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PROPOSED RULE [illegible] -19,20(44FR10388) (73)

Howard J. Larson
Vice President

April 24, 1979

Mr. Samuel J. Chilk
Secretary
U.S. Nuclear Regulatory Commission
Matomic Building
1717 H Street, N.W.
Washington, D.C. 20555

Dear Mr. Chilk:

The Forum's Subcommittee on Occupational Radiation Protection has reviewed the Commission's proposed rule to amend 10 CFR Parts 19 and 20 which appeared in the Federal Register of February 20, 1979. This proposed rule would eliminate the accumulated dose averaging formula, 5(N-18), the Form NRC-4 exposure history, impose a 5 rem annual dose limitation and retain the 3 rem per quarter limit. The Subcommittee's comments are directed primarily to the issue of eliminating the dose averaging formula which is an area of particular concern.

The proposed elimination of the dose averaging formula raises significant questions that appear to need further public input and discussion prior to final NRC action. In this respect, the Subcommittee had the following observations on the proposed action:

1. The Federal Register notice contains no rationale for elimination of the dose averaging formula other than; (a) the ICRP has made such a recommendation (b) deletion of the formula could have reduced the radiation dose of some 320 individuals who received more than 5 rems in 1977 and (c) the action could cause some licensees to take further action to reduce occupational doses.

2. The proposed rule change is apparently still being assessed by the NRC staff according to the wording in the Federal Register notice. This would indicate that the staff evaluation is preliminary and not yet completed.

3. The impacts of reducing flexibility for performing critical jobs and the possible increase in cumulative dose resulting from the proposed change need to be evaluated.

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4. The proposed rule change does not appear to take into full consideration extensive and continuing efforts by the nuclear power industry and the NRC to further reduce occupational exposures.

5. The Federal Register notice contains no scientific or biological data which would support the need to change the current limits. The available large body of scientific evidence still strongly supports the conclusion that the current radiation standards adequately protect human health. Controversial studies that have disagreed with this view have been extensively critiqued by qualified scientists, including those used by NRC, and found to be inconclusive with inherent faults in the methodology used. We have not yet seen a scientific evaluation supportive of these controversial studies.

There is a significant inconsistency in the proposed NRC rule. Although ICRP has recommended the deletion of the 5(N-18) formula, that group also recommended a companion provision in lieu of the formula to permit exposures above 5 rem per year in special circumstances. Thus, the NRC has chosen to adopt one part of the ICRP recommendation and not the other without supporting justification.

The Subcommittee fully supports the objective to reduce occupational radiation exposures to the lowest level reasonably achievable. The NRC indicates that the 320 individuals receiving in excess of 5 rems in 1977 represent less than 0.5 percent of the individuals participating in NRC-licensed activities. This is certainly a low percentage of the total number of workers exposed which is also indicative that the dose averaging formula has not been abused or misused. The majority of this group of workers in the nuclear power industry usually exceed 5 rems per year on rare occasions when particular experience or special skills are needed. The question of performing certain critical tasks without the availability of some type of flexibility needs to be fully evaluated.

There has been, and continues to be, a significant effort by the nuclear power industry to reduce occupational exposures through improved procedures and modifications at nuclear plants, review of plant designs, research studies to minimize sources

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of exposure and studies to identify sources and to evaluate better techniques for exposure reduction. In the latter category, for example, the Atomic Industrial Forum, and others, have conducted a significant number of technical generic radiation exposure reduction studies. The AIF studies completed or underway are indicated on the attached sheet.

It is the judgment of the Subcommittee that there is a continuing need for providing flexibility in the 5 rems per year dose limit under special circumstances. Accordingly, there are a number of questions concerning this issue which warrant further in-depth study by the Commission before any final action is taken.

Sincerely,

Howard J. Larson

HJL:hjm
Enclosure

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AIF TECHNICAL GENERIC EXPOSURE REDUCTION STUDIES

1. Compilation and Analysis of Data on Occupational Radiation Exposure Experienced at Operating Nuclear Power Plants, AIF/NESP-005, September, 1974.

2. Potential Benefits of Reducing Occupational Radiation Exposure, AIF/NESP-010, May, 1978.

3. A Preliminary Assessment of the Potential Impacts on Operating Nuclear Power Plants of a 500 mrem/year Occupational Exposure Limit. Report by AIF Subcommittee, April, 1978.

4. Operating/Manpower Considerations Related to Reduced Exposure Limits, NESP contract study in progress. Completion estimated early summer, 1979.

5. Engineering Techniques for Reducing Radiation Exposure at Operating Nuclear Power Plants. Study underway by AIF Subcommittee. Completion estimated June, 1979.

6. Compendium of ALARA Practices at LWR Plants. NESP study in progress. Completion estimated in summer of 1979.

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