enough to make value judgments on what is feasible and practicable in radiation protection. ICRP and NCRP were created to assess biological risks, not to deal with the practicalities of radiation protection or the apportionment of risk. Anyone interested in this issue should read Dr. Taylor's testimony in Appendix Q of DOE/TIC-10124, where he discusses the reasons for establishing the FRC and problems with EPA. See attachment.
5. The health risks that ICRP and NCRP evaluate are hypothetical while the feasibility and cost of complying with lower and lower standards are real. NCRP stepped out of the role of technical advisor and into the role of a regulatory authority when recommendations were made on how the proposed basic annual limit of 100 mrem/yr for the public should be applied for individual facilities. ICRP moved out of their area of responsibility when they compared hypothetical radiation risks with real industrial risks to derive a recommendation for what risk should be acceptable in the nuclear industry. This is an EPA not an ICRP task. ICRP and NCRP have usurped EPA's authority. It is a fact not subject to debate, that if a DOE contractor maintains exposures of the most sensitive group within an offsite population within 170 mrem/yr, and has implemented ALARA, that contractor is in compliance with current Federal Regulations regardless of what ICRP and NCRP may have recommended.

I urge that the Department not circumvent the process Congress put in place to achieve uniform implementation of radiation protection practices among Federal Agencies. Unless it is our intent to embarrass EPA, DOE should not adopt recommendations of ICRP and NCRP that have not been formally evaluated by EPA and approved by the President. The Department needs Federal Regulations that have been approved at the highest levels, not recommendations lifted from ICRP and NCRP reports.

The introductory statement for DOE policy in DOE 5480.XX should be: "DOE implements the Federal radiation protection policy and regulations recommended by EPA and approved by the President for the protection of the public and the environment. DOE operations will be considered to be in compliance with radiation protection requirements when basic Federal regulations are met." There is no need to make reference to ALARA in the DOE policy statement because ALARA is a part of Federal Regulations. DOE's radiation protection policy statement should be clear and unencumbered by operational details such as ALARA and requirements for radiological monitoring.



Tommy McCraw  
Office of Safety Policy

COMMITTEE ON INTERAGENCY RADIATION RESEARCH  
AND POLICY COORDINATION

REPORT ON  
IDENTIFICATION OF FEDERAL RADIATION ISSUES

TO THE  
FEDERAL COORDINATING COUNCIL FOR  
SCIENCE, ENGINEERING, AND TECHNOLOGY

MARCH 21, 1986

In December 1984, the CIRRPC Executive Committee began a series of meetings with senior staff of each member agency. Specific matters affecting agencies' programs were brought to light, problem areas identified, and invaluable perspectives gained into the major issues affecting federal government operations, upon which CIRRPC must focus its attention.

Since the Congress and national professional societies provided their input quite independently from those of the federal agencies, a further cross-section of opinion was achieved.

A number of federal agencies, congressional respondents and professional societies have emphasized that the broad U.S. policies, regulations, and standards that provide the overall umbrella for national radiation protection have not been systematically reviewed and updated since 1960, and that this is urgently needed. The Federal Radiation Council was disestablished in 1970, and this resulted in a loss of effectiveness in coordinating federal policy on radiation issues. The Congress noted this lack of coordination and cohesiveness among the federal agencies in policy-making and standards-setting and supported CIRRPC's efforts in this regard.

### III. LISTING OF ISSUES

Ten national radiation issues were identified as follows:

- o Federal Radiation Policy, Regulations and Standards
- o Radiation Compensation
- o Radon
- o Non-Ionizing Radiation
- o High-LET Radiation
- o Food Irradiation

- o Radioactive Wastes
- o Radiation Measurements, Records and Control
- o Public Information and Education
- o Emergency Preparedness and Clean Up Standards

#### IV. DEFINITION AND AGGREGATION OF RADIATION ISSUES

The above list of issues results from the aggregation of 34 specific issues into 10 major topics. Diverse policy, research, management and science issues were cited by the respondents and these are integrated into the 10 topics.

The purpose of this section is to list the composition of the 10 issues.

##### FEDERAL RADIATION POLICY, REGULATIONS AND STANDARDS

This issue includes the following elements or was expressed in the following ways:

- o Need for consistent federal radiation policies;
- o Need for mutually consistent and coordinated radiation regulations and standards, particularly those involving multiple federal agencies and jurisdictions;
- o Establishment of radiation levels below regulatory concern (de minimis);
- o Coordination of U.S. policies and positions on radiation issues at international policy meetings;
- o Updating of U.S. radiation policy, regulations, and review of existing standards (particularly revisions of 10 CFR Part 20 and FRC Report No. 1);

- o Clarification of As Low As Reasonably Achievable (ALARA) policy:
  - o Need for scientifically-based standards;
  - o "Umbrella" dose limits, age-averaging, dose commitments, in utero standards, and collective doses; and
  - o Introduction of a risk-based standards system, standardized radiation risk estimation and comparability with other risks.

#### RADIATION COMPENSATION

Compensation procedures for radiation injury have profound policy, legal and scientific implications. It is of primary interest to the Justice Department in adjudicating radiation injury claims of all types. The Veterans Administration is interested in the applicability of the Radioepidemiological Tables (for estimating the probability of causation of radiogenic cancers) to the many veterans' radiation injury claims related to low level radiation exposure. The Defense Department is concerned over the possible operational impact of occupational exposure of military personnel. The Interior Department is interested because of claims arising from exposure of native Americans and residents of the Pacific Trust Territories. The Department of Health and Human Services, which was assigned the task of preparing Radioepidemiological Tables by the Congress, is concerned over the appropriate use of the tables. The Labor Department and Nuclear Regulatory Commission also have an interest in this issue from the standpoint of worker exposures.

The Senate Subcommittee on Nuclear Regulation of the Committee on Environment and Public Works and the Senate Labor and Human Resources Committee held joint hearings on this subject in 1985. Those individuals

## A P P E N D I X Q

### TESTIMONY BEFORE THE SENATE COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION (Excerpts)

(Senator Warren G. Magnuson)

June 17, 1977

Prepared for the National Council on Radiation Protection and Measurements by  
Lauriston S. Taylor

#### CONTENTS

#### II. Two Major Problems

##### B. Transfer of FRC to a single agency

(1) Study by Bureau of the Budget

(2) Environmental Protection Agency responsibilities inherited from the Federal Radiation Council

#### III. Possible Solutions for Some Problems

##### A. Single new agency

##### B. Reactivation of the Federal Radiation Council

#### II.B. Transfer of FRC to a Single Agency

The second broad area of concern has been the transfer of the responsibilities of the Federal Radiation Council, as established in 1959, to a single federal agency which must live and operate in parallel with many other federal agencies having legitimate concerns with health and safety in the field of ionizing radiation.

##### (1) Bureau of the Budget Study

In the late 1950's it was recognized, as a result of hearings by the Joint Committee on Atomic Energy, that the federal government had no mechanism for establishing radiation protection standards and had always been in the position of having to accept those developed by the NCRP (then the National Committee on Radiation Protection). The problem was studied in depth by Dr. Robert Cutler in the Bureau of the Budget in 1959. The concept of establishing this responsibility within any single federal agency was examined and completely rejected. In addition to discussions with various agencies and outside groups, the matter was considered by the NCRP and I was personally very deeply involved in many of the discussions. This involvement was such that an agreement had been reached with the President's Science Advisor at that time, that the Executive Order would not be signed until I had approved it. (It so happened that I was in Europe at the time they wished to release the statement establishing the Federal Radiation Council and was consulted by telephone by Drs. Killian and Kistiakowsky relative to the specific language of the Executive Order. After the FRC was established, I became a member of its working group and from time to time an acting member of the FRC itself acting on behalf of the Secretary of Commerce.)

The major findings of the Cutler study at that time included:

- (a) No one agency could provide the breadth of coverage needed for the development of radiation protection standards.
- (b) No one agency could be assured, in the field of radiation protection, of adequate cooperation by all other concerned agencies.
- (c) Interagency committees in the normal sense were traditionally ineffective and frequently served only for window dressing.
- (d) Bureaucratic "necessities" stimulate a kind of rivalry that is costly and inefficient.

The original objectives assigned to the Federal Radiation Council were to adopt or develop protection standards needed by the federal government to carry out its individual federal responsibilities. This was needed because (as noted above) of the discovery that up until then the federal government had been in a position of having to essentially accept the standards recommended by a body (the NCRP) over which it had no control. This was clearly recognized by the government as well as by the NCRP as an untenable situation.

A critically important feature of the FRC was its mode of operation. The FRC itself was composed of Departmental Heads (Cabinet Officers), but each in turn assigned one of his top radiation experts to a "working group" that met weekly. It was their responsibility to consider the technical details and endeavor to reach agreement among the several agencies represented. This was then modified or stamped with approval by the most senior officers in the government. It was a stamp of authority that could not be achieved were the FRC in any single agency.

In its first activity after its formation in 1959, the Council made an intensive study of permissible dose standards. This study drew in representatives from government agencies, government laboratories, and many parts of the public sector - individuals with established reputations of knowledge and experience bearing on the subject. Following this intensive study, the FRC in its Report No. 1 adopted as basic standards for government use those that had been recommended by the NCRP and were already in use throughout the country. However, by this action on the part of an established government body, what had always been "recommendations by the NCRP" thenceforward became the standards of the U.S. Government for U.S. Government use.

It was an excellent example of the system of checks and balances that can evolve through close cooperation between the government and private bodies.

When the Environmental Protection Agency (EPA) was established by Executive Order, the functions of the FRC were transferred to the new organization without any change in the language from the original Executive Order EO-10881 or the subsequent amendment to the Atomic Energy Act of 1954. At the time that the reorganization and formation of the EPA was taking place, the Joint Committee on Atomic Energy had important reservations regarding the transfer of the original language into the new reorganization bill. (Adoption by reference). The JCAE prepared some alternate proposals. However, these were too complicated and would have involved too heavy a legal commitment by the National Council on Radiation Protection and the National Academy of Sciences to work with a federal agency.

While there were some features of the JCAE proposal that were desirable, the overall plan was basically opposed by both the NCRP and the NAS and never came to a critical issue.

## (2) EPA Responsibilities from FRC

As I see the situation today, I feel that the EPA has grossly over-extended its interpretation of the FRC responsibilities to position that are far beyond the original objectives which applied to the federal government only. I believe that the proper interpretation of the original intent in the establishment of the FRC is clearly shown by the eight FRC reports which were issued prior to the establishment of the EPA.

Among improper areas of concern to the EPA are those in the general area of medical practice, patient dose limitation, shielding in medical installations, occupational exposures, etc. In this connection, the EPA has openly stated their intention to extend their areas of concern to non-governmental medical practice by their own interpretation that any services reimbursed by Medicare automatically fall within the FRC scope of "government needs." It is difficult also to see how any such interpretation can fall within the structure of "environmental protection." Their attitude toward using Medicare as a lever for governmental control shows a clear recognition of the fact that some kind of subterfuge was needed to support their extension of the stated FRC objectives. The EPA inclusion of general medical radiological procedures, either under FRC or environmental protection philosophy, over-taxes the imagination.

Such interpretation would place any regulatory, advisory, or control responsibilities in an organization and atmosphere that is professionally and intellectually mal-suited to the problem. If radiological practice, because it touches upon such a large fraction of the population, can be described as environmental - then so can practically every other profession or business.

## III. Possible Solutions for Some Problems

Having directed attention to what may be some problem areas in several of the federal agencies concerned with radiation safety, it would be appropriate to consider some possible solutions. Some of these have already been considered from time to time.

#### A. Single New Agency

Recognizing the complex matrix of government interest in radiation health and safety, one proposal has been to establish a new single agency to set standards and develop the corresponding regulations (for government use only) and to organize any needed enforcement capability. Upon consideration, it appears to be impractical to form any new agency that could acquire the needed professional competence and proper working atmosphere to accomplish the overall objective above. Consider the varied, and often conflicting, interests of Defense, HEW, Agriculture, Medicine, Labor, etc. All you have to do is to look at the various splinter operations that have developed in the federal government over the past two decades. Building up a new agency by cannibalizing from other agencies (such as ERDA, NRC, BRH) only removes pieces from successful operating organizations with a good overall competence and proper working atmosphere. Moreover, the chances of acquiring the best staff members for such a new organization are regarded as extremely remote. There are too many better and more challenging opportunities available outside of the government. Again, look around. Good working organizations will be destroyed only to generate poor new organizations.

As we look around at the assortment of radiation protection activities scattered through the federal government, the theory of placing them all in a single organization looks good, but we are convinced that the result would be at least as disastrous, and probably more so, as the situation we now have.

#### B. Reactivation of the FRC

A second solution for at least part of the problem is to reestablish the Federal Radiation Council outside of any individual agency. In doing this, one should consider the modification of the working rule in the old FRC that always required absolute unanimity upon the agency members. At times this might be an asset, but sometimes it was an absolute roadblock to progress.

Whatever the structure, the FRC should be organized at a level above the departmental level and in the Executive Office if necessary. Perhaps the solution here would be to place the FRC in the Executive Office in principle but make it possible for the FRC to operate on the basis of departmental acceptance of decisions and official agreements. With this arrangement, the Executive Office itself would be used only in the cases of necessary adjudication in those rare instances of stalemate. The existence of an executive adjudication step would probably largely eliminate any stalemate situations.

A basic policy would be that any new Federal Radiation Council actions would apply only to government operations. Any applications of FRC actions to such areas as the private practice of medicine, industry, education, etc., would be through some strictly non-federal process.

A positive step should be taken to stop the current technique of managing the private sector through subterfuge and indirection. States or other levels of government should be completely free to choose what they wish to use from the federal patterns, but be free from pressure or coercion, except when uniformity of standards would be critical and involve interstate considerations, e.g., air, water, and food contamination or protection requirements for some commercial products. There would obviously have to be some mechanism to insure the necessary compliance with federal standards for such operations as nuclear power. I believe it has already been decided that the federal standards in this area preempt those of the states.