AMERICAN FRIENDS SERVICE COMMITTEE
2234 SOUTH-EASTERN REGIONAL OFFICE
P O BOX — HIGH POINT NORTH CAROLINA 27261
1818 SOUTH MAIN STREET · PHONE 919 883-0109

DOCKET NUMBER
PROPOSED RULE PR -19,20(44FR10388)

Secretary of the Commission
Nuclear Regulatory Commission
Washington, D.C. 20555

Dear People,

I would appreciate receiving a copy of the proposed amendents to Parts 19 and 20 of NRC regulations. These amendments concern the reduction of standards for occupational exposures for nuclear workers from 12 rems/year to 5 rems/year.

These amendments were published in the Federal Register on February 20, 1079.

Thank you for this consideration.

William Reynolds

William Reynolds

March 6, 1979

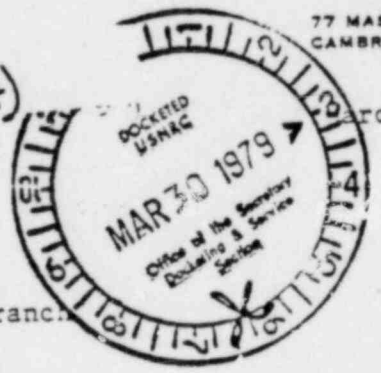
Int 4-9-79

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
MEDICAL DEPARTMENT
ENVIRONMENTAL MEDICAL SERVICE

77 MASSACHUSETTS AVENUE, 208-238
CAMBRIDGE, MASSACHUSETTS 02139

(18)

DOCKET NUMBER
PROPOSED RULE PR-19,20(44FR10388)



March 22, 1979

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Docketing and Servicing Branch

Gentlemen:

I wish to submit comments regarding the Proposed Rules published in the Federal Register (Vol. 44, No. 35), dated 20 February 1979.

I am in favor of the proposed elimination of the accumulated dose averaging formula 5 (N-18) and the associated Form NRC-4. Also, I approve of the proposed section 20.101.

However, I think that the proposed section 20.102 needs to be revised in order to make it practical to comply with its provisions. The difficulty is that its provisions do not allow for the situation whereby the individual does not know his prior dose. It has been our experience that individuals who have had previous work with radiation usually specify "unknown" when asked to state their prior dose.

Therefore, the following alternate revisions are suggested:

1) After item (b) insert on item (c) which reads as follows: "or (c) that an individual states that the prior dose is unknown to the individual".

2) Or, alternatively, it is suggested that item (b) of proposed section 20.102 be revised so that, for individuals who have had previous work with radiation sources, the licensee isallowed 60 days to obtain dose histories from previous employers.

I hope the above comments will be helpful.

Sincerely,

S. Levin

Samuel Levin
Radiation Protection Officer

Acknowledged by card.....

SL:bh

Dupe of 7904210150

Add-5

ROGER T. WAITE
CONSULTING ENGINEER
42 MIDDLEBROOK ROAD
WEST HARTFORD, CONNECTICUT 06119

DOCKET NUMBER
PROPOSED RULE PR-19 (19) (44FR 10388)

March 23, 1979

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Docketing and Service Branch

RE: Proposed Changes in 10CFR20

Dear Sir:

Since I have been engaged for many years in the inspection of nuclear facilities countrywide I have studied the proposed changes with a great deal of interest.

1. Elimination of the differentiation of permissible quarterly exposure between persons who show a clear prior record as compared with those who do not have a clear prior record should simplify the record keeping in licensees' operations. Two sets of limits will no longer be required for temporary personnel. However, it does not eliminate the possibility that an individual can get well over the three rem per quarter limit on successive jobs. It is very likely that some licensees in their own defense will continue to request prior exposures.

2. Sec. on 20.101 and .102 refer at many points to "standards". The table of permissible exposure does not give standards, it gives limits. The reference to standards is totally in error and is misleading. This misuse of the word becomes particularly confusing when related to the requirements for monitoring. These requirements can easily be interpreted as calling for a pro-rating of the annual "standard" for a quarterly period, which I believe was not your intent.

Now that you are making some changes may I urge substitution of a more accurate and understandable terminology.

Yours very truly,

R. T. Waite

Roger T. Waite
Engineering Consultant

RTW:mc

• Acknowledged by card ....

Dupe of 7904210036 - Add-S

THE UNIVERSITY OF TEXAS AT AUSTIN
DIVISION OF PHYSICAL PLANT
AUSTIN, TEXAS 78705

Safety Office
2617 Speedway, Suite 104
Phone 512—471-3511

(20)

DOCKET NUMBER
PROPOSED RULE PR - 9 (44 FR)

March 21, 1979

Mr. Robert E. Alexander
Office of Standards Development
US Nuclear Regulatory Commission
Washington, DC 20555

Dear Bob,

I am glad to see the NRC propose a rule reducing the permissible annual personnel exposure from twelve to five rems per year. As you know we operated under the 5 rems per year policy at General Dynamics/Fort Worth. I continued that policy when I came to the University without any appreciable difficulty. I have been particularly concerned about individuals or companies that sell dose just because it is available in their "bank account". This proposed rule change should curtail or at least slow down this practice.

I was going through some old files a couple of weeks ago and ran across some rather offical looking documents entitled, "Red Button on the Desk","Dr. Schmeckle and Mr. Pie-Eyed" and "What Price Survival". The author is unkown. Also in this file I found the enclosed article which might bring back some memories of your early HP days.

Sincerely,

Bill

Hugh W. Bryant

Acknowledged by card.....

Dupe of 7904210169 -Add's

17Ma. .., 1979

DOCKET NUMBER
PROPOSED RULE PR -19

(12)

Secretary of the Commision
NRC
Washington, D.C.

Dear Sirs:

In ~~I~~ Response to your request for comments on the proposal to do away with the 5(N-18) regulation, Iwhole-heartily support reducing the annual radioation exposure to the legal limits of ~~5~~ 5 R per year. However, if this is just a prelude to reducing the legal limits to 500 millirem annualy, I'm afraid that I would have to disagree with you. Reducing the allowable exposure to that low a level would require more manpower than is re lly required to complete any sort of major maintenance evelutions inside a reactor compartment, thereby driving up the already unreal costs of power production charged by the major utilities.

Sincerely yours,

Steven R. Lueders

DOCKETED USNRC
MAR 30 1979
Office of the Secretary
Docketing & Service
Branch

Acknowledged by card....................

Dupe of 7904210122 - Add S

MIDWEST CHAPTER
HEALTH PHYSICS SOCIETY

March 16, 1979

(16)

PR -19 (44 FR 10388)

Secretary of the Commission
Attention: Docketing and Service Branch
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gentlemen:

In response to a notice of proposed rule making (44 FR 10388-90, February 20, 1979) involving 10 CFR Parts 19 and 20, the Midwest Chapter of the Health Physics Society submits comments herewith for consideration in the final rulemaking. This correspondence has been prepared and approved by the Legislative Committee, voted on and approved by the Board of Directors, and presented to the chapter members for comment.

In general, the chapter concurs with the rule change in that it represents a step in the direction of maintaining radiation exposures as low as is reasonably achieveable (ALARA). Portions of the proposed rule which, in our view, require clarification or amplification are as follows:

Acknowledged by card.....

Dupe of 7905220034 - Add's

If no other address is given, send replies to:

Edward Jascewsky, Executive Secretary
Midwest Chapter - Health Physics Society
Argonne National Laboratory
Safety & Technical Building
9800 S. Cass Avenue
Argonne, Illinois 60439

protection of the worker, licensee liability should be established for these situations where individuals deliberat circumvent the regulations, as in the above example.

b. In the event that a transient individual going immediately from one licensee to another (i.e., too quickly for the film badge or TLD issued by first licensee to be processed and reported), should the second licensee be required not to employ the worker until a reliable estimate of his exposure is available? The term "reliable estimate", if used, would require definition. The definition should state whether the individual must furnish to second licensee: (a) results of film or TLD monitoring or (b) results of pocket dosimeter measurements or equivalent monitoring techniques.

3. Since NRC Form-4 will no longer be needed for its original purpose if the rule discussed above is adopted, it is recommended that consideration be given to redesign this Form for use by the individual in disclosing, to the licensee, previous exposure records in the form of a "... signed, written statement ..." Use of a form for this purpose would ensure uniformity of information supplied to all licensees by all such individuals. It could also be used to record the type of measuring device on which the individual's exposure record is based.

Poplar Bluff Hospital, Inc.
218 OAK STREET
PHONE 785-7701 POST OFFICE BOX 940
POPLAR BLUFF, MISSOURI 63901

(11)

PROPOSED RULE PR-19

March 16, 1979

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington D.C. 20555

ATT: Docketing and Service Branch

Gentlemen:

Relative to the proposed rule to eliminate the accumulated dose averaging formula 5(N-18) and associated form NRC-4 exposure history and impose annual dose limiting standards while retaining quarterly standards, the following comments are rendered.

1. Clustering is very questionable epidemiological evidence for radiation induced disease.

2. It is highly desirable to retain quarterly dose-limiting standards.

3. It is agreed that mathematical standards are necessary to prevent abuses of the "as low as reasonably achievable" principle.

4. Your concern about the undue intrusion into the physician-patient relationship is appreciated.

Sincerely,

A.T. Tuma, M.D.
Radiologist
Physicist
Chief of Staff
ATT/paf

Dupe of 7904210175 - ADS

Pryor Foundry, Inc.

Subsidiary of J I Case
A Tenneco Company

P. O. Box 549
Pryor, Oklahoma 74361
(918) 476-8321

(15)

DOCKET NUMBER
PROPOSED RULE PR - 9 (44 FR)

March 15, 1979

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Re: Nuclear Regulatory Commission (10CFR 19 and 20) Notices, Instructions and Reports to Workers' Standards for Protection Against Radiation. Proposed Rule.

ATTN: Docketing and Service Branch

Gentlemen:

We are in agreement to eliminate the need for the 5 (N-18) dose averaging formula for radiation exposure to personnel. We can foresee the occasion where radiographers in specific types of testing would exceed the maximum permissible dosage, however, safety precautions must be implemented to prevent this exposure to personnel.

20.102 Determination of prior dose. We take exception to the following wording:

> "Each licensee shall require any individual, prior to first entry of the individual into the licensee's restricted area during each employment or work assignment, etc."

The word "individual" should be changed to "employee" and a statement added whereas service companies could be permitted to enter the facilities in an emergency situation, yet maintain their own exposures to radiation, using their dosimeter, film badge and other radiation monitoring devices.

Very truly yours,

Darrell W. Pruitt
Radiation Safety Officer

DWP:pr

Acknowledged by card.....

Case

Dupe of 7904210183 - Adds

HARVARD MEDICAL SCHOOL DEPARTMENT OF RADIOLOGY
JOINT PROGRAM IN NUCLEAR MEDICINE
CHARLES A. DANA CANCER HOSPITAL • CHILDREN'S HOSPITAL MEDICAL CENTER •
PETER BENT BRIGHAM HOSPITAL

(14)

DOCKET NUMBER
PROPOSED RULE PR -19

March 15, 1979

Secretary, U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Attention: Docketing and Service Branch

Re: Proposed Changes in 10CFR 19 and 20

Sir:

1. While there is no magic reason to retain the 5(N-18) dose averaging formula, neither do I know of any reason to prohibit a radiation worker from absorbed doses of 3 rem per quarter or 12 rem per year. There is no evidence proving that such exposures are hazardous - compared to all other risks to which workers are exposed - and the effects of reducing such limits on overall population exposures (genetic burden) is nil. I therefore oppose the proposed changes as being unnecessarily and unreasonably restrictive.

2. Retain the quarterly standard of 3 rem as appropriate.

3. Maintaining records of the total exposure of radiation workers is indeed reasonable.

Sincerely yours,

David E. Drum

David E. Drum, M.D., Ph.D.
Radiation Protection Officer
Affiliated Hospitals Center, Inc.

DED/ms

Acknowledged by card.....................

Dupe of 7904210190 - Adds

The Commonwealth of Massachusetts
Bunker Hill Community College
CHARLESTOWN, MASSACHUSETTS 02129
TELEPHONE: (617) 241-8600

(10)

March 15, 1979

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Docketing and Service Branch
Washington, D.C. 20555

Re: Proposed Rules Changes Amending (10 CFR Parts 19 and 20)
Notices, Instructions, and Reports to Workers:
Inspection Standards for Protection Against Radiation

Dear Sir:

Bunker Hill Community College presently offers accredited training programs in Nuclear Medicine Technology and Diagnostic Radiologic Technology. Both programs incorporate the use of a wide array of energized equipment comparable to that found within the hospital setting. Some 80% of this equipment has been provided to the college through a grant from the Manpower Grants Service, Office of Academic Affairs, Veterans' Administration. Students receive controlled laboratory experiences using this equipment which are designed to acquaint the students with effect on the films produced and dosages of radiation delivered resulting from adjustments of the various controls or the use of accessories pertinent to each piece of equipment. Full awareness of the effects of radiation exposure to both patients and radiation workers is an integral and vital component of the students' training.

Protocols for strict control of student exposure to radiation have been developed within each program which are intentionally more conservative than what would be required to keep student exposure to within presently acceptable limits. The proposed limit for mandating the monitoring of minors 18 years of age or under (any quarterly dose in excess of 1.25% of the annual standards specified in Part 20.010) is a limit we fully endorse and indeed have already incorporated into our protocals for all students irrespective of age.

Dupl of 7905150229 -Add S

(21)

PROPOSED RULE PR - 19, 20 (44FR 10388)

500 Penn Center, Pittsburgh, Pennsylvania 15235 412/823-0810

March 14, 1979

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, DC 20555

ATTN: Docketing and Service Branch

Reference: Proposed Rule making 10CFR Parts 19 and 20 "Notices, Instructions and Reports to Workers: Inspection Standards for Protection Against Radation." Federal Register, Tuesday, February 20, 1979.

Gentlemen:

This communication is intended as Rad Services, Inc. corporate comment with regard to the above mentioned proposed rules.

As the leader in providing contract health physics technician services to nuclear generating facilities, we believe that the flexibility afforded by the 5 (N-18) dose averaging formula is in the best interest of the nuclear industry. Even though most of our technicians do not exceed the 5 REMS per year dose, we feel that the flexibility to do so provides a cost effective and controllable way to accomplish the objectives of getting a power plant back on line in the most reasonable time possible without unduly exposing more people. We believe a system of controls is already in effect to limit the doses received by our people and, we, as professionals, believe we can and have demonstrated ALARA in our daily work. We are available to provide testimony to these facts and would be very pleased to provide the commission with such evidence.

In closing, we would like to reiterate that we, and the industry need a controlled formula that would still allow the flexibility to get the job done. The proposed rule, as written, does not allow this latitude. A better way would be to control 5 (N-18)!

Very truly yours,

RAD SERVICES, INC.

Stephen M. Sorensen
Corporate Safety Officer

SMS/mjk

Acknowledged by card 4/13

Dupe of 7907130124

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY
ILLUMINATING BLDG. • PUBLIC SQUARE • CLEVELAND, OHIO 44101 • TELEPHONE (216) 623-1350 • MAIL ADDRESS: P.O. BOX 5000
Serving The Best Location in the Nation

Dalwyn R. Davidson
VICE PRESIDENT
SYSTEM ENGINEERING AND CONSTRUCTION

March 14, 1979

(17)

DOCKET NUMBER
PROPOSED RULE PR-9 (44FR)

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Docketing and Service Branch

Dear Sir:

We would like to take this opportunity to comment on the proposed amendments to 10CFR20 that would eliminate the accumulated dose-averaging formula, 5(N-18), and the 12-rem-per-year radiation exposure limit, as described in the February 20, 1979 Federal Register (7590-01-M).

In your Supplementary Information Section, you state: "These standards were based on recommendations of the National Council on Radiation Protection and Measurements (NCRP), the International Commission on Radiological Protection (ICRP), and guidance for federal agencies issued by the former Federal Radiation Council (FRC,...)" The section goes on to state: "The Commission, taking into account recently published interpretations of epidemiological data and associated recommendations for lower standards, and also in response to petitions for rule making to lower the dose standards filed by the Natural Resources Defense Council (NRDC) and Dr. Rosalie Bertell, has determined that a hearing should be held on the adequacy of present occupational radiation dose-limiting standards." While a hearing may be in order based on your assessment of the requests, it does not follow that deletion of the provision for utilizing the 5(N-18) dose-averaging formula is either necessary or wise.

Reducing the radiation exposure limits as proposed will not lower the work force man-rems, but spread them over a larger population. This does not meet the intent of the NRC's ALARA concept. With the number of radiation workers in the industry, and with the small number actually exceeding the proposed 5-rem annual dose limit, it should be apparent that licensees are not abusing the ALARA concept. It is our feeling that by deleting the provision, total exposure will be significantly increased because of difficulty in most instances of replacement personnel accomplishing tasks which require highly skilled individuals to receive exposure above the 5-rem annual dose. In other instances, outage costs could be greatly increased with no reduction in man-rem exposure or a total increase in exposure.

Acknowledged by card.....

Dupe of 7904280187 - NdS

LEVA, HAWES, SYMINGTON, MARTIN & OPPENHEIMER

815 CONNECTICUT AVENUE, N. W., WASHINGTON, D. C. 20006

TELEPHONE (202) 298-8020 CABLE: FOLEX WU TELEX: 89-2720

MARK LEVA
LLOYD SYMINGTON
JOSEPH C. SWIDLER
FRANZ M. OPPENHEIMER
JOHN G. KELLER
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EDWARD R. MULLER
CARMEN D. LEGATO

March 13, 1979

DOCKETED USNRC MAR 16 1979 Office of the Secretary Docketing & Service Branch

DOCKET NUMBER PROPOSED RULE PR-19,20 (44 FR 10388) (8)

Mr. Samuel J. Chilk
Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

RE: Request for public hearing on proposed rule to amend 10 CFR parts 19 and 20

Dear Mr. Chilk:

On behalf of Commonwealth Edison Co., of Chicago, an NRC licensee with extensive experience in the operation of nuclear power generating facilities, the undersigned hereby requests a public hearing on the Commission's proposed rule to amend 10 CFR parts 19 and 20, published in the Federal Register on February 20, 1979, 44 Fed. Reg. 10388 et seq.

If adopted, this proposed rule would eliminate the Commission's current accumulated dose averaging formula, 5(N-18), and substitute annual and quarterly dose limitations of 5 rem per year and 3 rem per quarter, respectively. In addition, the proposal would modify notification, reporting and other related provisions of the present regulations.

This proposal raises important issues which warrant an opportunity for discussion before the Commission. Since these issues relating to dose accumulation are distinct from the issues concerning the level of the occupational exposure standards to be considered at the hearing described in the [illegible] notice, tentatively scheduled for [illegible] y preferable to address these

DUPLICATE DOCUMENT

Entire document previously entered into system under:

ANO 7906020008

No. of pages: 5

Acknowledged by card....3/16/79....

Add: S

HOOKMAN

(1)

PROPOSED RULE PR 19,20 (44FR10388)

ttman
rporation
9190 Red Branch Road
Columbia, Maryland 21045
301/730-7800

February 28, 1979

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Attention: Docketing and Service Branch

Gentlemen:

This comment is in response to the proposed rulemaking regarding changing the allowable dose requirements in 10 CFR 20, as outlined in 44 F.R. 10388 (February 20, 1979).

I do not believe that this proposed change would close the loophole that presently exists (and has existed for many years) which allows individuals to receive more than the allowable dose.

The regulations leave it up to the individual to disclose all prior exposure history. The licensee must assume the disclosure is accurate, but this assumption may not be valid since the individual may not keep accurate records of previous exposure, or he may conceal past exposure for various reasons.

In my opinion, lowering the allowable exposure to individuals does not prevent individuals from receiving doses far in excess of the allowable limits. This is especially true for transient workers and moonlighters.

Many employers of service personnel are not licensees, so there is no burden upon the employer to keep accurate records of employee exposure. The licensees also are not under any burden to make timely reports of exposure to individuals who are not their employees. In many instances a report to an individual is only required after the end of each quarter. The individual could visit several licensees during any quarter, without having any information as to his dose at these licensees, until well after the end of the quarter.

It is obvious that the licensees cannot do a thorough background check on all workers under their license. It is also difficult, if not impossible, to perform follow-up work such as exposure estimates from bioassay information, for transient workers. For example, the requirements of 10 CFR 20.102(a)3 to back calculate total exposures based on intakes of airborne radionuclides could only be accomplished if a licensee had all the information on MPC hours and the like from other licensees.

It is equally obvious that individuals themselves cannot keep accurate exposure records since they must depend on the licensee to give them data and the data sometimes requires interpretation and calculations that may be beyond the expertise of the individual.

317

Dupe of 7903290037

HITTMAN

I recommend that the present loophole be closed so that individuals will be protected as required by regulation. An individual may choose not to be protected and mislead a licensee regarding his exposure, or the individual may make an honest mistake regarding his own exposure. However, a risk of genetic damage may exist so individual choice may not be allowed. An individual's offspring have a right to be protected and, therefore, the NRC should exercise much stronger control over individual radiation exposures.

The regulation should provide that each individual's exposure at any licensee's facility be provided immediately upon leaving the facility if he is going to visit another licensee's facility prior to returning. The regulations should also provide for a means of determining if an individual has visited other licensee's facilities during a particular quarter. This would give licensee's the ability to check on an individual's exposure for the quarter and year.

Very truly yours,

Richard DiSalvo

Richard DiSalvo
Radiation Safety Officer

nr

STATE OF NEW YORK
ENERGY OFFICE

(81)

JAMES L. LAROCCA
COMMISSIONER

AGENCY BUILDING 2
EMPIRE STATE PLAZA
ALBANY, NEW YORK 12223

PR - 19,20 (44FR 10388)

May 4, 1979

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Attention: Docketing and Service Branch

Dear Sir:

The cognizant New York State radioactive materials control agencies have reviewed the recent NRC proposed amendments to the occupational radiation protection standards (Federal Register, February 20, 1979, Vol. 44, pp. 10388-90). With the exceptions discussed below, New York supports the proposal including specifically the elimination of the 5(N-18) dose averaging formula, and the establishment of a 5 rem annual and 3 rem quarterly dose limit for whole body exposure.

New York recommends that NRC modify the period of application for the annual limits from the proposed "calendar year" to "any four consecutive quarters". Such a change would eliminate the possibility of a 6 rem semi-annual period and a 10 rem annual period, which would be permissible under the "calendar year" format (i.e. last quarter or two of one year and first quarter to two of the next). It would also remove from licensees the possible temptation to allow a radiation worker to exceed the dose limit in the final quarter of a calendar year with the knowledge that the worker could continue radiation work in the following quarter, the first quarter of a new calendar year. The "calendar year" format could also give the impression of a double standard when a radiation worker who receives the annual limit in the first two calendar quarters is prohibited from further radiation work that calendar year, while another worker who receives an identical dose in the final two calendar quarters is permitted to continue radiation work without interruption.

Currently, New York State's applicable regulations, Industrial Code Rule No. 38, Part 16 of the New York State Sanitary Code, and Article 175 of the New York City Health Code, all express the annual limit in terms of

5/22

Dupe of 7907050461 - Add-5

"any 52 consecutive weeks", which is comparable (albeit not identical) to the recommended modification of "four consecutive quarters".

A preliminary draft version of the proposed amendment, which was provided to the Agreement States in June 1978, included a requirement that licensees who are required to perform personnel monitoring, air sampling or bioassays shall develop, document and implement programs for ensuring that occupational radiation exposures are maintained "as low as reasonably achievable" (ALARA). That requirement was deleted in the proposed amendment formally published in the Federal Register. The New York City Department of Health, one of three New York radioactive materials licensing agencies with responsibility assumed under the NYS/NRC Agreement, has expressed its objection to the deletion of the ALARA requirement. It believes that without the caveat on numerical standards which ALARA provides, the maximum allowable limits may tend to become wholly acceptable. While the other two New York radioactive materials licensing agencies, the New York State Departments of Health and Labor, concur in the New York City endorsement of the ALARA philosophy for radiation protection, they do not share its support for the deleted requirement. They feel that the implementation of the ALARA principle can be and is adequately ensured in the review of an applicant's radiation safety program during the licensing process, and in post-licensing inspection. Further, the State Department of Health foresees difficulty in integrating such a requirement into its program for regulating radiation producing equipment (e.g. x-ray machines, accelerators) which currently consists of a registration rather than licensing process. In that regard, the Health Department feels that the ALARA requirement would mean significant increased workload with questionable commensurate benefit.

New York appreciates the opportunity to comment on the proposed amendment.

Sincerely,

T. K. DeBoer
Director of Nuclear Operations

cc: Dr. Francis J. Bradley
Thomas J. Cashman
Sherwood Davies
Dr. Leonard R. Solon
G. Wayne Kerr

Alabama Power Company
600 North 18th Street
Post Office Box 2641
Birmingham, Alabama
Telephone 205 323-5341

(77)

-19,20(44FR10388)

Alabama Power
the southern electric system

May 1, 1979

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Docketing & Service Branch

Gentlemen:

Reference: Proposed Amendments to 10CFR20.

As the licensee for the Joseph M. Farley Nuclear plant we have the following comments regarding the proposed amendments:

1. 10CFR20.101. The elimination of the 5(N-18) accumulative dose rule should not cause an immediate problem with respect to our own employees, since the rule would be used only under exceptional circumstances. However, we are opposed to its elimination on the grounds that the rare occasion may arise where it is needed to accomplish special work. Further, its elimination will have an immediate and direct impact on a small group of contract workers having special skills. Its elimination will not lower the total man-rems required to accomplish special surveillance and maintenance tasks, e.g. eddy current testing of steam generator tubes, and could result in a net increase of total man-rems by the use of additional personnel to do the work.

   Although, not related to dose, the elimination of the 5(N-18) rule would reduce the record keeping load related to securing and maintaining a prior lifetime exposure history on each worker.

2. 10CFR20.104(a). This change would not affect us, since it is Company policy not to employ persons under 18 years of age.

5/22

Dupe of 7907050263 - Change PDR dd-P Add-L

3. 10CFR20.202. The slight decrease in the level at which personnel monitoring equipment is required is not expected to have a significant impact on our present personnel monitoring program.

Yours very truly,

H. O. Thrash
Manager
Nuclear Generation

HOT/WMJ/mrb

GAIL D. ADAMS, PH.D.
RADIOLOGICAL PHYSICIST

CERTIFIED BY:
AMERICAN BOARD OF RADIOLOGY
AMERICAN BOARD OF HEALTH PHYSICS

P. O. BOX 391
OKLAHOMA CITY, OKLAHOMA 73101

DOCKET NUMBER
PROPOSED RULE PR-19,20 (44FR10388) (7)

March 12, 1979

U. S. Nuclear Regulatory Commission
Secretary of the Commission
Washington, D. C. 20555

Attention: Docketing and Service Branch

Subject: 20 Feb 1979 Notice of Intent to Amend 10 CFR 19 and 20

Dear Sirs:

I thank you for adding my name to your list of persons notified of specific Commission actions. In the past, my first notice has been received by accident and after comment periods had expired.

I have been Radiation Safety Officer at the University of Oklahoma Health Sciences Center and three on-campus hospitals since January 1965. I act as RSO on a consultant basis to hospitals and other facilities throughout the State of Oklahoma. I do not have responsibility for any installation in which high LET radiation is the major radiation hazard.

It seems to me that 5(N-18) has been seen as a guide in two different contexts. 1) That relating to the radiation worker in the ordinary course of his employment. 2) That relating to any person, though a radiation worker in overbearing probability, at a time of radiation emergency. You argue well to abandon 5(N-18) for the first context. Supervisory personnel, particularly the RSO, needs a guide to employ in the case of a radiation emergency. If not 5(N-18), please do not leave a vacuum. The difficulty then would probably be both technical and legal.

I wish to applaud removal of "permissible". It has been a long-standing joke that "Maximum Permissible Dose" is neither a maximum nor permissible nor a dose.

To note something you already know, I'm sure: it is very difficult to collect the moonlighting portions of occupational radiation histories. Fear (on the part of the worker) is involved, conditions and locations change abruptly, and the worker typically does not see this as a priority matter. We try but I am unsure of the degree of cooperation received.

Yours sincerely,

G. D. Adams, Ph.D.

GDA:db

Acknowledged by card 3/16/79

Dupe of 7907190448 - Add P, Add L Change PDR

EBASCO SERVICES
INCORPORATED

UTILITY CONSULTANTS - ENGINEERS - CONSTRUCTORS

TWO RECTOR STREET
NEW YORK, N.Y. 10006

CABLE ADDRESS "EBASCO"

DOCKET NUMBER
PROPOSED RULE PR-19 20(44FR10388) (G)

March 5, 1979

Secretary of the Commission
US Nuclear Regulatory Commission
Washington, DC 20555

Subject: PROPOSED RULE CHANGE TO 10CFR20
FEDERAL REGISTER VOL 44, NO. 35
DATEL TUESDAY, FEBRUARY 20, 1979

Attention: Docketing and Service Branch

Dear Sir:

The following comments are offered in response to the proposed rule change to 10CFR20.

Comment 1

In light of operating experience and the ICRP-26 recommendations, the deletion of the 5(N-18) rule seems appropriate. However, in accordance with the ICRP-26 recommendations, the NRC should eliminate the quarterly exposure limits. This would give utilities additional operating flexibility and may very well reduce annual man rem exposures. In addition, it would be consistent with the philosophy of regulating only to the degree required.

The 3 rem whole body quarterly limit appears to be an arbitrarily defined limit to help ensure that the annual limit is met. Utilities will probably institute their own administrative limits to ensure compliance with the annual limits and to optimize manpower utilization. However, the utilities should be given the option to exercise their own judgement in these matters. A 3 rem, rather than a 5 rem, quarterly limit would neither provide the NRC with a very powerful tool to ensure compliance with the annual limits nor act as an indicator of possible undesirable conditions.

Comment 2

The NRC should consider removing the lens of the eyes from the 5 rem/yr limit of 20.101 since there is no reason why this structure should be singled out when such organs as the thyroid and the lungs are not. In addition, ICRP-14 has clearly demonstrated the relative

Acknowledged by card 3/16/79

Dupe of 7907190429 - Add'l P&L Rec'd PDR

radiological insensitivity of the lens of the eyes. Using a 50 year working life, and the 15 Sv (1500 rem) ICRP-26 recommendation, a more appropriate limit would be 30 rem/yr.

Comment 3

Though not part of the proposed rule change, it must be emphasized that the technical basis for the NRDC petition, namely the Mancuso report and the Portsmouth study, have been discredited. In light of this and the ICRP recommendations, a rule making hearing in response to the NRDC petition is unwarranted.

Thank you for this opportunity to comment on the proposed rule change. It is hoped that our comments prove to be useful.

Very truly yours,

Edward P O'Donnell

EDWARD P O'DONNELL
Chief Engineer
Nuclear Licensing

EPO:JM:no

PHILADELPHIA ELECTRIC COMPANY

2301 MARKET STREET

P.O. BOX 8699

PHILADELPHIA, PA. 19101

(215) 841-5001

SHIELDS L. DALTROFF
VICE PRESIDENT
ELECTRIC PRODUCTION

April 25, 1979

Mr. Samuel J. Chilk
Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Docketing and Service Branch

Subject: Comments on Proposed Amendment to 10 CFR 20

Dear Mr. Chilk:

On February 20, 1979, the Nuclear Regulatory Commission published in the Federal Register (44 F.R. 10388 et seq.) proposed amendments to its regulations and requested comments on the proposals. We appreciate this opportunity to provide the Commission with Philadelphia Electric Company's comments on the proposed amendments.

One of the proposals being made by the Commission is to delete the accumulated dose averaging formula, 5(N-18), from the regulations in Part 20. We concur with this proposal and with the related proposal to eliminate the need for signed NRC-4 forms. We also concur with the Commission's proposal to revise Section 20.102. of the regulation to require a worker to sign a statement describing his previous exposure for the year. We believe that this requirement rightfully places some responsibility on the worker himself and will have the added benefit of encouraging the worker to become more aware of his accumulated dose.

The Commission is also proposing to establish annual limits for radiation doses of 5 rem per year, as well as the quarterly limits of 3 rems per calendar quarter. The rationale for imposing the quarterly limit is to enable the Commission to receive early indications of possible undesirable situations and provide the NRC the opportunity to investigate such situations. We believe that it would be more appropriate

Acknowledged by card 5/22

Dupe of 7907050532

for the regulations to permit a 5 rem exposure at any time during the year even if the exposure occurred in a single calendar quarter, since there is no significant difference in biological effect between an annual limit of 5 rem and a quarterly limit of 3 rem. For purposes of notification and control, the regulations could still require a licensee to notify the Commission in the event of an exposure in excess of 3 rems per quarter.

Additionally, we believe some provisions should be made to permit a licensee, on prior application to the Commission, to utilize 12 rem per year in those circumstances when use of the higher limit would be beneficial, e.g. minimizing total radiation exposure.

Very truly yours,

State of Louisiana

R.T. SUTTON
COMMISSIONER

OFFICE OF CONSERVATION

B. JIM PORTER
ADMINISTRATOR
NUCLEAR ENERGY DIVISION

April 25, 1979

(72)

DOCKET NUMBER
PROPOSED RULE PR-19,20(44FR10388)

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Docketing and Service Branch

Dear Sir:

Re: Proposed Amendments to NRC Regulations Establishing Dose Limiting Standards (10 CFR 19 and 20)

In the Federal Register, Volume 44, No. 35, Tuesday, February 20, 1979, the U.S. Nuclear Regulatory Commission has outlined proposed amendments to its regulations which will eliminate the accumulative dose averaging formula 5(N - 18), with the associated form NRC-4, and impose annual dose limiting standards while retaining quarterly standards with associated requirements for reporting doses that exceed standards.

After a thorough review, the Louisiana Nuclear Energy Division finds that it supports the concept of establishing a 5 Rem annual dose limit with a 3 Rem quarterly limit, and the elimination of the form NRC-4. However, the Division cannot fully support the proposed changes, as we understand them, in their present form until certain issues mentioned below are clarified or until more detailed information is supplied by the NRC.

It appears that when an individual exceeds the 5 Rem annual dose limit, that individual will not be allowed to work in a radiation area for the remainder of the calendar year. This time of forced non-employment may be as long as 364 days or as short as 1 day. The Division is particularly concerned about the impact that these proposed changes might have upon an individual's right to earn a living and that the hardship imposed by these changes apparently would not be applied equally to all who may be so affected.

Furthermore, if an individual is restricted from working in a radiation area by the new regulations, the licensee will likely terminate the individual since he can no longer be productive in his radiation-related task. Large companies may provide other types of work, but smaller companies would either terminate the individual or he would seek employment elsewhere in radiation-related work or other types of work.

Acknowledged by card. 5/2

P.O. BOX 14690 . BATON ROUGE, LOUISIANA 70808 . PHONE (504) 925-4518

Dupe of 7906200553 - Add-5

It should be noted that in a proposed rulemaking to 10 CFR Part 20, published February 6, 1978, the Commission addressed the necessity of dismissal or removal of a worker from all activities involving potential exposure in subsequent calendar quarters. In this document, it was stated that:

> "The dose limits recommended by standard setting groups such as the National Council on Radiation Protection and Measurements, International Commission on Radiological Protection, and the Federal Radiation Council, (now the Environmental Protection Agency), and implemented in the NRC regulations, are not intended to mark clearly the difference between conditions that are "safe" or "unsafe." Consideration of the linear dose/effect concept indicates that the risk associated with additional dose at low dose rates would be no greater than those associated with comparable dose received before an occupational overexposure. The possible loss of employment by an individual is not considered to be warranted by the small risk involved in additional dose within the limits in 20.101." (emphasis added)

It now appears that the NRC has changed its philosophy since publishing the above referenced document. The Division is not aware of any new scientific evidence supporting this change in position, so we must assume this to be an administrative decision.

A possible, if not certain, counterproductive aspect of this requirement is that individuals who suspect, or know, that they have exceeded the annual limits may conveniently lose their personnel monitoring device; others may not wear the personnel monitoring device for extended periods of time to insure that their dose is low. Either situation will present very difficult enforcement problems, especially in the industrial radiography industry where there is a real possibility of an individual exceeding the annual limit. It is also very likely that if an individual is restricted from work by a licensee he would attempt to go to work for another company without making his previous exposure record available.

The Division strongly believes that provisions should be made to allow an individual to resume radiation work in the calendar quarter following a dose in excess of specified limits. One approach is to allow an individual to continue to work, if he so chooses, in a radiation area with a limit of 1¼ Rem per calendar quarter for the four consecutive calendar quarters after the overexposure. This would provide for the extension of the lower quarterly dose limit for a period of one year, independent of the time of exposure within the calendar year.

Thank you for this opportunity to comment on these proposed changes.

Sincerely,

B. Jim Porter
Administrator
Nuclear Energy Division

BJP:RLW:pfd

cc: Office of State Programs
All State Radiological Health Programs

(75)

DOCKET NUMBER
PROPOSED RULE P - 19,20 (44FR10388)

April 24, 1979
L-79-98

Mr. Samuel Chilk
Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Chilk:

Re: Proposed Rule to Eliminate the Accumulated Dose Averaging Formula, 5(N-18) (F.R. Notice, February 20, 1979, p. 10388).

Florida Power and Light Company has reviewed the proposed rule change and submits the following comments.

I. Hearings will be held in the near future to consider the adequacy of present occupational radiation dose standards. Pending the outcome of those hearings, any decision to reduce the present standards would be inappropriate. The subject of occupational exposure has generated extended debate and many issues are yet to be resolved. To overlook the uncertainty associated with such questions as technical justification for reduced exposure levels and the impact of the reductions could result in overreaction and unnecessary costs. To improve the probability of an intelligent, well reasoned decision, the commission is urged to delay consideration of the proposed rule until the hearings are complete.

II. The rule as suggested ignores the present efforts to reduce occupational exposures to satisfy ALARA standards. If given a reasonable demonstration period, the ALARA Program can reduce the exposure levels substantially without the necessity of abandoning the flexibility provided by the averaging formula.

III. The information provided in the F.R. Notice implys that substantial individual dose savings can be realized by doing away with 5(N-18); however, an E.P.A. Report indicates that the average dose received by all U.S. workers using the formula was substantially less than the maximum allowable when using the formula. Based on data for 1976, which is comparable to data from 1977, the average received by all workers exceeding 5 Rem/Year was 6.66 Rem, far below the maximum of 12 Rem. (See Table 7.1, p. 74, Radiation Protection Activities - 1977 EPA-520/4-78-003). This data verifys the prudence with which the formula is used and the minimal effect on the individuals receiving the extra dose.

Acknowledged by card 5/7

Dupe of 7906200563

IV. The proposed rule fails to address the issue of exposure standards for fertile women. Any final rule relating to occupational exposure must clarify the commissions position on this important question.

In conclusion, this Company supports the proposition that there is no technical justification for modifying the current exposure standards set forth in 10 CFR 20, Section 20.101(b). These standards are used prudently and in the vast majority of situations result in exposures only slightly higher than the proposed annual dose limit.

Thank you for the opportunity to make these comments.

Sincerely,

Robert E. Uhrig
Vice President
Advanced Systems & Technology

REU:JRP:cf

cc: Robert Lowenstein, Esquire

Wisconsin Electric POWER COMPANY
231 W. MICHIGAN, P.O. BOX 2046, MILWAUKEE, WI 53201

April 24, 1979

(71)

DOCKET NUMBER
PROPOSED RULE PR-19;20 (44FR10388)

Mr. Samuel J. Chilk
Secretary of the Commission
U. S. NUCLEAR REGULATORY COMMISSION
Washington, D. C. 20555

Dear Mr. Chilk:

PROPOSED AMENDMENTS TO 10 CFR PARTS 19 AND 20

The following comments are submitted in regard to the proposed amendments to the regulations contained in 10 CFR Parts 19 and 20, as published in the Federal Register on February 20, 1979, at 44 FR 10388. These provisions would eliminate the "5(N-18)" rule or "dose bank" as it is sometimes called and would implement other related changes in the existing regulations.

Wisconsin Electric Power Company is a member of the Utility Occupational Radiation Standards Group (UORSG), organized under the general auspices of the Edison Electric Institute (EEI). Wisconsin Electric has been an active participant in the preparation of the comments provided to you by the UORSG. We support those comments and do not consider it necessary to belabor the details here. However, it is appropriate that we provide some additional observations specific to our own operations.

At our Point Beach Nuclear Plant, exposures in excess of 5 Rem/year have been minimal. There were six such exposures in 1975, three in 1976, one in 1977, and none in 1978. Of these, only one was above 6 Rem and none were above 7 Rem. This record does not indicate any abuse of the 5(N-18) provision; rather, it indicates that prudent and restricted use of the flexibility afforded by the rule has been made when the particular skills and experience of certain individuals were needed for the performance of a specific task.

The proposed changes would remove this afforded flexibility and would provide little or no corresponding benefit to workers. In the Commission's notice, cost effectiveness is assumed but not analyzed, ALARA benefits are claimed but not demonstrated, and no technical justification is provided. We believe that in certain circumstances the costs of the proposed rule change could be appreciable, for example, when downtime is increased due to the unavailability of personnel with particularly needed skills. At the same time, the proposed rule change may be inconsistent with ALARA, particularly when

Acknowledged by card....5/7.....

Dupe of 7906290136 - Add-P&L Change PDR

relatively unskilled personnel are assigned to tasks which would be otherwise performed by more experienced individuals. In such cases, collective dose may be expected to increase because of additional time spent at the task. Finally, from a radiobiological point of view, there is no evidence that any significant change in risk is attributable to the rate of exposure for the time frames involved here. There is no significant difference in risk for receiving 5 Rem per year for two years or receiving zero Rem in one year and 10 Rem the next.

For these reasons, we oppose the adoption of the rule changes proposed by the referenced Federal Register notice. We are aware of the current proposals by certain special interest groups and several individuals to reduce the current radiation dose limits. Their positions have received considerable peer criticism and are not accepted by well established and recognized bodies of radiological expertise. We ask that the Commission hold hearings before any modification of existing radiation standards is undertaken, in order to allow full and open discussion of the technical merits of any such proposal.

These comments do not apply to the proposed changes to 10 CFR Paragraph 19.13 which are primarily administrative in nature and to which we have no objection.

Very truly yours,

Sol Burstein

Executive Vice President

2410 Sugar Mill Road
Charlotte, N. C. 28210

April 24, 1979

(60)

PROPOSED RULE PR - 19 20 (44FR 10388)

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Docketing and Service Branch

Subject: Comments on Proposed Amendments to 10CFR Parts 19 & 20

Gentlemen:

This letter is provided to clarify the statement of the EEI Health Physics Task Force provided in my letter of April 16, 1979. The proposed amendments have not been supported with scientific data that justify a modification of current rules which have evolved from extensive research and experience with ionizing radiation. More specifically, the explanatory information contained in the notice indicates that the Commission has not thoroughly evaluated the impacts of eliminating the 5(N-18) dose averaging formula.

We object to the elimination of the formula without adequate justification. If the Commission persists in its intent to eliminate the formula, we recommend strongly that the NRC include this matter in a public hearing prior to instituting the change. It is imperative that the interested parties be given the opportunity to present their views directly to the Commission and that a thorough record be established.

This additional comment is provided to supplement our comments of April 16, 1979.

Sincerely,

L. Lewis

Lionel Lewis, Board Member
EEI Health Physics Task Force

LL/jpb

Dupe of 7906200219 - Add-S

PUBLIC CITIZEN LITIGATION GROUP
SUITE 700
2000 P STREET, N. W.
WASHINGTON, D. C. 20036
(202) 785-3704

April 24, 1979

Samuel J. Chilk, Secretary
Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Comments on Amendments to 10 C.F.R. Part 20 On Occupational Radiation Limits

Dear Secretary Chilk:

I would like to make several brief comments on the proposed regulations to eliminate the 5(N-18) exception to the general occupational radiation limits. Notice of the proposed amendments appeared in 44 F.R. 10388 (Feb. 20, 1979).

I agree with the major thrust of the amendments which does away with the 5(N-18) exemption to the nominal occupational radiation standard of 5 rems per year. The exemption now almost swallows up the rule and allows the vast majority of nuclear workers to be exposed to up to 12 rems of external, whole body radiation in a year. Given the recent scientific work on low-level radiation which indicates that it may be many times more harmful than was believed when the present standards were set, this reform is long overdue.

The notice asks for comments on whether any quarterly dose limit is needed. A quarterly limit is needed and it should be one-fourth of the annual limit, 1 1/4 rems, not 3 rems. A quarterly limit is needed because of the nuclear industry's use of short term contract labor or migrant atomic workers. The supposed justification of an occupational standard which allows much greater radiation dose than the public can be subjected to is that a worker can reasonably be exposed to greater danger than the public in return for his pay. It is unfair to subject a worker to a year's worth of risk for a day's pay. Sixty percent of a year's risk (3 rem) is not much better.

The current standards are based on a calendar quarter, so a worker can be subjected to one quarter's dose on March 31

Dupe of 7906140525 - Add-S

and another complete quarter's worth on April 1, with a similar problem for short-term workers for two days' pay. The standard should be a continually updated one--what the worker has been exposed to in the previous three months or a year. In any event, given these cumulative inequities in the current accounting, the quarterly limit should be one-fourth of the annual limit.

The Federal Register notice proposes an obfuscation of the heading of the regulations. The change is justified as NRC recognition of the fact that there is some risk in any radiation exposure. The NRC proposes to remove the word "permissible" from the heading. It seems the NRC equates the word "permissible" with "safe." "Permissible" occupational radiation exposures are exactly what these regulations are about--what the NRC permits. Retitling the regulations "radiation protection standards" begs the question of whether the standards protect workers enough, and thus contains the very categorical reassurance that the change supposedly eliminates. In addition, the new title is a cop out, eliminating explicit recognition that it is the NRC regulations which permit workers to get certain maximum routine radiation doses. President Carter has ordered federal agencies to move in the direction of clear, forthright regulations, not the other way.

An unfortunate side effect of elimination of the 5(N-18) rule is that employers will no longer need to calculate a worker's lifetime history of occupational radiation dose on Form NRC-4. Thus, an employer will have no incentive to keep convenient tabulations of its workers' exposure histories all in one place. This is unfortunate in two respects. First, it increases the difficulty for a worker to get a ready cumulation of his lifetime dose at any time during his career or upon leaving an employer or retiring. Secondly, it impedes future epidemiological radiation research by requiring researchers to dig through many year's old, original records, possibly in different formats, to establish dose histories.

The solution to this byproduct of the proposed reform is to establish a national registry of all occupational radiation exposures. In addition to providing accurate, up-to-date information to workers themselves and researchers (with appropriate provision for protection of privacy), a computerized national registry would help eliminate the problems which now exist with workers who work for more than one employer. Such workers are expected to report their previous exposure history to their new employer. If the registry were updated daily, as the Navy does in its nuclear shipyards, the radiation registry could be used to inform employers of exposure histories of new

workers and prevent violations of radiation exposure regulations.

If you have any questions about these comments, please give me the opportunity to clarify and supplement them.

Sincerely yours,

Michael H. Bancroft

Michael H. Bancroft
Staff Attorney

MHB/ms

William J
Vice President

Consolidated Edison Company of New York, Inc.
4 Irving Place, New York, N.Y. 10003
Telephone (212) 460-3811

(74)

PROPOSED RULE PR-19,20 (44FR10388)

April 23, 1979

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Attention: Docketing and Service Branch

Gentlemen:

Consolidated Edison Company of New York, Inc. respectfully submits the following comments on the Commission's proposed amendments to 10 CFR Parts 19 and 20, relating to dose limits for workers, published in the Federal Register on February 20, 1979.

We believe that NRC's action in proposing these regulations is premature. It would be more reasonable, and better in keeping with good scientific standards-setting practice, to await the receipt of forthcoming relevant, substantive information before selecting a course of action. As the Commission states in its Notice, it is planning a hearing on the general subject of occupational dose standards later this year. The Environmental Protection Agency is expected to announce similar hearings in the near future. The Report of the Committee on the Biological Effects of Ionizing Radiation (BEIR Committee) will soon be issued. NCRP is also reviewing its guidance in this area. The Interagency Task Force on Ionizing Radiation, recently issued a series of draft reports, including its report on proposed institutional changes in radiation control. As a result, these new regulations might have to be reviewed and possibly changed to make them consistent with those of other agencies and to reflect the latest information.

There is no urgency for a change in dose limits. Most exposures to workers have been well below the current limits, and there is no evidence that exposure to the highest radiation levels currently allowed diate threat to health, or could become are, review and adopt standards after all eceived. The benefits of delaying a ons to the existing regulations until

ard. 5/2

dd S

IOWA ELECTRIC LIGHT AND POWER COMPANY

General Office

CEDAR RAPIDS, IOWA

April 23, 1979

DUANE ARNOLD
CHAIRMAN OF THE BOARD
AND PRESIDENT

(68)

DOCKET NUMBER
PROPOSED RULE PR-19, 20 (44FR10388)

General Counsel
U. S. Nuclear Regulatory Commission
7920 Norfolk Avenue
Bethesda, Maryland 20034

Dear Sir,

In the absence of medical data to support it, we sincerely oppose your agency's proposal published in the Federal Register 20 February 1979 to change 10 CFR Part 20 to eliminate the dose limiting formula 5(N-18) or "dose bank". Your proposal suggests the implementation of new rules without waiting for planned hearings later this year.

Analysis of the proposal's affect in the operation of our own unit suggests that some of the results will be counter to the objectives you seek to achieve and may well work to the physical disadvantage of radiation workers. There are unfavorable economic implications to the nuclear electric companies and their customers, but these are of no consequence if it is clearly demonstrated that the workers' health environment is indeed improved and not accidentally degraded. It seems to us to be an imprudent course to follow to implement a change in regulations precipitously and without full evaluation beforehand.

The proposed changes in regulations were not precipitated by the discovery of any previously unidentified hazard to health. As a matter of fact, I know of no data suggesting that the current regulations are inadequate.

Sincerely,

D. Arnold

Chairman of the Board and President

DA:wg

Acknowledged by card. 5/7

Dupe of 7906210050 (1pg)-Add-5

Westinghouse Electric Corporation
Water Reactor Divisions
Box 355
Pittsburgh Pennsylvania 15230

NS-TMA-1979

April 23, 1979

(69)

DOCKET NUMBER
PROPOSED RULE PR-19,20 (44FR10388)

Mr. Samuel J. Chilk
Secretary of the Commission
U. S. Nuclear Regulatory Commission
1717 H Street NW
Washington, DC 20555

Attention: Docketing and Service Branch

Subject: Proposed Amendments to 10CFR19 and 10CFR20

Gentlemen:

This is in response to the Commission's notice in 44 Federal Register 10388 (February 20, 1979) requesting comments on proposed amendments to 10CFR19 and 10CFR20 of the Commission's regulations. The effect of these amendments would be to eliminate the dose averaging formula and the associated exposure history records and impose new annual dose-limiting standards while retaining quarterly standards.

Westinghouse believes that, in matters relating to radiation protection, the guidance and recommendations of such eminent scientific bodies as the International Commission on Radiological Protection (ICRP), the National Council on Radiation Protection (NCRP) and the committee on the Biological Effects of Ionizing Radiation (BEIR) must be relied upon. The Environmental Protection Agency (EPA) has the responsibility for reviewing the recommendations of these scientific bodies and promulgating general guidelines and standards for radiation protection guidelines and standards to be utilized by other agencies of the federal government. In view of the fact that EPA is presently reviewing and updating existing federal radiation protection guidance for occupational radiation exposures, we believe that the proposed amendments to the Commission's regulations are inappropriate at this time.

The EPA has also announced, at the Atomic Industrial Forum Conference on Regulation of Radiation in the Nuclear Industry (April 1979), their intention to convene a public hearing following publication of their proposed new federal guidance on occupational radiation protection standards. Since there is no imminent need to promulgate the proposed amendments we believe that action should be delayed until EPA issues its occupational radiation protection guidance. At that time, the proposed amendment should be considered in concert with any other changes necessary to implement the EPA guidance.

Acknowledged by card. 5/2

Dupe of 7906280259 (3PP) Change - PDR Add - P&L

Westinghouse believes that while it is not appropriate to promulgate changes to the existing NRC occupational radiation protection standards at this time, participation by NRC in the EPA proceedings and preparation for possible future changes is timely. In this regard, Westinghouse offers the following specific comments on the proposed changes to 10CFR20 for the NRC consideration during their preparation:

1. The proposed deletion of the dose averaging formula should be accompanied by the addition of the ICRP recommendation, in its Publication 26, of allowing up to twice the annual limit under special circumstances:

   "Situations may occur infrequently during normal operations when it may be necessary to permit a few workers to receive dose equivalents in excess of the recommended limits. In such circumstances external exposures or intakes of radioactive material may be permitted provided the dose-equivalent commitment does not exceed twice the relevant annual limit in any single event, and, in a lifetime, five times this limit."

   Guidance should be included for the determination by the licensee of those situations which constitute special circumstances. This guidance might include:

   a. Demonstration that exceeding the individual exposure limit is the lowest practicable level of total man-rem exposure for the particular operation(s) under consideration,

   b. The risk of potential health effects to the affected worker(s) is understood by the worker(s) and

   c. The workers voluntarily accept the risk.

2. The wording change to the "undesignated center heading proceding 20.101 through 20.108" is not "intended to imply that doses above the standard are unsafe and that doses below the standard are safe." Instead, the standards are "for regulating the affected industry." Therefore, we recommend that the wording be changed to "Regulatory Standards Applicable to Doses, Levels and Concentrations", thus removing implication that the change is being made for radiation protection purposes. We believe that this wording more clearly reflects the intent and philosophy of these sections of the regulations.

3. We support the inclusion of exposure limits for a calendar quarter at the 3 rem per quarter value only on the grounds that the lack of such a numerical limit in the regulations could result in future misinterpretation of the intent of the regulations and the imposition of stricter quarterly limits. Allowing workers to receive up to 3 rem per calendar quarter provides operational flexibility which usually results in lower total man-rem exposures. In these circumstances, lower limits would not be in harmony with the "as low as is reasonably achievable" (ALARA) concepts. We also believe that the exception noted in Comment 1 is applicable to the quarterly limit as well as the annual limit.

4. We support the intent and specific wording regarding personnel monitoring, definitions and the limits for minors.

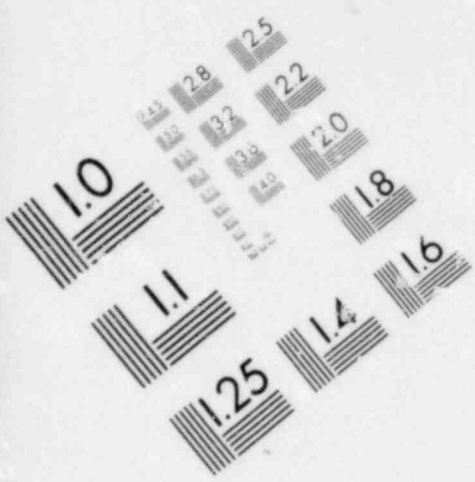
In summary, we believe that the recommendations by such scientific bodies as ICRP, NCRP and BEIR should be reflected in the Commission's review of its regulations and standards. That guidance should reflect the intent of such recommendations including any exceptions. Further, we believe that any changes to the NRC regulations concerning occupational radiation protection are inappropriate at this time in light of the forthcoming overall occupational radiation protection standards being considered by the EPA. The proposed changes should be held in abeyance until the EPA guidance is issued, at which time this proposed change should be considered together with any other changes which may be appropriate.

We thank you for the opportunity to provide comments on the proposed changes to the regulation. We would be happy to discuss our comments further with you should you so desire.

Very truly yours,

T. M. Anderson, Manager
Nuclear Safety Department

RJLutz/lz



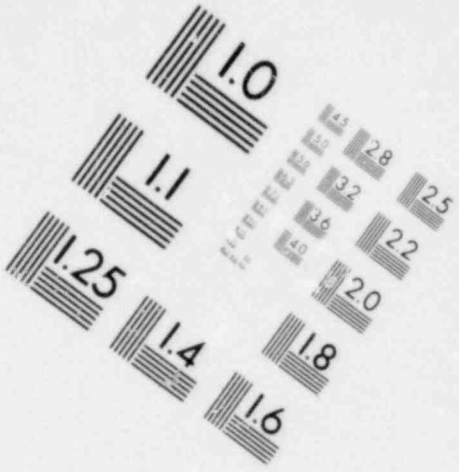
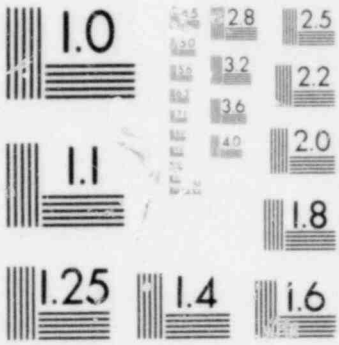
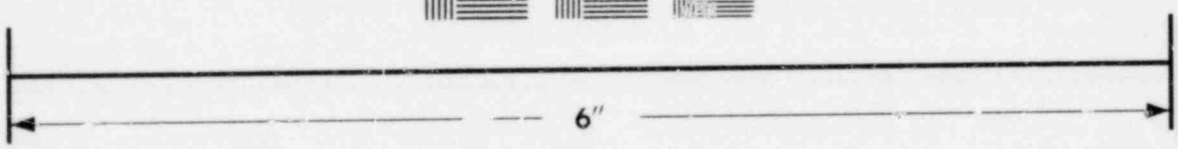
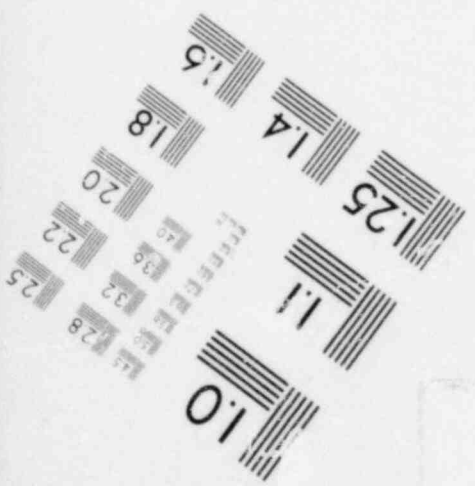
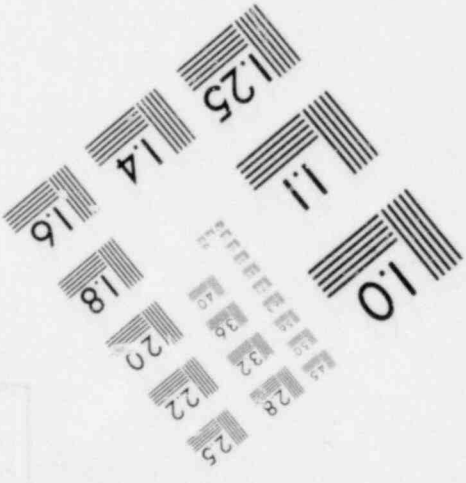


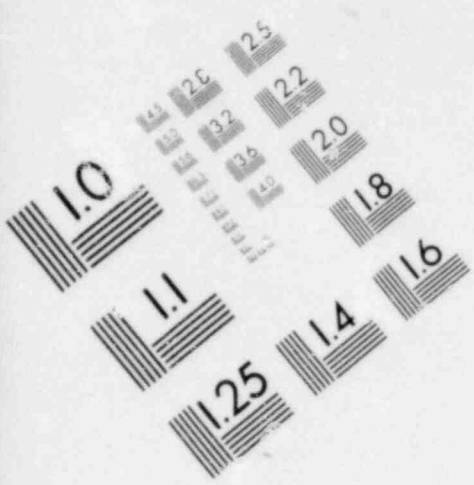
IMAGE EVALUATION TEST TARGET (MT-3)











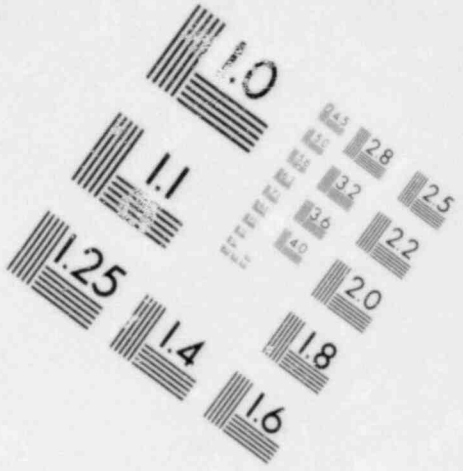
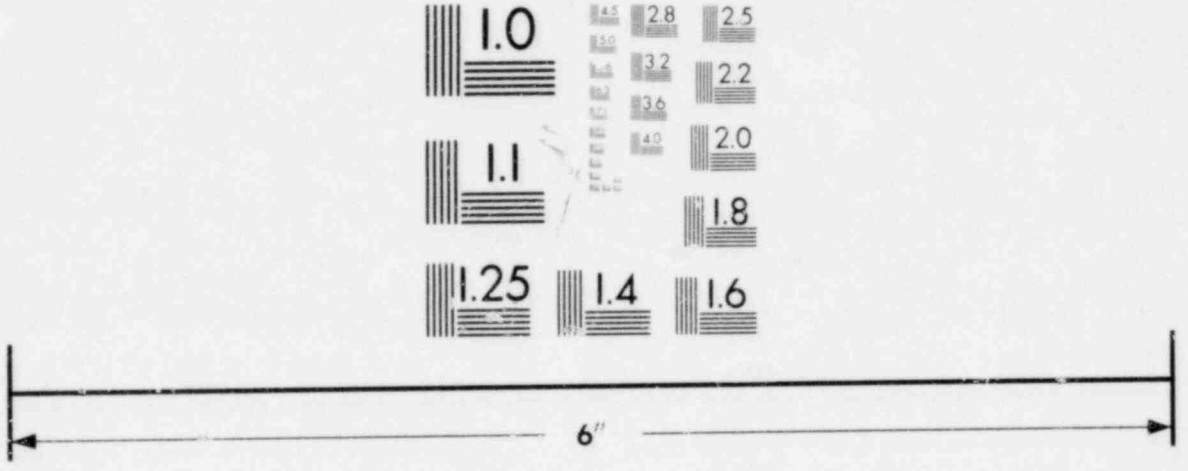
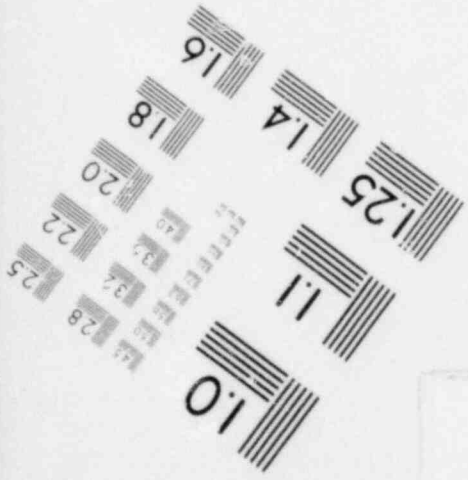
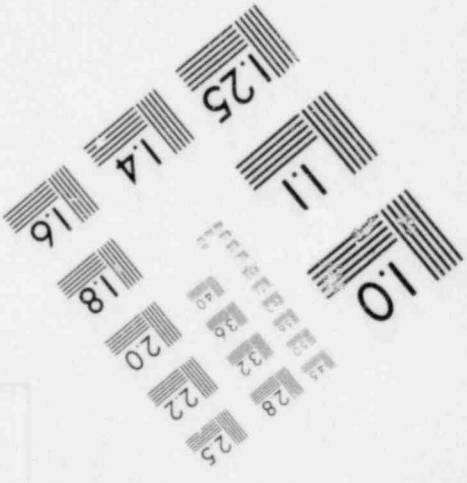


IMAGE EVALUATION TEST TARGET (MT-3)







(65)

DOCKET NUMBER
PROPOSED RULE 19, 20 (44FR10388)

Telephone 617 366-9011
TWX
710-390-0739

YANKEE ATOMIC ELECTRIC COMPANY

B.1.2.1

20 Turnpike Road Westborough, Massachusetts 01581

WYC 79-14

April 23, 1979

Secretary of the Commission
United States Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Docketing and Service Brand

Subject: Comments Regarding Federal Register Notice Appearing on Page 10388, Volume 44, No. 35, Tuesday, February 20, 1979 Proposed Rule to 10 CFR Parts 19 and 20

Dear Sir:

This letter is in response to the Federal Register Notice referenced above inviting public comment on the Commission's proposed rule "Notices, Instructions, and Reports to Workers; Inspection Standards for Protection Against Radiation."

The Yankee Atomic Electric Company is deeply concerned that the NRC proposes to make fundamental changes to 10 CFR Part 20 of the Commission's regulations through normal "notice and comment" rulemaking. The proposed elimination of the 5(N-18) rule, if adopted, will undermine a licensee's flexibility in dealing with infrequent special occupational exposure situations. The NRC proposed rule change specifically references the ICRP-26 recommendation that the 5(N-18) rule be eliminated, but selectively fails to state that ICRP-26 substituted an alternative provision for planned special exposure.

In our view, the staff has not provided adequate analysis or justification to propose this fundamental rule change or other rule changes associated with modifying 10 CFR Parts 19 and 20. We request the staff's proposal to eliminate the 5(N-18) rule and the other proposed changes be fully examined in public hearings.

Dupe of 7916200328

Add P&L
Chang PDR

ISHAM, LINCOLN & BEALE
COUNSELORS AT LAW

ONE FIRST NATIONAL PLAZA FORTY-SECOND FLOOR
CHICAGO, ILLINOIS 60603

TELEPHONE 312-558-7500 TELEX 2-5288

WASHINGTON OFFICE
1050 17TH STREET, N.W.
SEVENTH FLOOR
WASHINGTON, D.C. 20036
202-833-9730

April 23, 1979

(57)

-19,20(44FR10388)

Mr. Samuel J. Chilk
Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Re: Proposed Amendments to 10 CFR
Parts 19 and 20, 44 F.R. 10388
(February 20, 1979)

Dear Sir:

The Utility Occupational Radiation Standards Group ("UORSG") was established in 1978 under the auspices of the Edison Electric Institute, the principal national association of investor-owned electric utility companies, for the purposes of expressing the electric utility industry's views on, and providing industry assistance to other entities in connection with, matters relating to occupational exposure to radiation in nuclear facilities operated by EEI member companies. UORSG has reviewed the amendments the Commission proposes to make to certain of its regulations contained in 10 CFR, Parts 19 and 20 and, in response to the Commission's invitation to submit written coments with respect thereto, submits this letter of comment.

The central provision of the proposed amendments would eliminate the accumulated dose averaging formula, "5(N-18)," sometimes referred to as the "dose bank." UORSG opposes the elimination of the dose bank on the grounds that: (1) except for a rather weak ALARA analysis in which cost-benefit effectiveness is assumed but not analyzed, no sound justification for the proposed amendment is provided by the Commission; and (2) the elimination of the dose bank would result in a serious loss of flexibility to the nuclear industry with little corresponding benefit to the worker population.

UORSG is particularly concerned that the Commission has proposed to eliminate the dose bank through notice and comment rule-making at a time when both the Commission

Dupe of 7906140577 - Add-5

industry has been continuing its efforts to maintain exposures as low as is reasonably achievable.

Again as noted above, elimination of the dose bank may be contrary to the best interests of ALARA. Planned individual exposures in excess of 5 Rems per year ordinarily occur only in situations in which it is necessary to assign a particularly skilled and experienced individual to perform a specific high-exposure task. In such situations, the proposed amendment could result in more, and possibly less-skilled and less-experienced, workers being assigned to such tasks, and consequently greater non-productive and total man-rem exposure.

For these reasons, UORSG believes the flexibility afforded the industry by the 5(N-18) rule should be retained. This flexibility is particularly needed for those special situations which require the specialized services of outside contractor personnel, such as steam generator replacement, steam generator tube plugging, in service inspection, to name a few. Unanticipated increases in the scope of such tasks during refueling and maintenance outages can lead to justifiable applications of the flexibility provided by the dose bank. Where repeated instances of higher exposures have been experienced, the industry has developed and will continue to develop either facility design changes or improvements in maintenance and inspection aids to mitigate such exposures. The loss of flexibility which would result from the proposed amendments would have a significant impact when needed most, i.e., during unanticipated maintenance in high radiation areas. At best, additional costs and additional dose would be incurred for extra personnel; at worst, down-time would be increased.

The brief explanatory material contained in the Commission's notice suggests that the proposed elimination of the dose bank has not been thoroughly evaluated either by the Commission or its staff, and that certain of its potential consequences have been ignored, such as its potential adverse effects on worker population exposures with miniscule offsetting benefits in terms of individual worker exposure. In fact, the notice is virtually devoid of any documentation with the exception of reference to Report 26 of the International Commission on Radiation Protection (ICRP).

In Report 26, the ICRP concludes that exposures of 5 Rems per year constitute an acceptable societal risk, commensurate with, if not smaller than, other risks normally

at the inference in the Commission's Federal Register notice that a degree of technical merit should be attributed to the NRDC petition, the Bertell petition and other "recently published interpretations of epidemiological data and associated recommendations for lower standards." Most, if not all, of these recent claims by various individuals are contrary to the positions expressed by the prestigious entities referenced above and, in addition, are not standing up well under peer review. In the absence of a sound technical basis for so doing, it is inappropriate for the Commission to pursue any changes in the existing standards.

Also related to the proposal to eliminate the 5(N-18) rule is the corresponding elimination of the requirement to complete and maintain the information contained on NRC Form 4. Since the need for licensees to determine lifetime exposure histories would be eliminated, the sole repository of lifetime exposure information on individuals would be the NRC via termination reports. This is a somewhat peculiar feature in view of the recent HEW recommendations that dose histories be better maintained, although perhaps consistent with the concept of centralizing such records. Notwithstanding the attractive feature that licensees might be freed from a certain amount of record-keeping by this provision, UORSG does not consider it prudent to rush into the elimination or discontinuance of the sizeable body of data currently managed by licensees. If lifetime exposure histories are to be eliminated, other provisions should be made to ensure the availability and continuity of this data.

UORSG has no objection to the intent of the changes proposed for 10 CFR Section 19.13. However, we recommend that the provision be restricted to "measurable dose."

In the Commission's Notice, the NRC Staff admits that "no quarterly standards are needed," and then proposes a 3 Rems/Quarter limit in proposed 10 CFR 20.101 as a "precautionary measure." We do not believe that there is any necessity, precautionary or otherwise, for such an additional limit. The limit should be expressed either on a quarterly basis (as currently done) or on an annual basis, but not both. Supplemental limits introduce needless complexity in record-keeping and enforcement without a concomitant decrease in risk. A similar rationale should apply to the quarterly dose restrictions in Sections 20.104 and 20.202. If a basic annual limit is to be used, then those restrictions should all be stated on an annual basis only.

Air Transp(Association ata OF AMERI

(36)

DOCKET NUMBER PR 19,20(44FR10388)
PROPOSED RULE

1709 New York Avenue, N.W.
Washington, D. C. 20006
Phone (202) 872-4000

April 17, 1979

Secretary
U. S. Nuclear Re[illegible]latory Commission
Attn: Docketing and Service Branch
Washington, D. C. 20555

Dear Sir:

This is in reply to your proposed revision to CFR Parts 19 and 20 regarding radiation dose limiting standards published February 20, 1979.

Some ATA member airlines use radioisotopes for inspection of aircraft and engines. Most of the affected ATA member airlines support the proposal. However, attached are comments from American Airlines and Air Canada regarding the proposal.

Your consideration of these comments will be appreciated.

Sincerely,

E. L. Thomas
Assistant Vice President -
Engineering

Attachments
VWB:lbh

Acknowledged by card 4/19/79

Dupe of 7905040313 -Add-S

TEMPLE UNIVERSITY
PHILADELPHIA, PENNSYLVANIA 19140

RADIATION SAFETY OFFICE

April 23, 1979

PROPOSED RULE PR - 19, 20 (44FR 10388) (57)

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attn: Docketing and Service Branch

Re: Fed. Reg. 44: 10388 (2/20/79).

Gentlemen:

I am writing to comment on the proposed revisions of 10 CFR 19 and 20 relating to radiation protection standards applicable to doses. I am specifically pointing out a difficulty with the proposed 10 CFR 20.102, "Determination of Prior Dose."

If a person does not request his or her radiation exposure history for the current year when leaving employment, the new employer may be subjected to undue delays in placing the person to work at the position involving radiation exposure (potentially exceeding 250 mrem per calandar quarter) for which the person was hired, since the former employer has, from 10 CFR 19.13, 30 or more days to respond to requests from former employees for exposure history. These delays would result in financial burden to either the new employer or to the employee (if the employer refuses to provide compensation since the employer is prohibited from using the new employee's services without the requisite information) and could perhaps be viewed as restraint of trade or infringement on right to work.

There are various measures that could be proposed to circumvent this problem, but each has its own inherent difficulties. I suggest that further thought be given to this aspect of the proposed revised regulations.

Very truly yours,

Ronald E. Zelac, Ph.D., C.H.P.
Director, Radiological Health
and Biohazards Control

REZ:rm

Acknowledged

cc: Dr. P.D. Forbes
Dr. N.D. Charkes
Dr. S. Herman

Dupe of 7906130186 (1pg) - Add-S

International Brotherhood
of Electrical Workers

Charles H. Pillard
International
President

Ralph A.
Internatio
Secretary

IBEW

1125-15th St. N.W.
Washington, D.C.
20005

(55)

DOCKET NUMBER
PROPOSED RULE PR-19,20 (44FR10388)

April 23, 1979

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Docketing and Service Branch

Dear Mr. Chilk:

This is in regard to the proposed rule by the U. S. Nuclear Regulatory Commission as published in the Federal Register of February 20, 1979, relative to proposed amendments to the Commission's regulations on Protection Against Radiation.

Of the 50 nuclear generating stations with units licensed to operate (72 units), the IBEW represents the bargaining unit employees at 33 stations. Some 6,000 of our members are permanently assigned to the various stations, while tens of thousands of our members rotate through the stations for required maintenance and service.

At the present time we are in the process of discussing the accumulated dose average formula with our Local Unions who have jurisdiction in these nuclear generating stations. In general, the IBEW is supportive of the proposed rule by the Commission.

We will provide you with additional comment in the very near future.

Very truly yours,

Charles H. Pillard

Charles H. Pillard
International President

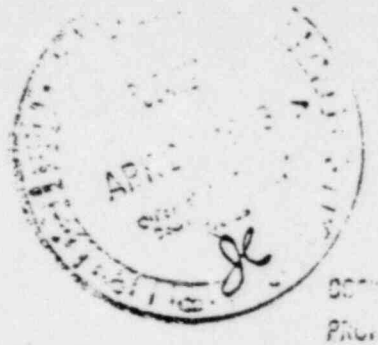
CHP:mhb

Acknowledged by card.....

Dupe of 7906130188 Att-S

IBEW

International Brotherhood of Electrical Workers



Local No. 457 Connecticut Yankee Unit

Address of Writer 31 Pratt St. Meriden, Conn. 06450

(54)

PR-19,20(44FR10388)

The Secretary of the Commission,

The members of Local Union , 457 , of the Conn. Yankee Unit, having reviewed your proposed ruleson 10 CFR Part 19 and 20 involving the elimination of the use of the formula, 5(N-18), have some comments and they are here presented.

1. We feel that the provision for the licensee to obtain previous total occupational exposure should remain intact. Many workers may not know thier previous exposure before being assigned work involving exposure on a new assignment and it would be difficult to disclose a previous dose accuratly in a signed statement. Addionally, the members want assurance that the licensee at any time can give them an accurate record of total lifetime exposure.

2. After having reviewed the explaination of the reasons for allowing up to 3REM for a quarter, we feel this should be looked into more carefully. At present, during a period of major work, the licensee keeps the exposure just below that allowed. If the quarterly dose were to be reduced more than indicated, (below 3REM) then more than 320 workers would be effected. If the quarterly dose were to be reduced somewhat, many licensees would improve administrative controls, and install some engineering impoovements to reduce the exposure rather than hire more people. There is a cost benifit situation where it is of more benifit to reduce exposure through administrative controls and engineering features than to hire more people. We would ask you to look more closely at this and try to detirmine if a reduction in allowable quarterly exposure would in fact result in lower collective dose as well as individual dose.

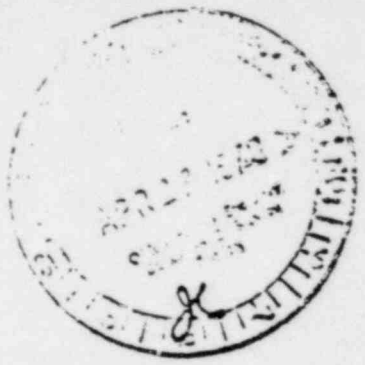
Sincerely,

Theodore J. Riccio
for Local 457 , Conn. Yankee Unit

Acknow...

Dupe of 7906130191

Process Control Division
1601 Trapelo Road,
Waltham, Massachusetts 02154
Tel: (617) 890-2000



(53)

DOCKET NUMBER
PROPOSED RULE -19,20(44FR10388)

April 23, 1979

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Attn: Docketing and Service Branch

Dear Sir:

I wish to comment on the proposed changes to 10 CFR Parts 19 and 20 as published in the Federal Register on Page 10388 of February 20, 1979.

[illegible]eral, I support the proposed changes. However, I have some concern about the effect on certain other regulations and about the possibility of having non-uniform regulations from state to state.

The LFE Corporation employs people in a number of states some of which are Agreement States. In addition, some of the employees work in both Agreement States and non-Agreement States. Without uniform regulations in all states, administration of a radiation program becomes very difficult. I recommend that the Commission work with the Agreement States to phase in the new regulations simultaneously in all states.

My other concern involves general licensees. Part 32.51(a) specifies the radiation dose applicable to general licensees as 10 percent of the limits of 20.101(a). In the proposed regulations, 20.101(a) disappears. Therefore, it appears that 32.51(a) must be amended.

Very truly yours,

LFE CORPORATION
PROCESS CONTROL DIVISION

William R. Prendergast
Radiation Safety Officer

Acknowledged [illegible]

WRP:ek

Dupe of 7906130195 (1pg) - Add-5

(51)

-19, 20 (44FR 10388)

BECKMAN®

BECKMAN INSTRUMENTS, INC.
EXECUTIVE OFFICES
2500 Harbor Boulevard, Box 3100, Fullerton, California 92634 • Telephone: (714) 871-4848 • TWX: 910-592-1260 • Telex: 06-78413

April 23, 1979

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Docketing and Service Branch

Gentlemen:

Subject: Proposed Rule to Eliminate the 5(N-18) Formula for Dose Averaging

Following are the comments of Beckman Instruments, Inc. on the subject proposed rule as set forth in the Federal Register of February 20, 1979 (43FR 10388)

Regulatory requirements for occupational exposure are desirable for use as a guideline against which an operational program may be measured. However, as stated in the preamble, these requirements do not attempt to define a fine line between safe and unsafe limits. We believe that under certain circumstances it is highly desirable to provide some flexibility in the permissible dose levels through the exercise of discretion of a well qualified expert.

Therefore we recommend that the proposed regulations include provisions allowing the prescribed dose levels to be exceeded when in the judgement of a qualified expert (e.g. Certified Health Physicist or equal) all circumstances warrant such action. These provisions might well require reporting to a regional compliance office (or appropriate local agency) the justification for non-recurring exceptions or a license amendment for recurring exceptions.

The proposed requirement for the determination of prior exposure (§20.102) essentially follows that which was proposed in February 1978. As stated in our response to that proposal (copy attached for your convenience of reference), a requirement for such written statements is

Dupe of 7906180363

PSEG

Public Service Electric and Gas Company 80 Park Place Newark, N.J. 07101 Phone 201/430-7000

(50)

COMMENT PERIOD: PR - 19, 20 (44FR 10388)

April 23, 1979

Samuel J. Chilk
Secretary to the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Docketing and Service Branch

Dear Mr. Chilk:

COMMENTS ON 10CFR PARTS 19 AND 20

On February 20, 1979, the U.S. Nuclear Regulatory Commission published in the Federal Register proposed rule changes to 10CFR 19 and 20 which would eliminate the "5 (N-18)" rule where N is the age of the individual and impose a ceiling of five rem per year for occupational exposure to ionizing radiation. In addition, the Commission has also proposed various changes in the reporting and record keeping for occupationally received doses. These changes were evidently prompted by Paragraph 35 of the International Commission of Radiation Protection publication No. 26 which withdrew its endorsement of the age related formula. The Commission has indicated that it has adopted some portions of the recommendations of the ICRP while rejecting one of its most important provisions, specifically Paragraph No. 113. Paragraph 113 of ICRP No. 26 indicates that the ICRP allowed for the situation in which a few key individuals may have to receive exposures higher than 5 rem/yr. The following paragraph is quoted from ICRP No. 26.

"Situations may occur infrequently during normal operations when it may be necessary to permit a few workers to receive dose equivalents in excess of the recommended limits. In such circumstances external exposures or intakes of radioactive material may be permitted provided the dose-equivalent commitment does not exceed twice the relevant annual limit in any single event, and, in a lifetime, five times this limit. The Commission wishes to emphasize the external exposures or intakes of this magnitude are only justified when alternative techniques, which do not involve such exposure of workers, are either unavailable or impracticable."

NCRP | National Council on Radiation Protection and Measurements

7910 WOODMONT AVENUE, SUITE 1016, WASHINGTON, D. C. 20014 AREA CODE (301) 657-2652

WARREN K. SINCLAIR, *President*
HYMER L. FRIEDELL, M.D., *Vice President*
W. ROGER NEY, *Executive Director*

(49)

PROPOSED RULE -19,20 (44FR10388)

April 23, 1979

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Docketing and Service Branch

Dear Sir:

The National Council on Radiation Protection and Measurements (NCRP) is pleased to offer comments on the proposed amendment to Nuclear Regulatory Commission regulations which would eliminate the accumulated dose averaging formula, 5(N-18). The Commission's desire to reduce the risks of occupational exposure is, of course, commendable. However, the NCRP believes that whenever a change is proposed in any recommended level, the reasons for that change should be clear and definite. In this case, the demonstration of the need for the proposed change in the dose-limiting rules appears to us to be inadequate. No firm reason is given. Inclusion of consideration of the proposed change in the scope of the proposed hearings on the general question of occupational dose-limiting standards might provide the opportunity to demonstrate the need for the proposed change.

The averaging formula does have a number of positive attributes, of which perhaps the most important is the flexibility it provides. It demonstrates quite effectively that the numbers selected for annual limits do not define the boundary between safety and danger. It thus permits an occasional exposure in excess of the annual limit but bars repeated passing of that limit. Even if it is believed that the averaging formula should be abandoned, some method of providing this type of flexibility could be valuable.

Dupe of 7906140572 Add-S

NEW YORK UNIVERSITY MEDICAL CENTER

Institute of Environmental Medicine

550 FIRST AVENUE, NEW YORK, N.Y. 10016
AREA 212 679-3200

PLEASE REPLY TO:
NEW YORK UNIVERSITY MEDICAL CENTER
BOX 817, TUXEDO, NEW YORK 10987

DOCKET NUMBER
PROPOSED RULE PR-19,20 (44FR10388)

April 23, 1979

Secretary of the Commission
Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Docketing and Service Branch

Gentlemen:

I would appreciate ~~receiving~~ a copy of the proposed amendments to Parts 19 and 20 of NRC Occupational Radiation Dose Standards. Could you also include information relating to the public hearing which will be held on this action?

done 5-17-79 JSC

Any information which you have relating to this topic would be of great interest to me. Thank you for your consideration.

Very truly yours,

Norman Cohen, Ph.D.
Associate Professor of
Environmental Medicine

NC/j

Acknowledged by card. 5/7

Dupe of 7906210362 - Add-S

VANDERBILT UNIVERSITY
NASHVILLE, TENNESSEE 37232 TELEPHONE (615) 322-7311
Radiation Safety Office • Direct phone 322-2057

(42)

PROPOSED RULE 10 CFR 20 (44FR10388)

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gentlemen,

We are in basic agreement with the NRC's proposal to modify the presently existing dose standards which allow up to 12 rem whole body dose per year under certain conditions, and believe that a straightforward 5 rem per year standard is preferable and is acceptable. However, we are opposed to retention of a 3 rem quarterly limit. The 3 rem limit is so close to the 5 rem annual standard that it would not seem to satisfy the NRC's rationale for having the quarterly limit, i.e., serve as an early indicator of undesirable situations. If the intent is to serve as an early indicator, then a 1¼ rem limit is preferable. This latter limit would also be consistent with the quarterly limits for hands (etc.) and skin, i.e., 25% of the annual standard. Although we are in favor of eliminating the quarterly standards, if they are to be retained we would suggest a simplified reporting format for doses in excess of the quarterly limits. The reports, investigations and proposed corrective actions would be required only for absorbed dose equivalents in excess of the annual standards, which would be regarded as the "official" dose standards. The quarterly standards would be used simply for early reporting purposes: based on these reports the NRC, of course, could request any additional information or action it deemed necessary. This would be similar to a procedure we use at Vanderbilt for notifying and often investigating reported doses in excess of 50% of quarterly or equivalent monthly standards. These doses we describe as "significant exposures", in contrast to "overexposures", which would require much more thorough follow up action.

Paragraph 20.102 of the proposed regulations also needs some clarification. This requires that new individuals disclose in a written, signed statement the amount of any radiation dose received during each quarter of the current calendar year, prior to first entry into a licensee's restricted areas. Paragraph 19.13 (e) requires the previous employer to provide the individual with this dose information. However it is not clear as to what sort of documentation relating to this dose information is acceptable. Does the NRC contemplate developing a form to relate this information? Or, is the individual's recollection of his dose history acceptable? If so, are exact figures needed, or are order of magnitude values acceptable? Is the licensee obligated to check out any of this information for accuracy?

NORTHEAST UTILITIES

P.O. BOX 270
HARTFORD, CONNECTICUT 06101
(203) 666-6911

(70)

DOCKET NUMBER
PROPOSED RULE PR-19, 20 (44FR10388)

April 20, 1979

Secretary of the Commission
Attn: Docketing and Service Section
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Reference: (1) Federal Register, Volume 44, Number 35, dated February 20, 1979, Proposed Rule Changes to 10CFR Parts 19 and 20.

Dear Sir:

Northeast Utilities Service Company (NUSCO) is pleased to be given the opportunity to submit comments on the above referenced proposed rule change in 10CFR Parts 19 and 20. NUSCO is responsible for the corporate management of three nuclear power stations and has extensive experience in occupational exposure matters having been involved in the operation and design of nuclear power stations since 1965.

It is our understanding that the proposed rule change will eliminate the 5 (N-18) dose-age averaging formula which could allow certain workers to receive up to 12 rems per year. The revised annual limit will be 5 rem with a quarterly limit of 3 rem. The apparent intent is to reduce the risk to individuals who were estimated to comprise about 0.5 percent of the total number of radiation workers in 1977. The Commission indicates that this change will have little effect on the collective dose (man-rem).

An evaluation of the proposed rule change indicates the only apparent benefit is the reduction in individual risk to a small percentage (0.5) of the radiation workers. On the other hand, the costs of this proposed rule change would be, (1) the necessity for an increased number of workers with certain specialized skills and as a result of a decreased work efficiency, (2) a potential for an increase in collective exposure (man-rem). It is not obvious in the proposed rule change where the above costs have been compared to the benefits of reduced individual risks. It is necessary that this be done to provide a value-impact analysis for the rule change.

The Commission references the International Commission on Radiological Protection (ICRP) Publication 26 (January, 1977) as the basis for the 5 rem/year limit. However, the need to have the flexibility of utilizing a limit of up to 10 rem/year for certain essential tasks was also indicated in ICRP-26. This flexibility has not been included in the proposed rule change. This would be especially important for high radiation dose-rate jobs where certain specialized skill workers are at a premium. The industry has maintained the "as low as reasonably achievable" (ALARA) philosophy in regard to workers' exposures. Any exposure in excess of 5 rem/year could be justified in accordance with the ALARA practices. These justifications would be documented and subject to Commission inspection. The industry record does indicate that in only a small percent (0.5) of cases is there

Dupe of 7906220043 Acknowledged by card. 5/7

exposure in excess of the 5 rem/year limit. Utilization of the ALARA justification criteria would further ensure that this low percent be maintained.

The philosophy and principles of ICRP-26 have not been adopted in their entirety by the Commission. The ICRP indicates that at a level of about 5 to 10 rem the rate of exposure during a calendar year is not biologically significant. This leads to a dropping of quarterly limits and the flexibility of utilizing a limit of up to 10 rem for certain essential tasks where alternatives are either unavailable or impractical. The Commission should consider these principles more closely.

In conclusion, the proposed rule change should be amended to incorporate the necessary flexibility in accordance with ICRP-26. In addition, a value-impact assessment is essential to provide the basis for the proposed rule change.

Thank you for your attention in this matter.

Very truly yours,

NORTHEAST UTILITIES SERVICE COMPANY

W. G. Counsil

W. G. Counsil
Vice President

ARIZONA PUBLIC SERVICE COMPANY
P. O. BOX 21666 · PHOENIX, ARIZONA 85036

(61)
PROPOSED RULE PR - 19, 20 (44FR10388)

April 20, 1979
ANPP-12985-JRM

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Docketing and Service Branch

Subject: Comments on Proposed Amendments to 10CFR19 and 10CFR20, per FR Volume 44, No. 35, February 20, 1979, pages 10388-10390
File: 79-010-419

Dear Sir:

The proposed amendments would eliminate the accumulated dose averaging formula, 5(N-18), and the associated Form NRC-4 exposure history and impose annual dose-limiting standards while retaining quarterly standards.

We offer the following comments in support of the proposed amendments:

1. We agree with the concept of a precautionary quarterly limit of 3 rems as a useful indicator of potential undesirable exposure conditions. This quarterly limit still gives the licensee the flexibility of accomplishing essential work involving the higher dose rates.

2. Elimination of the 5(N-18) formula relieves the licensee of a very cumbersome burden of radiation exposure record keeping and places the responsibility of current dose data maintenance onto the transient worker where it belongs.

Very truly yours,

E. E. Van Brunt

E. E. Van Brunt, Jr.
APS Vice President
Nuclear Projects
ANPP Project Director

EEVBJr/JRM:skc

cc: R. L. Robb
J. M. Allen
F. W. Hartley
A. C. Gehr

Dupe of 7906160053 - Add-S

GENERAL ELECTRIC

NUCLEAR ENERGY

PROJECTS DIVISION

GENERAL ELECTRIC COMPANY, 175 CURTNER AVE., SAN JOSE, CALIFORNIA 95125

MC 682, (408) 925-5040

(39)

PROPOSED RULE PR - 19,20 (44FR10388)

April 20, 1979

MFN-108-79

Secretary of The Commission
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Docketing and Service Branch

Gentlemen:

SUBJECT: PROPOSED RULE CHANGES IN 10CFR 19 AND 20

General Electric Company herein provides comments in response to the NRC's notice of a proposed rule to amend portions of 10CFR 19 and 20 on standards for protection against radiation published in the Federal Register of February 20, 1979 at 44FR 10388-390.

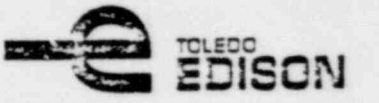
The proposed rule changes raise substantial technical and scientific issues on permissible radiation dose. Proper scientific bases for resolution of such issues must be the basis for establishment of dose control, and the Commission's notice does not provide the time nor the vehicle upon which such changes should be based. Therefore, we recommend that the proposed rules be considered in a hearing, as the notice suggests, and that the Commission solicit testimony from expert scientific organizations and individuals for such a forum.

The following comments are based upon the material presented in the NRC notice.

1. The supplementary information portion of the notice states that the NRC's current assessment of a dose 12 rems per year is based on a desire to reduce the risks of occupational dose. The information supplied in the notice provides no basis for this position, and it appears to rely on the assumption of linearity between dose and effect.

2. The elimination of the 5(N-18) rems per lifetime basis may not result in reducing overall man-rem dose in a facility. If specially skilled employees are not available to complete some required work, the substitution of several employees of lesser skills would probably result in a greater total dose. Since NRC thinking is apparently based on the linearity assumption, the NRC's proposed elimination of 5(N-18) is incompatible with total man-rem ALARA objections, and thus the NRC's position appears inconsistent.

Dupe of 7906180358 - Add S



JAMES S. GRANT
Vice President
Energy Supply
(419) 259-5332

April 19, 1979

Serial No. 1-61

(46)

DOCKET NO. PR - 19, 20 (44FR 10388)
PROPOSED RULE

Mr. Samuel J. Chilk
Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Docketing and Service Branch

Re: Comments on the proposal to change the dose standard to the whole body in 10 CFR 20 to 3 rems per quarter and the annual dose standard to 5 rems

Dear Mr. Chilk:

The proposed rules change the whole body dose standards from 1.25 to 3 rems/quarter and from 12 rems/year, provided 5(N-18) is not exceeded to 5 rems/year. ICRP Publication 26 states that for annual doses on the order of 5 rems, there is little or no biological advantage, except for an embryo or fetus, in limiting the rate at which the dose is received. Therefore, no quarterly standards are needed.

Generally, an individual receives most of his annual exposure during the yearly refueling. By limiting the quarterly dose standard to 3 rems could mean that an individual's yearly exposure would rarely exceed a quarterly dose standard because exposures outside the refueling period are considerably reduced. This concept could actually result in higher total man-rems for the following reasons:

1. An experienced individual being replaced by a less qualified one taking longer to perform the work would receive more exposure.

2. On jobs in high radiation areas, additional exposure is received entering and leaving the work areas.

An ALARA program must also consider total man-rems, as well as reducing exposures to an individual.

The position of the Toledo Edison Company on the proposed rules is that quarterly doses standards should be eliminated based on the fact that dose rates for annual doses on the order of 5 rems does not present a biological hazard and total man-rems would be higher by imposing quarterly dose standards.

Yours very truly,

James S. Grant
Vice-President, Energy Supply

TDM/DWB/daw

Dupe of 7906140631 - Add-5

BALTIMORE GAS AND ELECTRIC COMPANY

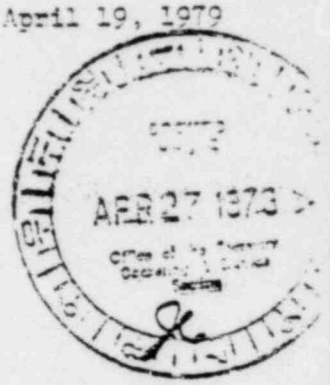
P. O. BOX 1475
BALTIMORE, MARYLAND 21203

(44)

April 19, 1979

JOHN W. GORE, JR.
VICE PRESIDENT
ENGINEERING AND CONSTRUCTION

DOCKET NUMBER
TO RULE PR-19,20(44FR10388)



Secretary of the Commission
Attention: Docketing & Service Branch
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Comments on Proposed Change to 10CFR20
Eliminating the 5(N-18) Rule

Gentlemen:

Baltimore Gas and Electric Company fully subscribes to the ALARA concept and to date has maintained annual whole body doses to individuals under 5 rem.

However, we believe the proposed changes should not be promulgated at this time pending outcome of the upcoming NRC hearing on the adequacy of present occupational dose-limiting standards. Although BG&E is most anxious to protect personal health and safety and endorses standards required to ensure adequate protection, we do not endorse changes of existing standards without clear risk-benefit and/or cost-benefit justification for doing so.

Some specific items related to these proposed changes which should be addressed during the hearings are:

1) The overall health effect of possible increased collective risk (man-rem) vs. reduced individual risk.

2) The cost-benefit assessment of the proposed changes to dose-limiting standards.

3) The justification for retaining quarterly limits within the 5 rem per year limit.

If the Commission is concerned about abuses of the 5(n-18) formula prior to completion of the low level dose hearings, you should emphasize to those licensees routinely using the formula that it is intended for use in special cases only.

Sincerely,

Dupe of 7906130199 - Add-5

LEVA, HAWES, SYMINGTON, MARTIN & OPPENHEIMER

815 CONNECTICUT AVENUE, N. W., WASHINGTON, D. C. 20006

TELEPHONE (202) 298-8020 CABLE: FOLEX WU TELEX: 89-2720

MARX LEVA
LLOYD SYMINGTON
JOSEPH C. SWIDLER
FRANZ M. OPPENHEIMER
JOHN G. KELLER
ROBERT MARTIN
CRAIG MATHEWS
LESTER S. HYMAN
RICHARD SHLAKMAN
PETER BARNES
JOHN S. HOFF
JOSEPH H. PRICE
MICHAEL B. SHEPPARD
KENNETH I. SCHANER
DAVIS R. ROBINSON
THOMAS M. LEMBERG
ROGER STRELOW
EDWARD BERLIN
WILLIAM H. TAFT III

LOWELL D. TURNBULL
BRIAN G. DRISCOLL
CATHLEEN H. DOUGLAS
FRED W. GELDON
ANDREW D. WEISSMAN
S. LINN WILLIAMS
MAURICE J. MOUNTAIN, JR.
JOSH LOREN NORDAN
E. DONALD ELLIOTT
ROBERT S. TAYLOR
STEVEN J. AGRESTA
GEORGE A. LEMAISTRE, JR.
SIMEON M. KRIESBERG
EDWARD R. MULLER
CARMEN D. LEGATO
FRANCIS S. BLAKE

April 19, 1979

Mr. Samuel J. Chilk
Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Re: Petition for separate public hearing on proposed rule to amend 10 CFR parts 19 and 20

Dear Mr. Chilk:

For the reasons stated in the attached letter, Commonwealth Edison Company hereby petitions the Commission to act pursuant to the authority specified in 10 CFR §§ 2.804 and 2.805 to hold a separate public hearing on the Commission's proposed rule to amend 10 CFR parts 19 and 20, published in the Federal Register on February 20, 1979, 44 Fed. Reg. 10388, et seq.

As explained in the attached March 13 letter, which requested a hearing pursuant to the Commission's February 20 notice, a hearing separate from that to be held concerning "the adequacy of present occupational dose-limiting standards" (44 Fed. Reg. 10388) is essential, to ensure that the Commission devotes adequate attention to the important and distinct issues raised by the February 20 proposal.

Sincerely,

Roger Strelow

Roger Strelow
Counsel for
Commonwealth Edison Co.

RS:ldg
Attachment

Dupe of 7907300258 - Add-S

LEVA, HAWKES, SYMINGTON, MARTIN & OPPENHEIMER

815 CONNECTICUT AVENUE, N. W., WASHINGTON, D. C. 20006

TELEPHONE (202) 298-8020 CABLE: FOLEX WU TELEX: 89-2720

[illegible] LEVA
[illegible] SYMINGTON
JOSEPH C. SWIDLER
ALEZ M. OPPENHEIMER
[illegible] G. KELLER
[illegible]BERT MARTIN
[illegible] MATHEWS
STER S. HYMAN
CHARD SHLAKMAN
TER BARNES
HN S. HOFF
SEPH H. PRICE
CHAEL B. SHEPPARD
NNETH T. SCHANER
VIS R. ROBINSON
OMAS M. LEMBERG
GER STRELOW
WARD BERLIN
LLIAM H. TAFT IV

LOWELL D. TURNBULL
BRIAN G. DRISCOLL
CATHLEEN M. DOUGLAS
FRED W. GELDON
ANDREW D. WEISSMAN
S. LINN WILLIAMS
MAURICE J. MOUNTAIN, JR.
JOSH LOREN NORDAN
E. DONALD ELLIOTT
ROBERT S. TAYLOR
STEVEN J. AGRESTA, JR.
GEORGE A. LEMAISTRE, JR.
SIMEON M. KRIESBERG
EDWARD R. MULLER
CARMEN D. LEGATO

March 13, 1979

Mr. Samuel J. Chilk
Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

RE: Request for public hearing on proposed rule to amend 10 CFR parts 19 and 20

Dear Mr. Chilk:

On behalf of Commonwealth Edison Co., of Chicago, an NRC licensee with extensive experience in the operation of nuclear power generating facilities, the undersigned hereby requests a public hearing on the Commission's proposed rule to amend 10 CFR parts 19 and 20, published in the Federal Register on February 20, 1979, 44 Fed. Reg. 10388 et seq.

If adopted, this proposed rule would eliminate the Commission's current accumulated dose averaging formula, 5(N-18), and substitute annual and quarterly dose limitations of 5 rem per year and 3 rem per quarter, respectively. In addition, the proposal would modify notification, reporting and other related provisions of the present regulations.

This proposal raises important issues which warrant an opportunity for discussion before the Commission. Since these issues relating to dose accumulation are distinct from the issues concerning the level of the occupational exposure [illegible] e hearing described in the [illegible] tentatively scheduled for [illegible] preferable to address these

Add S

RON PAUL
22ND DISTRICT, TEXAS

WASHINGTON OFFICE:
ROOM 1224
LONGWORTH HOUSE OFFICE BUILDING
WASHINGTON, D.C. 20515
(202) 225-3951

Congress of the United States
House of Representatives
Washington, D.C. 20515

DISTRICT OFFICES:
1110 NASA ROAD 1
SUITE 406
HOUSTON, TEXAS 77058
(713) 333-2566

HOUSTON CONGRESSIONAL HOT LINE
(713) 237-1550

101 OYSTER CREEK DRIVE
LAKE JACKSON, TEXAS 77566
(713) 297-3961
(713) 393-1895

LAKE JACKSON CONGRESSIONAL HOT LINE
(713) 297-0202

18 April 1979

(64)

- 19,20(44FR10386)

Mr. Carlton Kammerer
Director, Office of Congressional Affairs
Nuclear Regulatory Commission
1717 H Street, N. W.
Washington, D. C. 20505

Dear Mr. Kammerer:

Re - Gulf Nuclear, Inc.
P. O. Box 58866
Houston, Texas 77058

The attached correspondence from Gulf Nuclear, Inc., is self-explanatory. I will appreciate your considering their complaints and furnishing me a full report on the matter.

Thanks very much for your help, and please advise.

Sincerely,

Ron Paul

RP/e
Enclosure

Ron Paul
Member of Congress

Dupe of 7905290107 - Add-S

AmericanAirlines

MAINTENANCE & ENGINEERING CENTER

(41) April 18, 1979

DOCKET NUMBER
PROPOSED RULE PR-19, 20 (44FR10388)

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Docketing and Service Branch

Dear Sir:

Reference Nuclear Regulatory Commission proposed amendments to 10 CFR Part 19 and 20 on Radiation Dose Limiting Standards as published in Federal Register Vol. 44, No. 35, for Tuesday, February 20, 1979.

The following comments apply to the proposed amendments as shown on the attached Federal Register pages to referenced memo beginning on page 10389, column 3.

Paragraph 19.13, 10 CFR Part 19 new paragraph e.

Notifications and reports to individual workers terminating employment.

Comment: The proposed amendment is logical and is supported.

Paragraph 20.3(a), 10 CFR Part 20

Definition of calendar year.

Comment: No objection.

Paragraph 20.101, 10 CFR Part 20

Changing undesignated center heading to delete the word "permissible."

Comment: No objection.

Paragraph 20.101, 10 CFR Part 20

Revised radiation protection standards for individuals in restricted areas.

Comment: Those engaged in radiography in American Airlines can operate within the proposed dose limits. However, coupling the revised limits with removal of the 5(N-18) formula will adversely affect some individuals/companies in the radiographic business.

Dupe of 7906160056 -Adds

[7590-01-M]

NUCLEAR REGULATORY COMMISSION

[10 CFR Parts 19 and 20]

NOTICES, INSTRUCTIONS, AND REPORTS TO WORKERS: INSPECTION STANDARDS FOR PROTECTION AGAINST RADIATION

Proposed Rule

AGENCY: U.S. Nuclear Regulatory Commission.

ACTION: Proposed Rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is proposing amendments to its regulations that would eliminate the accumulated dose averaging formula, 5(N-18), and the associated Form NRC-4 exposure history, and impose annual dose-limiting standards while retaining quarterly standards. Related amendments would express, in terms of the new annual standards, the standard for dose to minors, the requirements for the provision of personnel monitoring equipment, and the requirements for control of total dose to all workers including transient and moonlighting workers.

DATES: Comment period expires April 23, 1979.

ADDRESSES: Written comments should be submitted to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch.

FOR FURTHER INFORMATION CONTACT:

Mr. Robert E. Alexander, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (phone 301-443-5975).

SUPPLEMENTARY INFORMATION: The Commission's basic radiation dose-limiting standards for workers are set forth in 10 CFR Part 20. The current standards for whole body exposure of adult workers are:

(1) 1.25 rems per calendar quarter, or

(2) 3 rems per calendar quarter provided that the lifetime accumulated dose does not exceed 5(N-18) rems, where N is the age of the individual in years.

These standards were based on recommendation of the National Council on Radiation Protection and Measurements (NCRP), the International Commission on Radiological Protection (ICRP), and guidance for Federal agencies issued by the former Federal Radiation Council (FRC, the function of which is now incorporated into the Environmental Protection Agency).

The present Commission action is based on assessment of the need for the 5(N-18) dose-averaging formula which allows a worker to receive up to 12 rems per year. The assessment is being performed because of the desire of the Commission to reduce the risks of occupational radiation doses in Commission-licensed activities, the Commission's continuing systematic assessment of exposure patterns, and new recommendations of the International Commission on Radiological Protection which eliminate quarterly dose-limiting standards and the use of the 5(N-18) formula for controlling the allowable cumulative lifetime dose up to age N.

The Commission, taking into account recently published interpretations of epidemiological data and associated recommendations for lower standards, and also in response to petitions for rule making to lower the dose standards filed by the Natural Resources Defense Council (NRDC) and by Dr. Rosalie Bertell, has determined that a hearing should be held on the adequacy of present occupational radiation dose-limiting standards. This hearing will be the subject of a separate FEDERAL REGISTER notice. It is tentatively scheduled to be held in the spring of 1979.

The Commission believes that the rule changes proposed in this notice have benefit from the standpoint of radiation protection for workers. For example, deletion of the formula, 5(N-18), could have reduced the radiation dose of some 320 individuals who received more than 5 rems during 1977. In addition, it could cause some licensees to take further action to reduce occupational doses. For these reasons the Commission believes that these changes should be proposed for comment at this time, without waiting for the planned hearing. Nevertheless, comments on the desirability including these proposed rule changes within the scope of the planned hearing are specifically invited.

Specifically, the Commission is proposing to amend § 20.101(b), 10 CFR Part 20, to delete the provision that a licensee may permit an individual worker to receive up to 3 rems per calendar quarter and 12 rems per year if the accumulated lifetime radiation dose does not exceed the 5(N-18) dose-averaging formula.

The ICRP (ICRP Publication 26, "Recommendations of the International Commission on Radiological Protection," January 17, 1977, Pergamon Press) has indicated that the 5(N-18) formula should no longer be used. This formula was originally intended to be used only in special cases for which the additional dose could be justified. Data available to the Commission reveal that approximately 320 (less than 0.5%) of the individuals participating in NRC-licensed activities in 1977 received doses exceeding 5 rems and, therefore, required use of the dose-averaging formula. Elimination of the use of the formula would have little effect on the collective (man-rem) dose, but the individual risk could be reduced for approximatley 320 people (1977 data).

The Commission is also proposing to amend § 20.101 to establish annual (calendar year) standards for radiation dose. These annual standards would have the same values as would apply over four calendar quarters under the existing 1.25 rems per quarter standard. A definition of calendar year would be added to § 20.3. Quarterly dose standards would be retained, but the standard for the whole body would be changed from 1.25 to 3 rems, with no requirement for obtaining the individual's occupational dose history. Some licensees occasionally need the flexibility provided by the 3 rems per calendar quarter standard in order to accomplish essential work involving high dose rates. If this flexibility were removed, there could be a desirable effect in that new facilities and/or equipment might be designed to meet the lower dose standard. However, it is very likely that existing licensees would use extra workers in order to accomplish essential work rather than backfitting engineering controls to reduce dose rates and working times. Thus, the collective dose would not be lowered and might be increased. Informed members of the scientific community, as evidenced by ICRP recommendations, believe that, for annual doses on the order of 5 rems, there is little or no biological advantage, except for an embryo or fetus, in limiting the rate at which the dose is received. From this viewpoint, no quarterly standards are needed in 10 CFR Part 20. However, the Commission staff believes that quarterly standards with associated requirements for reporting doses that exceed those standards are necessary as precautionary measures which give early indication of possible undesirable situations and provide NRC the opportunity to investigate those situations, if necessary to ensure that they are promptly corrected and that adequate measures are taken to preclude recurrence. At the same time, the quarterly standard proposed, i.e., 3 rems per calendar quarter whole body, is considered by the Commission to be adequately low for effective regulatory control when considered in conjunction with the other standards and controls set forth in the regulations. Comments on the desirability of retaining quarterly dose-limiting standards are specifically invited.

endar quarter of the terminating calendar year or fraction thereof, or provide an estimate of those doses if the finally determined personnel monitoring results are not available at that time. Estimated doses shall be clearly indicated as such.

2. Section 20.3(a) of 10 CFR Part 20 is amended by adding immediately following subparagraph (4) a new subparagraph (4a) to read as follows:

§ 20.3 Definitions.

(a) As used in this part:

• • • • •

(4a) "Calendar year" means four consecutive calendar quarters starting with the calendar quarter which begins in January.

• • • • •

3. The undesignated center heading preceding § 20.101, 10 CFR Part 20, is amended to read "Radiation Protection Standards Applicable to Doses, Levels, and Concentrations."

4. Section 20.101, 10 CFR Part 20, is revised to read as follows:

§ 20.101 Radiation protection standards for individuals in restricted areas.

Except as provided in § 20.104, no licensee shall possess, use, or transfer licensed material in such a manner as to cause any individual in a restricted area to receive in any period of one calendar quarter or one calendar year from radioactive material and other sources of radiation a total dose in excess of the standards specified in the following table:

	Rems per calendar quarter	Rems per calendar year
1. Whole body, head and trunk; active blood-forming organs; lens of eyes; or gonads	3	5
2. Hands and forearms; feet and ankles	18¾	75
3. Skin of whole body	7½	30

5. Section 20.102, 10 CFR Part 20, is revised to read as follows:

§ 20.102 Determination of prior dose.

Each licensee shall require any individual, prior to first entry of the individual into the licensee's restricted area during each employment or work assignment under such circumstances that the individual will receive or is likely to receive in any period of one calendar quarter a dose in excess of 5 percent of the applicable annual standards specified in § 20.101, to disclose in a written, signed statement, either, (a) that the individual had no prior dose during the current calendar year, or (b) the nature and amount of any dose which the individual may have received during each specifically identified calendar quarter of the current calendar year from sources of radiation possessed or controlled by other persons. Each licensee shall maintain records of such statements until the Commission authorizes their disposition.

6. In § 20.104, 10 CFR Part 20, paragraph (a) is amended to read as follows:

§ 20.104 Exposure of minors.

(a) No licensee shall possess, use or transfer licensed material in such a manner as to cause any individual within a restricted area who is under 18 years of age to receive in any period of one calendar quarter from radioactive material and other sources of radiation a dose in excess of 2.5 percent of the annual standards specified in the table in § 20.101.

• • • • •

7. In § 20.202, 10 CFR Part 20, paragraphs (a)(1) and (a)(2) are amended to read as follows:

§ 20.202 Personnel monitoring.

(a) Each licensee shall supply appropriate personnel monitoring equipment to, and shall require the use of such equipment by:

(1) Each individual 18 years of age or older who enters a restricted area under such circumstances that the individual receives, or is likely to receive, a dose in any calendar quarter in excess of 5 percent of the annual standards specified in § 20.101.

(2) Each individual under 18 years of age who enters a restricted area under such circumstances that the individual receives, or is likely to receive, a dose in any calendar quarter in excess of 1.25 percent of the annual standards specified in § 20.101.

• • • • •

(Sec. 161, Pub. L. 83-703, 68 Stat. 948 (42 U.S.C. 2201), sec. 201 as amended, Pub. L. 93-438, 88 Stat. 1242 (42 U.S.C. 5841))

Dated at Washington, D.C. this 12th day of February, 1979.

For the Nuclear Regulatory Commission.

SAMUEL J. CHILK,
Secretary of the Commission.

[FR Doc. 79-5235 Filed 2-16-79; 8:45 am]

[6405-01-M]

DEPARTMENT OF ENERGY

Economic Regulatory Administration

[10 CFR Parts 500, 501, 502, 503, and 505]

[Docket No. ERA-R-78-191]

SYMPOSIUM-HEARING ON PROPOSED RULES TO IMPLEMENT THE POWERPLANT AND INDUSTRIAL FUEL USE ACT OF 1978

AGENCY: Economic Regulatory Administration, Department of Energy.

ACTION: Notice of Symposium-Hearing.

SUMMARY: The Economic Regulatory Administration (ERA) hereby announces that a symposium-hearing on the Proposed Rules for Implementation of the Powerplant and Industrial Fuel Use Act of 1978 (FUA) will be held on March 2, 1979, and if required, March 3, 1979, in Lexington, Kentucky. Procedures governing the conduct of this symposium-hearing are presented with this Notice. This symposium-hearing replaces the Lexington hearing, notice of which was published in the FEDERAL REGISTER (44 FR 3721, January 13, 1979, and 44 FR 5003, January 29, 1979).

DATES: Symposium-hearing will be held at 9:00 a.m. on March 2, 1979, and if required, March 3, 1979.

ADDRESS: The Kentucky Center for Energy Research, Administration Building, Iron Works Pike, Lexington, Kentucky.

FOR FURTHER INFORMATION CONTACT:

William L. Webb (Office of Public Information), Economic Regulatory Administration, Department of Energy, Room B-110, 2000 M Street, NW., Washington, D.C. 20461, (202) 634-2170.

Stephen M. Stern (Regulations and Emergency Planning), Economic Regulatory Administration, Department of Energy, Room 2130, 2000 M Street, NW., Washington, D.C. 20461, (202) 632-8621.

Robert Davies (Fuels Regulation Program Office), Economic Regulatory Administration, Department of Energy, Room 7202, 2000 M Street, NW., Washington, D.C. 20461, (202) 254-3010.

James H. Heffernan (Office of General Counsel), Department of Energy, Room 6144, 12th & Pennsylvania Avenue, NW., Washington, D.C. 20461, (202) 633-8296.

SUPPLEMENTARY INFORMATION: Conservation of scarce energy resources through encouragement of greater coal and alternate fuel use in place of imported petroleum and natu-

STATE OF TENNESSEE
DEPARTMENT OF PUBLIC HEALTH
CORDELL HULL BUILDING
NASHVILLE, TENNESSEE 37219

(63)

-19,20(44FR10388)

April 17, 1979

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Docketing and Service Branch

Gentlemen:

After reviewing your proposed changes in 10 CFR Part 20 announced on February 20, 1979, we have the following comments.

We adamantly oppose lifting the 1.25 rems per quarter limit because we believe this will result in higher exposures to many individuals and chaos in administering a radiation control program. If it is necessary to establish a 5 rems/year limit do so but do not tamper with the 1.25 rems/quarter limit. By adopting a procedure allowing up to 3 rems in a quarter if the licensee demonstrates that the worker has not received greater than 2 rems in the preceding 3 quarters, i.e., the worker will not receive greater than 5 rems in any 4 consecutive quarters, you can retain the 1.25 rems/quarter limit, allow planned exposures to 3 rems and restrict the exposure of any individual to 5 rems in any 4 consecutive quarters. This seems to us to be a much better approach than that chosen by the Commission.

It should be further noted that the use of a "calendar year" concept invalidates the framework of limiting a worker to 5 rems in any one 12 month period because it allows an individual to receive 5 rems on the last day of one calendar year and then 5 rems on the first day of the next calendar year which could total 10 rem in two days not 5 rems in a year's time as specified in stating that "there is little or no biological advantage in limiting the dose rate for annual exposures on the order of 5 rems".

Sincerely,

Michael H. Mobley
Radiological Physicist
Division of Radiological Health

MHM/jt 4/10

Acknowledged

Dupe of 7906160055 - ADS

Southern California Edison Company

P. O. BOX 800
2244 WALNUT GROVE AVENUE
ROSEMEAD, CALIFORNIA 91770

K. P. BASKIN
MANAGER GENERATION ENGINEERING

TELEPHONE
213-572-1401

April 17, 1979 (47)

SUBJECT: PROPOSED RULE 10 CFR - 19 20 (44FR10388)

Mr. Samuel J. Chilk
Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Chilk:

Subject: Elimination of 5(N-18) Rule from 10 CFR 20

In the Federal Register notice of February 20, 1979 the NRC proposed changes to 10CFR20 which would eliminate the "5(N-18)" rule. The justification the Commission gives for this action is the recommendation in ICRP 26 that the 5(N-18) rule be eliminated. The Commission also notes that less than 0.5% of the individuals participating in NRC - licensed facilities received doses in excess of 5 rems, thus implying minimal impact from elimination of the 5(N-18) rule. However, ICRP 26 recognized in sections 113 & 114 that infrequent situations may arise in normal operations where exposure of a few workers in excess of the annual limit may be justified because alternative techniques for attaining lower exposure are either unavailable or impracticable. Specifically, ICRP 26 would allow a worker to receive doses up to twice the annual limit in any single year and up to five times the annual limit in a lifetime for a planned special exposure.

We believe the intent of ICRP 26 would be achieved and the "As Low as Reasonably Achievable" principle reinforced if the 5(N-18) rule were retained with a modification of 10CFR20 to limit the 5(N-18) rule to (1) planned special exposure situations where alternative techniques to reduce the exposure are unavailable or impracticable, and (2) to lifetime special planned exposures below 5 times the annual limit. This would allow the utility industry the flexibility which we consider necessary in those rare but significant situations where higher exposure is justified.

Very truly yours,

Dupe of 7906140633 — 4p-5

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where, H_I is the annual dose-equivalent index, $H_{wb,L}$ is the annual dose-equivalent limit, I_j is the annual intake of radionuclide j, $I_{j,L}$ is the annual limit of intake for radionuclide j.

(111) Although the Commission no longer proposes separate annual dose-equivalent limits for individual tissues and organs irradiated singly, the implied values of such limits may be obtained, if required, by dividing the dose-equivalent limit $H_{wb,L}$ (50 mSv in a year) by the relevant value of w_T. Such values would be subject to the limits, based on non-stochastic effects, given in paragraph 103.

(112) It should be recognized that the limits have been derived for application in average situations, for all adult ages and for both sexes and without regard to individual circumstances which might enhance the risk. The Commission believes that, for example, any variation in risk with age will not influence the total risk from a lifetime exposure unless the exposure is limited to a special group. Additional precautions and dose limitations may be necessary, however, to limit the irradiation of an embryo or foetus in the case of occupational exposure of pregnant women (see paragraphs 115 and 116).

Planned special exposures. (113) Situations may occur infrequently during normal operations when it may be necessary to permit a few workers to receive dose equivalents in excess of the recommended limits. In such circumstances external exposures or intakes of radioactive material may be permitted provided the dose-equivalent commitment does not exceed twice the relevant annual limit in any single event, and, in a lifetime, five times this limit. The Commission wishes to emphasize that external exposures or intakes of this magnitude are only justified when alternative techniques, which do not involve such exposure of workers, are either unavailable or impracticable (see also paragraph 171).

(114) Planned special exposures should not be permitted if the worker has previously received abnormal exposures resulting in dose equivalents in excess of five times the relevant annual limit. Planned special exposures should not be permitted for women of reproductive capacity. Dose equivalents resulting from planned special exposures should be recorded with those from usual exposures, but any excess over the limits recommended in paragraphs 103 *et seq.* should not by itself constitute a reason for excluding a worker from his usual occupation. (Accidental and emergency exposures are discussed in section G).

Occupational exposure of women of reproductive capacity. (115) When women of reproductive capacity are occupationally exposed under the limits recommended in paragraph 108, and when this exposure is received at an approximately regular rate, it is unlikely that any embryo could receive more than 5 mSv during the first 2 months of pregnancy. Having regard to the circumstances in which such exposures could occur, the Commission believes that this procedure will provide appropriate protection during the essential period of organogenesis.

Occupational exposure of pregnant women. (116) It is likely that any pregnancy of more than 2 months' duration would have been recognized by the woman herself or by a physician. For reasons described in paragraph 65, the Commission recommends that, when

Dose-equivalent limits for individual members of the public. (117) Radiation risks are a very minor fraction of the total number of environmental hazards to which members of the public are exposed. It seems reasonable therefore to consider the magnitude of radiation risks to the general public in the light of the public acceptance of other risks of everyday life. This acceptance (when related to risks that could not be reduced or avoided entirely) is motivated by the benefits that would not otherwise be received, by an assessment of the social cost of achieving a possible reduction of risk, or by an implicit judgment that the risk is negligible.

(118) The acceptable level of risk for stochastic phenomena for members of the general public may be inferred from consideration of risks that an individual can modify to only a small degree and which, like radiation safety, may be regulated by national ordinance. An example of such risks is that of using public transport. From a review of available information related to risks regularly accepted in everyday life, it can be concluded that the level of acceptability for fatal risks to the general public is an order of magnitude lower than for occupational risks. On this basis, a risk in the range of 10^{-6} to 10^{-5} per year would be likely to be acceptable to any individual member of the public.

(119) The assumption of a total risk of the order of 10^{-2} Sv^{-1} (see paragraph 60) would imply the restriction of the lifetime dose to the individual member of the public to a value that would correspond to 1 mSv per year of life-long whole body exposure. For the reasons given in the following paragraphs, the Commission's recommended whole body dose-equivalent limit of 3 mSv (0.5 rem) in a year, as applied to critical groups, has been found to provide this degree of safety and the Commission recommends its continued use under the conditions specified in paragraphs

EXXON NUCLEAR COMPANY, Inc.
RESEARCH AND TECHNOLOGY CENTER
2955 George Washington Way, Richland, Washington 99352
PHONE (509) 943-7100

April 17, 1979

(43)

PROPOSED RULE 19,20 (44FR10388)

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Docketing and Service Branch

Subject: Proposed Amendments to 10CFR Parts 19 and 20

References: Federal Register, Volume 44, No. 35, February 20, 1979
10388

Exxon Nuclear Company, Inc. appreciates this opportunity to comment on the Commission's proposed rulemaking. We wish to make the following comments:

1. We are generally opposed to the piecemeal approach to modifying the Commission's radiation protection standards which is suggested in this Proposed Rule. In the Supplementary Information supplied, the Commission indicates that a rulemaking hearing on the subject is tentatively scheduled for the Spring of 1979. The Commission presents no justification for a hasty action affecting only a very minor part of the population of exposed workers, and those only by less than a factor of two and one-half in annual dose.

2. The Commission cites the ICRP (ICRP Publication 26) as providing the rationale for eliminating the 5(N-18) dose-averaging formula, establishing instead a 5 rem per year dose-equivalent limit. This change does not wholly reflect the ICRP recommendations. While it is true that the ICRP did not again recommend the 5(N-18) formula, it did recommend certain allowances for planned special exposures during normal operations. (See Paragraphs 113 and 114 of ICRP Publication 26.) In those paragraphs the ICRP recommends, under certain conditions during normal operations, planned special exposures up to 10 rem per event and up to 25 rem in a lifetime. Further, these special event exposures were not to affect the ability of the worker to acquire future annual dose-equivalent limits.

Logged by card.....

Dupe of 7906140536 - Add-5

For all these reasons we oppose the Commission's proposed actions. We are aware of no information in informed scientific circles, certainly not in the ICRP recommendations, which warrants consideration at this time of reductions in permissible annual dose limits. Therefore, we do not support a general rulemaking proceeding on the subject of an overall reduction in annual dose limits. However, if such a general rulemaking is conducted it would be a more appropriate forum for evaluation of deleting the 5(N-18) formula.

Very truly yours,

R. Nilson, Manager
Licensing

RN:WSN:slr

Attachments:

1) Table I

2) Paragraphs 113 and 114, ICRP 26.

Cable "Robin" N.

TODD RESEARCH & TECHNICAL DIVISION

P. O. Box 1600 · Galveston, Texas 77553 · (713) 744-7141

(45) April 16, 1979

PROPOSED RULE 10 CFR 19, 20 (44FR10388)

Secretary of The Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Docketing & Service Branch

Dear Sirs:

In response to your proposed rule change(s) of 10CFR Parts 19 and 20 issued February 20, 1979, I wish to submit my thoughts on the elimination of the 5(N-18) formula.

Some time back a program was initiated which called for exposures to be held "AS LOW AS PRACTICAL" and was followed by our current "AS LOW AS REASONABLE ACHIEVABLE". These programs were to be achieved by planning, engineering, and design, etc. and did apparently exceed all expectations in that only 320 individuals exceeded 5 Rems during 1977.

It appears to me that we, the industry, did in fact take serious your "ALAP" and "ALARA" programs. Now that the program(s) are working, you are going to further penalize us by removing the only tool we had left in the regulations to handle some unforeseeable event. The elimination of this formula will not allow us the right to use volunteers (or volunteer ourselves) in the event of such a situation.

Based on your statement that "Elimination of the use of the formula would have little effect on the collective (man-rem) dose, but the individual risk could be reduced for approximately 320 people (1977 date)", I wish to ask some questions:

1) What is the risk that could be reduced?

2) How many more individuals must now be exposed to cover this small percentage (less than 0.5%)?

3) How many of those now to be exposed (based on the elimination of 5(N-18) are experienced and trained?

4) Are the rules and regulations I have been working under since 1955 that risky? (I truly don't believe it).

Dupe of 7906180360 - Add-5

THE PENNSYLVANIA STATE UNIVERSITY

228 ACADEMIC PROJECTS BUILDING
UNIVERSITY PARK, PENNSYLVANIA 16802

27 February 1979

Health Physics Office

Area Code 814
865-3459

DOCKETED (2)
PROPOSED RULE [illegible] -19.20(44FR10388)

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Att: Docketing and Service Branch Re: 7590-01-M

Dear Sir:

The following comments are in reference to the proposed changes in 10CFR19.13 and sections 3, 101, 102, 104 and 202 of 10CFR20 as published in the Federal Register 20 Feb 1979. I am in agreement with the proposed change to a 3 rem/quarter, 5 rem/year dose equivalent limit and strongly support the adoption of this rule. The concept of "banked dose" or the 5 (N-18) rule has never been a denfensible policy, in my opinion. I do not feel that a quarterly limit is necessary, but if it is adopted, it should not be less than the proposed 3 rem value.

The wording in the proposed section 20.102 states that each licensee shall require an individual to furnish a written, signed statement of the prior radiation exposure "... prior to the first entry of the individual into the licensee's restricted area during each employment or work assignment...". The term work assignment is inappropriate in that it could be interpreted as requiring a written report every several days or even more than once a day. Further explanation of what is intended or removal of the words "or work assignment" is suggested for this section. Likewise the words "specifically identified" in the next to the last sentence of 20.102 are confusing and unnecessary, that is in what respect are the quarters specifically identified? The intention appears to be to obtain the prior dose history for the current year. Thus, all calendar quarters to date must be included.

The requirement for supplying written evidence of prior radiation history or providing personnel monitoring depend heavily upon the interpretation of the word "likely" in the phrase "likely to receive". The dictionary indicates that likely is synonomous with probable. In nuclear measurements it is generally assumed that something with a 95% probability has a high probability, whereas a 5% probability is low or unlikely. I would therefore interpret a 5% probability of exceeding a given dose limit as unlikely and therefore would not require personnel monitoring or a previous dose history. This assumes that there is enough prior experience within a given restricted area to make such a prediction. However, my interpretation may not necessarily be the same as that of the NRC. Some discussion of this matter in the proposed rule making would be helpful to licensees and to NRC inspectors and licensing personnel.

Thank you for the opportunity to comment on these proposed regulations. My remarks reflect only my own opinion and do not constitute an official University position in this matter.

Sincerely,

Rodger W. Granlund
University Health Physicist

RWG:m

3/7

Dupe of 7903260114 - Add 5

PEOPLE FOR ENERGY PROGRESS

P. O. BOX 777, LOS GATOS, CALIFORNIA 95030

April 16, 1979

(40)

DOCKET NUMBER
PROPOSED RULE PR-15,20 (44FR10388)

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Docketing and Service Branch

Gentlemen:

Reference: 44FR10388

People for Energy Progress, a grass-roots energy advocacy organization, has reviewed the proposed amendments to 10CFR19 and 20 (44FR10388) that would, among other things, eliminate the accumulated dose averaging formula, and offers the following comments for the Commission's consideration:

1. We perceive that the Commission is under considerable pressure by individuals and organizations to reduce the permissible occupational dose. We trust that the Commission would not reduce that dose without valid scientific demonstration that individuals who receive doses at the current dose limit are caused injury by that dose. We have studied the scientific literature and find no demonstration that an average of 5 rem per year or less for 50 years with doses in some years up to 12 rem, causes injury to individuals so exposed. There certainly is no consensus among experts in the field of radiation biology or radiation protection that a cause-effect relationship does or does not exist at a 5 rem per year average limit. Accordingly, we do not agree that the 5 rem per year average limit should be lowered.

2. Nor do we agree that the 5 (N-18) formula should be eliminated. Such action would have the same effect over 50 years of some individual's working lifetime as lowering the limit. This occurs because it is the aggregate dose over time that is related to injury. The ICRP (in ICRP-26) continues to recommend 5 rem (50 mSv) per year as the occupational limit for occupationally exposed persons 18 years old and older. Therefore, if one now started to work at 18 and worked at 5 rem per year until age 68, he or she could accumulate 250 rem. That 250 rem in 50 years has been the basic ICRP recommended limit since 1958 although ICRP did not specifically state so in any of it's publications. The current ICRP recommendations (ICRP-26) do not change that recommendation. Therefore, eliminating the 5 (N-18) formula will not necessarily reduce anyone's lifetime dose.

Dupe of 7906270016 Add-5

3. Practically, however, elimination of the formula will limit most radiation worker's lifetime dose to less than 250 rem. That occurs because most persons historically have not started working with radiation until after age 18. If the formula is eliminated, such persons could receive lifetime doses less than 250 rem; e.g., less by 5 rem for every year over the age of 18 that they were not occupationally exposed. So, if I, myself, were to start working at age 38, my maximum lifetime occupational dose (without the formula) at age 68 would be 150 rem. With the formula I could conceivably receive 250 rem by age 68. We know of no scientific evidence which demonstrates that a lifetime dose of 250 rem causes more injury than a lifetime dose of 150 rem if both are accumulated according to current limits in 10CFR20. Until such evidence is available, we do not agree that the formula should be eliminated.

4. Although it is clear that few radiation workers receive doses between 5 and 12 rem per year, it is human experience that having the flexability to use the "bank" (as the dose available between 5 and 12 rem is sometimes called) is occasionally very useful. Particularly in emergency situations or unforeseen circumstances, the additional dose in a bank is necessary to mitigate or recover from the situation. Consider the recent 3-Mile Island accident. It is clear to us that the availability of dose in certain persons' bank will be useful and may even be necessary to perform work practically in cleaning up. Admittedly such accidents have been rare and, we trust will continue to be. But the formula should not be eliminated, because it will reduce operational flexability in those infrequent instances when that flexability is most needed.

5. Finally, the ICRP no longer recommends use of the formula, not because of new data that demonstrates a higher risk of injury if the formula is used, but because it "seems to be unnecessary,"[1] to prevent accumulation of more than an annual dose-equivalent limit within a short period of time. Further, the ICRP states, "there is no evidence to indicate that the Commission's recommended system of dose limitation has failed to provide an adequate level of safety."[2] Also, "Long-continued exposure of a considerable proportion of the workers at or near the dose-equivalent limits would only be acceptable if a careful cost-benefit analysis had shown that the higher resultant risk would be justified."[3] Clearly, the Commission's emphasis on ALARA is more consistent with the ICRP radiation protection philosophy than simply elimination the formula.

1. ICRP-26, Paragraph 35
2. IBID, Paragraph 77
3. IBID, Paragraph 102

6. In conclusion, PEP urges that the 5 (N-18) formula be retained because:

   a. There is no scientific demonstrated need to eliminate it to reduce doses.

   b. There is a need to retain flexability in certain emergency situations.

   c. The ALARA program is more effective in limiting dose than eliminating the formula would be.

We appreciate the opportunity to furnish the above information and trust our comments will contribute to continuing effective and practical regulations.

Very truly yours,

A. N. Tschaeche
Managing Director

ANT:mh/1590-1592

(34)

DOCKET NUMBER
PROPOSED RULE PR -19,20 (44FR 10388)

2410 Sugar Mill Road
Charlotte, N. C. 28210

April 16, 1979

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Docketing and Service Branch

Dear Sir:

The following are the official comments of the Health Physics Task Force of the Edison Electric Institute, (EEI) on the notice of proposed rule-making, 10CFR Parts 19 and 20 which appeared in the Federal Register Vol. 44, No. 35, Tuesday, February 20, 1979 beginning on page 10388.

The EEI Health Physics Task Force does not believe that the epidemiological data and associated recommendations for lower standards, nor do the Petitions also referred to in the Proposed Rule, present an adequate basis for calling a hearing on the adequacy of existing occupational radiation dose-limiting standards. We also do not believe that they present an adequate basis for the elimination of the 5 (N-18) dose averaging formula.

The studies referred to (presumably Mancuso et al, Bross, Bartell) have all been repudiated by their peers in the technical literature. It is expected that the BEIR Report 3 when issued also will not support the above studies.

The Commission cites ICRP 26 as a further basis for the elimination of the 5 (N-18) dose averaging formula. We want to remind the Commission that ICRP 26 permits dose averaging and presents a formula which allows excess exposure in limited cases of up to 10 rem per year, and as much as 25 extra rem in a lifetime.

If the Commission eliminates the 5 (N-18) formula and cites ICRP 26 as the basis for its action then it must also allow the limited dose-averaging permitted by ICRP 26.

The EEI Health Physics Task Force believes that this additional exposure may be necessary for limited numbers of skilled workers in an extraordinary maintenance situation, such as, for example, certain welders used in a PWR steam generator replacement operation.

4/19/79

Dupe of 7907190811 (2pp)-S

We also want to remind the Commission that ICRP 26 ordinarily permits a dose of up to 5 rem in a year at any dose rate (i.e., with no quarterly dose limit). Therefore if the Commission imposes a limit of 3 rem per quarter it should not attach special conditions or meaning to doses close to this quarterly limit as long as they are necessary and are received and controlled under ALARA conditions.

Thank you for permitting us the opportunity to comment on this Proposed Rule. We expect that our comments will be noted and that appropriate changes will be made in the final rule.

L. Lewis

Lionel Lewis, Board Member
EEI-Health Physics Task Force

DUKE POWER COMPANY
POWER BUILDING
422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

TELEPHONE: AREA 704
373-4083

(52)

- 19 20(44FR 10388)

April 12, 1979

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Docketing and Service Branch

Subject: U. S. Nuclear Regulatory Commission
Proposed Rule on Radiation Dose Limits
Duke Power Company Comments

Reference: Federal Register Volume 44, No. 35
Tuesday - February 20, 1979

Dear Sir:

The following are our comments on the proposed amendments.

1. The referenced document states "The commission taking into account recently published interpretations of epidemiological data and associated recommendations for lower standards and also in response to petitions for rulemaking to lower the dose standards filed by the National Resources Defense Council (NRDC) and by Dr. Rosalie Bertell has determined that a hearing should be held on the adequacy of the present occupational radiation dose limiting standards."

   Duke Power Company feels very strongly that the data and petitions presented by the NRDC and Dr. Rosalie Bertell (specifically mentioned) and other implied studies (such as the work by Mancuso et al and Bross) have been repudiated by responsible peers and by spokesmen from National and International bodies responsible for recommending radiation protection dose standards. Therefore, the reasons quoted above for holding a hearing do not support the need for a hearing. Such hearings are not necessary nor should they be held. There is no currently generally recognized biomedical basis whatsoever for a reduction in dose limits. The BEIR Report 3, when issued, should be a totally adequate review.

Dupe of 7906140529

2. It is further stated in the referenced document that in 1977 approximately 320 people exceeded an annual dose of 5 rems; and that in accordance with the latest ICRP 26 recommendations, the NRC proposes to eliminate the 5 (N-18) formula and limit annual doses to 5 rems. No mention is made of the fact that the present NRC regulations permit exposures up to 12 rem per year at the rate of 3 rem per quarter; and also that there may have been a real need for these relatively few people to exceed 5 rems in a given year. It should also be noted in this regard that ICRP 26 makes some provision for a relatively small number of people, such as the 320 people cited above, to receive exposures in excess of 5 rems per year. ICRP 26 permits these relatively few exceptional exposures up to 10 rem in a given year and no more than 25 excess rems in a lifetime. The argument is made in the referenced document that the individual risk could be reduced for these 320 people by eliminating the formula with "little effect on the collective (man-rem) dose." It can be argued equally well that since only 320 people (less than 0.5% of those participating in NRC licensed activities) are affected, that the formula should be retained for special considerations warranting its use, such as steam generator replacement.

3. The reasons given by the NRC to limit quarterly doses to 3 rem maximum are inappropriate. ICRP 26 has recommended no such limit and this point is acknowledged by the NRC in the referenced document. Furthermore, the NRC acknowledges that there is no biological advantage in setting such a limit. It is unfortunate that the NRC has chosen to use the wording that the 3 rem per quarter limit would serve as an indication of "precautionary measures which gives early indication of possible undesirable situations." It should be noted here that ICRP 26 sets no such limit on the 5 rem per year dose rate. Presumably under ICRP 26 radiation workers could receive the whole 5 rem annual dose in one quarter of the year providing they had no further exposure for the remainder of the year. Since there is no currently recognized biological significance in a 5 rem annual dose delivered in a shorter time period, it follows that there cannot be any significance to a 3 rem dose in a quarter. The 3 rem limit would merely serve to provide some flexibility for accomplishing necessary work.

4. In regard to transient workers terminating employment, the industry has previously recommended to NRC that immediate reports be given to those individuals who request such reports, presumably because they intend to work at another facility sometime before the end of the given quarter. The industry showed where it would not be cost effective to give immediate reports to all transient workers if such reports would serve no useful purpose. Nevertheless, the proposed regulations have a requirement for a report upon termination

to each transient worker. It is our belief that this aspect should be reconsidered by the NRC.

In conclusion, Duke Power Company feels that there is not sufficient reason nor is there any experience to support the NRC's proposed amendments to 10CFR Parts 19 and 20 regarding occupational dose limits.

Very truly yours,

William O. Parker, Jr.

RFJ:vr

DOCKET NUMBER
PROPOSED PR-19,20 (44FR 10388)

GULF NUCLEAR, INC.
P.O. BOX 58866 HOUSTON, TEXAS 77058 (713) 332-3581

April 11, 1979

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attn: Docketing and Service Branch

RE: Comments on proposed rule changes to 10 CFR Part 19 and 20

Dear Sir:

The basic concept of enforcing 5 Rems per year is admirable along with allowing 3 Rems in a calendar quarter. The manner of approach, we feel, is poor because there is no latitude and the wording indicates that overexposures are deliberate, that is exposures in excess of 1.25 Rems per calendar quarter.

There are several basic questions that are conspicuously absent from this proposed rule as it appears in the Federal Register dated February 20, 1979.

1. What happens to the worker when an exposure greater that 5 Rems occurs? Is he not permitted to work with radioactive materials because he has exceeded his exposure due to an accident? If this is the case, it would seem to be a violation of his right to earn a living.

2. An overall resentment by the industry should be expressed because of the U.S. Nuclear Regulatory Commission supposition that no one tries to control levels.

Acknowledged by card 4/19/79

Dupe of 7906180149 (Add-S)

3. It is a known fact that the majority of those workers who exceed 3 Rems were involved in power reactor work and that probably ninety percent of the Regulatory Guides issued are directed at that group. We feel that the NRC should investigate its role with the power people and consider forming two divisions, one for power reactors and the other for byproduct materials. And possibly even a third division, that being related to medical. There are far too many rules that cover the three phases that are applied to all even though they are specific to only one group. Example, of the three hundred twenty individuals mentioned who exceeded 3 Rems, only about twenty were industrial byproduct users. But you are proposing an overall rule for all facets of your licensing program.

4. Your justification consideration mentions Dr. Rosalie Bertell and the Natural Resources Defense Council as petitioners and indicates basically that the NRC has decided that these along with EPA, ICRP and others have recommended that you accept these ideas. Realizing that this is a proposed rule making and I have the opportunity to comment, where is a reliable user represented in the above group? In other words, the NRC is quick to recommend rule adoption based on supposition which falls in line with hysteria created by anti-nuclear groups such as Dr. Rosalie Bertell and the NRDC.

Careful examination of your document reveals no justifiable reason for acceptance except as in many cases the NRC feels it is justifiable. There are several other questions besides the major ones mentioned above. What is the cost impact estimated to be on the industry? Will the NRC in the manner it has portrayed in the past be there quickly to level a civil penalty on the industry? All present forms and procedures will be made obsolete and reeducation of all personnel will be a necessity.

Based on the above I oppose the modification or changes to 10 CFR, Part 19 and 20. Realizing that there are possibilities that there are underlying causes for this type of change, if and when these causes from a reliable and reputable source are publised, then I will reconsider my position.

Very truly yours,

Walter P. Peeples, Jr.
President

WPP/aeg

cc: Fred Rohde, Managing Director of the Non Destructive Testing Management Association
Congressman Ron Paul
U.S. Senator Lloyd Bentsen
U.S. Senator John Tower

(32)

DOCKET NUMBER
PROPOSED RULE 19,20 (44FR10388)

nsi CORPORATE HEADQUARTERS 924 JOPLIN STREET P.O. BOX 7543 BATON ROUGE, LOUISIANA 70821 TEL (504) 387-0846 TLX 586473

April 11, 1979

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Sirs:

In reviewing your proposed rule change for dose-limiting standards for workers, several comments must be made in opposition to such change.

(1) The present 5(N-18) rems, 3 rems per calendar quarter has been in effect for a number of years and there has been no conclusive evidence that this system does not provide adequate safety margins.

(2) The present limits have been taught in the industry and the philosophy relating to lifetime exposure is predicated on such training. The impact in economics of retraining would be substantial. Also, the reaction of individuals to such change could likely be one of confusion, as the NRC has provided a guideline on the limiting dose, now they change it. "Have I been unduly exposed because of the NRC's newly found knowledge, and are the new limits adequate?"

(3) The adoption of this rule change would clearly show the NRC's acceptance of the linear hypothesis theory.

This change appears to be the adoption of a rule for the sake of change There is no scientific evidence to support this change and hypothesis is certainly not sufficient reason for this change. There are many regulations which are promulgated to ensure the safety of workers in this industry. If those are applied and well understood, they are sufficien to reduce radiation exposures.

You have stated as a purpose that individual exposures must be reduced. If the amount of work in radiation areas last year resulted in 320 persons receiving greater than 5 rems, does the application of the linear hypothesis result in reduced problems from exposure if such exposure is spread out over a greater proportion of the population? I think not!

Acknowledged by card 4/19/79

Dupe of 7906050424 - Add-S

In summary, we oppose the rule change as being economically and philosophically unsound and feel there is lack of evidence to support the need for more stringent safety measures.

Sincerely yours,

NUCLEAR SYSTEMS, INCORPORATED

Harry D. Richardson
President

HDR:sd

Washington Public Power Supply System
A JOINT OPERATING AGENCY

P. O. Box 968 3000 Geo. Washington Way Richland, Washington 99352 Phone (509) 375-5000

(33)

April 6, 1979

ET NUMBER
OSED RULE PR 20 (44FR10388)

Docketing and Service Branch
Secretary of the Commission
United States Nuclear Regulatory
Commission
Washington, D. C. 20555

Dear Sir:

Subject: Proposed Changes To 10CFR20

The Supply System offers the following comments concerning the proposed changes to 10CFR20 which appeared in the Federal Register February 20, 1979.

1) 10CFR20.101 - No additional comments are offered for the proposed changes to this section of the regulation.

2) 10CFR20.3 - The proposed additional definition "calendar year" was added to this section; however, "calendar quarter" was not redefined. As the Supply System stated in April 1978, a calendar quarter should be defined as a standard quarter (1-1 to 3-31, etc.) because licensees could be using different time periods for reporting dose information. This could increase the possibility of an overexposure, since one licensee could assign a dose to a previous calendar quarter and/or calendar year, and another licensee could include the dose as part of the current year.

We recommend that this comment be reconsidered for inclusion with the other proposed changes.

Very truly yours,

D L Renberger

D. L. Renberger
Assistant Director
Technology

mg

4/19/79

Dupe of 7905040294 - Nd-5

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

(30) April 6, 1979

DOCKET NUMBER
PROPOSED RULE PR -19,20(44FR10388)

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attn: Docketing and Service Branch

Serial No. 203
Docket Nos. 50-280
50-281
50-338
50-339
License Nos. DPR-32
DPR-37
NPF-4
CPPR-78

Dear Sir,

Pursuant to the provisions of Title 10 of the Code of Federal Regulations, Paragraph 2.805, the following comments and suggestions are submitted for consideration in regard to the proposed amendments to the regulations contained in 10CFR Parts 19 and 20, published in the Federal Register on February 20, 1979 at 44F.R.10388. The proposed amendments pertain to the basic radiation dose-limiting standards for workers, set forth in § 20.101 of 10CFR Part 20, and related sections of the regulations, including § 19.13 of 10CFR Part 19 and §§ 20.3, 20.102, 20.104 and 20.202 of 10CFR Part 20.

1. The proposed new paragraph (e) to be added to § 19.13, 10CFR Part 19 states:

> "(e) At the request of a worker who is terminating employment with the licensee in work involving radiation dose, or of a worker who, while employed by another person, is terminating assignment to work involving radiation dose in the licensee's facility, each licensee shall provide to each such worker, or to the worker's designee, at termination, a written report regarding that worker's radiation dose during each specifically identified calendar quarter of the terminating calendar year or fraction thereof, or provide an estimate of those doses if the finally determined personnel monitoring results are not available at that ated doses shall be clearly such".

1dd5

George E. Pickett, M.D., M.P.H.
Director

John D. Rockefeller IV
Governor

State of West Virginia

DEPARTMENT OF HEALTH
CHARLESTON 25305

April 6, 1979

(23)
19-20
(44FR 10388)

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Docketing and Service Branch

Dear Secretary:

I wish to register my approval of eliminating from current NRC regulations the use of the accumulated dose averaging formula, 5(N-18), and related matters, as contained in your proposal appearing in the Federal Register of Tuesday, February 20, 1979, pages 10388-10390.

Sincerely yours,

William H. Aaroe, Director
Industrial Hygiene Division

WHA:dg

4/13

Dupe of 7905290038 - Adds

Commonwealth Edison
One First National Plaza, Chicago, Illinois
Address reply to: Post Office Box 767
Chicago, Illinois 60690

April 6, 1979

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

Dear Bob:

Enclosed is a copy of my talk from Monday's session of the AIF Conference. I hope the examples will be of some benefit to you, as well as some of our comments on ALARA and its implementation. I would also hope that sometime before a decision is made, you and some of your staff will be able to visit one of our stations. I am extremely troubled that so many of the rules and regulations being imposed on the industry are being written by people with little practical experience, or outdated experience. Last Thursday and Friday, Dr. William Mills from the U.S. EPA visited Dresden Station. Much to my amazement, I found out it was the first time he had ever visited a nuclear power plant. He seemed, to our people, to be a very knowledgeable and practical gentleman, but a nuclear power plant is considerably different than most other radiation facilities.

As I indicated to you at the session, I am also concerned about what our various regulators consider to be reasonable costs. It frightens me to hear them talking about five or ten million dollars as if it was very small. I am sure that the accumulation of all of these very small costs is the reason that the cost of electricity today is double what it was less than ten years ago.

I was pleased to hear you say that you intended to use the experience of good performers as the basis for your standards. My only concern would be that, based on [illegible] NRC taking that good experience one or two notches beyond. This

(27)

-19-20 (44FR 10388) April 4, 1979

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

ATTN:· DOCKETING AND SERVICE BRANCH

SUBJECT: PROPOSED RULE CHANGE 10CFR PARTS 19 & 20

Gentlemen:

We have reviewed the proposed rule change as printed in the Federal Register, Vol. 44, No. 35 of Tuesday February 20, 1979 concerning 10CFR Parts 19 & 20.

We find no major problem with the rules as proposed.

We would however like to suggest an addition in Paragraph 20.102 and in any other part concerning disclosure of exposure by an individual.

We feel that some statement indicating that failure of the individual to make a true disclosure concerning exposure under 20.102(a) or (b) could be punishable by fine or imprisonment of the individual.

Sincerely yours,

John B. McCormack
Assistant Radiation
Protection Officer

JBMc/ds

4/13

Dupe of 7905290043 Add 5

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

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SANTA BARBARA · SANTA CRUZ

ENVIRONMENTAL HEALTH AND SAFETY

SANTA BARBARA, CALIFORNIA 93106

(25)

-19-20 (44FR 10388)

4 April 1979

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Attn: Docketing and Service Branch

Gentlemen:

Re: Proposed Changes to 10 CFR Part 20 to Eliminate the 5(N-18) Accumulated Dose Limit

I have reviewed the proposed amendments to 10 CFR Part 20 that were published in the Federal Register on 20 February 1979. My comments are as follows:

1) I am strongly in favor of making 5 rems per year the dose limit, with no exceptions, for whole body exposure.

2) I would like to see the limits for calendar quarters abolished, as recommended in ICRP Publication 26. If this is too radical a step, then the quarterly limits for the skin of the whole body, and for the hands and forearms, feet and ankles should be set at 50% of the annual limits, rounded off upward to a reasonably round number. If current annual limits are kept, this would become 15 rems/quarter to the skin of the whole body and 40 rems/quarter to the hands and forearms, and feet and ankles. Having a limit of 18.75 rems in the regulations, with 4 significant figures, makes no sense to me when the instruments used to measure the doses often involve an error of no better than 10% or so. Limits should be specified in numbers rounded off to one significant digit, or two significant digits if the first digit is a low number and the second digit is a five (e.g. 15, 25).

3) NCRP Report 39 recommends lower annual limits for the skin of the whole body and for the forearms. In addition, ICRP Publication 26 recommends a lower annual limit for the hands, feet and ankles. Therefore, I feel that NRC

Dupe of 7905290047 Adds

regulations should reflect the most conservative annual limits recommended by these two authoritative bodies:

	Rems per calendar year
Whole body	5
Skin of whole body	15
Forearms	30
Hands, feet and ankles	50

4) If the annual limits recommended in item 3 above are adopted, and if the elimination of quarterly limits is too radical a step to take, then I would like to see the quarterly limits set as follows:

	Rems per calendar quarter
Whole body	3
Skin of the whole body	8
Forearms	15
Hands, feet and ankles	25

5) It makes even less sense to have quarterly limits for persons under 18 years of age, so I urge that the limits be set at 10% of the annual limits for adults during any calendar year. This would make occupational exposure for these younger workers the same as that permitted in unrestricted areas.

6) I would like to see the requirements for requiring personnel monitoring set at a percentage of the annual limit in a calendar year--10% seems reasonable, e. g., 500 mrems to the whole body. This limit is based on the recommended dose to the fetus of 500 mrem over a 9 month gestation period. Levels for requiring personnel monitoring could be increased for older workers, to say 25% of the annual limits in a calendar year.

7) I do not understand what makes a 17 year old worker any different from a 17 year old member of the general public. Members of the general public are not required to wear personnel monitoring devices, so workers should not be required to wear them, even when under 18, unless they are expected to exceed 10% of

the adult annual limits in a calendar year. If this concept is not acceptable, then perhaps 5% would be a good compromise. It might not be possible to measure neutron exposures at these levels with commercially supplied dosimetry systems, however, particularly if the dose to the whole body is highly fractionated. The question of requiring personnel dosimetry for neutrons deserves much more study and consideration at these low levels.

8) The requirement to determine prior doses during the current calendar year for persons being monitored appears to be excessive and a paperwork nightmare, at the dose levels specified in the proposal. There are situations in the nuclear power business where this would be appropriate, but it should not apply to the bulk of medical and research licensees where most exposures remain quite low, even with rapid turnover of personnel. I recommend that dose limitation with more than one employer be limited to calendar year accumulations, and that it only apply to those individuals who are realistically expected to exceed 50%, or perhaps 25%, of the annual limits in a calendar year.

The above comments are mine alone, and do not necessarily reflect the opinions of the Regents of the University of California or any of their senior management personnel. Your consideration of these comments is appreciated.

Very truly yours,

Frank E. Gallagher III

Frank E. Gallagher, III, CHP
Radiation Protection Officer

FEG:er

TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401

319 Edney Building

Copy of 44FR 10855-10870 sent 4-10-79 WSC

April 3, 1979

Robert E. Alexander
Office of Standards Development
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Alexander:

I am very interested in receiving a copy of NRC's proposed amendments (dated February 20) to its regulations that would eliminate the accumulated dose averaging formula mentioned in the Current Report article, "Radiation, Task Force Report Fears Hazards May Be Greater Than Previously Suspected", page 1527. A copy of the article is enclosed.

If there is a charge for this copy being sent to me, please inform me before sending the copy.

Thank you very much for your assistance.

Sincerely,

John C. Elliott, M.D.
Chief, Health Projects Staff
Division of Medical Services

Enclosure

Dupe of 7905290503 Add's

and to cope with increasing numbers of complaints. Whiting stressed the need for early settlement of discrimination complaints. He outlined a system which the agency may begin using in a few regions this summer.

The proposed system would permit more opportunity to settle cases without lengthy investigations and litigation. One opportunity exists immediately after the complaint is made, Whiting said, when the complainant, employer and OSHA discrimination investigator would meet and attempt to settle the case face-to-face. Current OSHA procedure requires a complete investigation of the complaint before a settlement is made, an investigation which does not bring the employer and complainant together.

If the face-to-face meeting is unsuccessful, settlement may be possible after the full investigation is complete, but before the case is recommended to the solicitor, according to Whiting.

Both employer and employee are better served by early settlement — the employer in reducing the amount of backpay awarded the employee in settlement and in avoiding possible court costs, and the employee in receiving an offer of job reinstatement and backpay as soon as possible, Whiting said.

Weeding out trivial and non-OSHA complaints already is being done in OSHA's eastern regions by means of a new screening process, according to OSHA officials. Rather than investigating in person every complaint received, an extensive telephone interview now is conducted with the employee to determine if a valid 11(c) complaint exists. Approximately 15 percent of incoming complaints were eliminated in the past month without conducting a full-scale investigation, OSHA officials said.

Building Case Law

Since discrimination law is "a part of the Act that is still being developed," Whiting cautioned that cases that will build law "must be pursued."

Whiting said one case of particular importance in the area of job safety discrimination is the decision of the U.S. Court of Appeals for the Sixth Circuit in *Marshall v. Whirlpool Corporation and Empire-Detroit Division, Detroit Steel Corporation* (7 OSHC 1075). Calling the decision a "victory" for OSHA, Whiting said the case "sets us up again" for a Supreme Court decision on the right of a worker to walk off the job in the face of imminent danger. The Court previously declined to review a Fifth Circuit Court of Appeals decision in *Marshall v. Daniel Construction Company* (6 OSHC 1031).

Public Information Effort

Calling the area of 11(c) work "absolutely essential," Whiting said OSHA is embarking on a public information campaign to educate workers about discrimination. The agency plans to release within a few weeks a poster and pamphlets on discrimination, and a film on the subject now is being produced by OSHA.

OSHA officials anticipate an increase in the number of complaints as a result of the publicity, an increase which officials admit will strain the limited resources of the 11(c) staff unless many more cases can be settled more quickly. Each of the 59 investigators has an average of 50 cases per year — a heavy case load according to OSHA officials.

Negotiations Training

The first two days of the February 27-March 1 seminar were devoted to negotiations training. Gerard I. Nierenberg and Richard A. Zeif of the Negotiation Institute, New York City, conducted sessions on the "art of negotiating." Topics covered included philosophy and climate of negotiations, skill improvement, strategies and counters in negotiations, overcoming barriers, and communicating effectively both verbally and nonverbally.

Radiation

TASK FORCE REPORT FEARS HAZARDS MAY BE GREATER THAN PREVIOUSLY SUSPECTED

Exposure to low levels of radiation may be more hazardous than previously suspected and further research is needed to clarify the possible health effects of low-dose radiation, according to a February 27 statement by Secretary of Health, Education, and Welfare Joseph A. Califano, Jr.

Califano released for public comment draft work group reports of the Interagency Task Force on Ionizing Radiation. The reports cover research on the health effects of low-level radiation, access to records for epidemiological research, the provision of information to the public about radiation exposure, the compensation of those who are injured, and the reduction of radiation exposure.

The task force was created in May 1978 at the request of the White House. Last October Congress mandated that HEW "establish a comprehensive program of research into the biological effects of low-level ionizing radiation" and "conduct a comprehensive review of federal programs of research on the biological effects of ionizing radiation."

The task force is chaired by HEW and includes representatives of the Departments of Defense, Energy, and Labor, the Veterans Administration, the Nuclear Regulatory Commission, and the Environmental Protection Agency.

Califano said the reports are to be circulated widely for public review and comment and cautioned that they are draft versions and do not have final approval of the heads of the agencies involved.

He explained that HEW is expanding its radiation research program, including a comprehensive research program on occupational exposure to low-level radiation to be conducted by the Center for Disease Control. Califano noted that scientific assumptions about the extent of the risk from exposure to low levels of radiation, which are the bases for existing guidelines for radiation exposure, have been challenged by several recent studies. "Although none of these studies is conclusive, they do suggest that the incidence of leukemia produced by low levels of radiation may be higher than scientists previously thought," Califano commented.

He observed, "Workers in a number of occupations, including, for example, uranium and phosphate miners, nuclear energy plant employees, certain health care personnel, and researchers are exposed to radiation well above what the general public receives." The work group report on reducing radiation exposures added, "Health professionals and technicians incur the highest total population dose, but the population dose for workers in the nuclear power industry and in manufacturing and general industry is also significant."

Occupational Exposure Limit

"The major issue in worker exposure has been the adequacy of the current occupational dose limit," according to the report.

"A number of agencies share the responsibility for ensuring that worker exposures remain as low as reasonably achievable below the established occupational standard," it explained. "Approaches to regulation vary according to the industry and the regulatory powers conferred on the responsible agency."

"Generally the NRC protects workers in the nuclear fuel cycle as well as those who employ by-product materials in

industrial and health care settings. Th[illegible] has the authority to condition licensing on the user's development of procedures to maintain occupational exposures as low as reasonably achievable (ALARA). The NRC is seeking to expand the operator's ALARA program review during actual operations, following issuance of a license," the report continued.

It explained further that the Occupational Safety and Health Administration "has no licensing authority and does not insist on application of ALARA, but rather attempts to ensure adherence to dose limits." In summarizing the standard for occupational exposure, the report said: "The dose limit for nuclear workers permits application of a formula allowing up to 12 rems of radiation per year, providing that the accumulated dose from prior years does not average more than 5 rems per year since age 18. The standard applies only to whole-body radiation. Separate standards exist governing doses to individual organs" (29 CFR 1910.96; Reference File, 31:5357).

The report also observed that the Mine Safety and Health Administration "has powers similar to OSHA's and is responsible for ensuring that exposures to miners remain below prescribed ambient levels" (30 CFR 57.5-37 through 57.5-47; Reference File, 31:1908).

It also summarized the controversy surrounding the current occupational dose limit. It said, "Environmental groups and some unions contend that the standard should be lowered to 0.5 rem per year because of the recent studies suggesting that radiation is 10 times more hazardous than has been previously thought. Others believe these studies are in error."

The report noted that industry and certain other unions "believe that the present standard, combined with implementation of ALARA, provides good protection for workers and that lowering the standard would result in a higher worker population dose because more workers would have to be exposed to radiation sources for a longer total time." It added, "Environmental groups answer that lowering the standard would force industry to develop improved technology that would eventually reduce the population dose."

NRC Proposes to Amend Rules

NRC proposed on February 20 amendments to its regulations that would eliminate the accumulated dose averaging formula mentioned above and the associated Form NRC-4 exposure history, and impose annual dose-limiting standards while retaining quarterly standards. Related amendments would express, in terms of the new annual standards, the standard for dose to minors, the requirements for the provision of personnel monitoring equipment, and the requirements for control of total dose to all workers including transient and moonlighting workers (44 FR 10388).

The commission asked that comments be submitted by April 23 to the Secretary of the Commission, Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch.

NRC also decided to hold a hearing this Spring on the adequacy of present occupational radiation dose-limiting standards.

Further information on NRC's proposed amendments is available from Robert E. Alexander, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555; telephone (301) 443-5975.

Biologic Effects of Ionizing Radiation

The task force's science work group noted that epidemiological studies concerning occupational radiation exposures have involved medical radiation workers, radium dial painters, uranium miners, and nuc[illegible]dustry workers.

"Mortality statistics for radiologists in the United States and Great Britain have been compared with statistics for other physicians and for the general population in several studies over the past 35 years. Increased risk of leukemia and other cancers has been regularly documented, particularly for older physicians exposed in the early days of radiologic practice when radiation hazards were not fully appreciated. Similar effects were not seen, however, in a study of mortality among 6,560 U.S. Army World War II X-ray technologists in whom radiation doses were presumed not to be as great," the work group observed.

It continued, "Ongoing studies in the United States continue to follow cohorts of radium dial painters who 40 to 50 years ago ingested substantial amounts of radium while pointing the tips of their paint brushes with their lips. Greatly excessive numbers of bone tumors have occurred in these workers. This reflects the fact that radium concentrates internally in bone tissue and that in many of these workers sufficient radium accumulated to produce high levels of local radiation dose (500 — 1,000 rad). An excess of colon cancer has also been observed as well as an excess of nasal sinus carcinoma, presumably the result of radioactivity diffusing from bone to adjacent mucous membranes."

Portsmouth Naval Shipyard

The report mentioned the investigation of mortality patterns in nuclear workers at the Portsmouth Naval Shipyard in Kittery, Me. "This work has suggested an excess of cancer, primarily leukemia, among shipyard workers. The study, however, covered only one-third of identified deaths among workers and relied on indirect sources to define radiation dose. Levels of occupational radiation doses are substantially below allowable limits in nearly all workers. Interpretation of these findings remains uncertain," the report cautioned.

Further studies of the shipyard are being conducted by the National Institute for Occupational Safety and Health (Current Report, February 15, p. 1465).

The work group explained, "Exposures of United States uranium miners to radioactive radon daughters have been estimated by measuring radiation levels in mines and reconstructing the work histories of individual miners. Excess lung cancer has been observed in these workers, particularly among workers who smoked cigarettes. Excess lung cancer has likewise been found in other mining populations exposed to radon daughters, including Newfoundland fluorspar miners, Swedish and American hard rock miners, English iron miners, and Czechoslovakian uranium miners."

It discussed analyses which have recently been conducted with respect to 35,000 workers employed since 1944 at the nuclear facilities in Hanford, Wash. "Several of these reports indicate increased mortality from multiple myeloma and pancreatic cancer possibly associated with occupational radiation exposure. Similar patterns of excess cancer mortality in Hanford workers were described in an earlier analysis of death certificates. Some, but not all, of these analyses have also suggested statistically significant excess mortality for lung cancer and for all cancers as a group."

However, the report cautioned, "Interpretation of these analyses with respect to increased risk of radiogenic cancer is highly controversial . . . . To resolve these differences, substantially more data will be needed both on the Hanford workers and on similar occupation groups with particular emphasis on the possible role of competing carcinogenic agents" (Current Report, February 8, p. 1438).

0095-3237/79/$00.50

CALIFORNIA INSTITUTE OF TECHNOLOGY

PASADENA CALIFORNIA 91125

SAFETY OFFICE

(28)

-19-20 (44FR10388)

April 2, 1979

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attn: Docketing and Service Branch

Dear Sir:

Subject: Elimination of Accumulated Dose Averaging Formula.

I would like to make the following comments on the proposed changes to 10 CFR Part 20, as outlined in the Federal Register of February 20, 1979 (vol. 44, No. 35).

1) I basically oppose elimination of the 5(N-18) formula for the following reason. The current reasoning is that a total lifetime dose of 250 REM delivered at either 12 REM per year (until 5(N-18) is reached) or 5 REM per year will have the same net biological effect. While there is currently some question about whether the total lifetime dose should be reduced, I know of no data that indicate that a dose rate of 12 REM/yr. is significantly more risky than a dose rate of 5 REM/yr.

The present formula assumes that the important stochastic effects of radiation (genetic damage and carcinogensis) are dependent primarily on total accumulated dose. For one of these, genetic damage, it is certainly more reasonable to expose older persons who are beyond the normal child bearing age. In the case of a job requiring a more-or-less fixed man-rem dose (such as in the Nuclear Power Industry), the present formula allows a certain flexibility in the distribution of dose between younger and older workers. If the 5(N-18) formula is eliminated then everyone would be limited to 5 REM per year and it is easy to imagine a situation (again for the case of a fixed total man-rem exposure to a given group) where the younger segment of the population receives a dose higher than at present. This seems to me to be an undesirable, negative consequence of eliminating the 5(N-18) dose averaging concept.

2) I strongly favor the proposal to retain quarterly dose limits, but to raise the maximum permissible dose to 3 REM per quarter. Again, there appears to be no evidence that a dose rate of 3 REM/quarter is anymore detrimental than a dose rate of 1.25 REM/quarter (for the same annual dose of 5 REM).

4/13

Dupl of 7906070066 Add-S

3) I suggest that maximum permissible quarterly doses for the skin and extremities be raised in a manner analogous to that for the whole body. Limits of 15 REM/quarter for the skin, and 30 REM/quarter for the extremities seem to be reasonable values that would provide greater flexibility, without increasing the risk.

Very truly yours,

Walter F. Wegst, Jr. PhD
Manager of Safety and
Institute Health Physicist
Certified Health Physicist.

WFW/ah

UNIVERSITY OF CALIFO. , LOS ANGELES

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SANTA BARBARA • SANTA CRUZ

(27)

March 30, 1979 -19-20

(44FR 10238)

OFFICE OF ENVIRONMENTAL HEALTH AND SAFETY
THE CENTER FOR THE HEALTH SCIENCES
LOS ANGELES, CALIFORNIA 90024

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Docketing & Service Branch

Re: Comments on elimination of the 5(N-18) rule.
(Proposed Regulation Change)

The basic concept is sound and within current thinking of both the NCRP and ICRP and for most situations would not place any particular limitation on the licensee. However, two parts are of some concern:

Section 20.102 would require each new person to sign statement listing his prior dose within the calendar year. The administrative paper work load on the University would be excessive considering several thousand new persons start work with radiation each year. The potential gain in limiting doses would be negligible.

An alternate approach would be to pro-rate the dose for the rest of the year starting at the time an individual begins work. For example: If a person started April 1, the allowed dose for the rest of the year would be 3-3/4 Rem without regard for anything they have had prior to this time, and without written statements by the person involved. No additional paper work would be involved and the dose to the person would still be considerably under 12 Rem as currently permitted.

Section 20.202 (Personnel monitoring) requires monitoring for people over 18 and under 18 at 250 and 62½ millirem per quarter respectively. Technically, this is attainable for hard gamma and soft photon but is not technically feasible for neutron. Neutron films do not respond to neutron energies between thermal and 500 KEV. Neutron films have a lower reading limit (track counting under an oil immersion microscope and conversion to REM). Neutron films cannot be run for long periods (in excess of one (1) month) due to latent image fading. Experience indicates that in-house dosimetry can do a considerably better job than commercial vendors. Commercial vendors often place the cut-off point at 100 mrem (equal to 300 mrem in a quarter). Even at these levels, the results are poor. Examples of a recent inter-comparison are on file in this office.

4/13

Dupe of 7906070051 - Adds

Effectively it isn't possible to read low neutron doses with any reasonable degree of accuracy so that the regulation would require something which is not reliable due to technical limitations.

Very truly yours,

John C. Evraets
Radiological Safety Officer

JCE/ap

YUBA HEAT TRANSFER CORPORATION

P.O. BOX 3158 • TULSA, OKLAHOMA 74101 • (918) 939-2201

March 27, 1979

Office of Standards Development
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Mr. Robert E. Alexander

Reference: Proposed Rules, 10 CFR Parts 19 & 20
"Notices, Instructions, & Reports to Workers: Inspection Standards For Protection Against Radiation"

Dear Mr. Alexander:

The following are comments on the proposed amendments to 10 CFR Parts 19 and 20:

How can the NRC justify the expense of changing and operating under a regulation that has been acceptable, as is indicated in the NUREG-0495 "Public Meeting on Radiation Safety for Industrial Radiographers", Page 61? There apparently have been no new scientific developments since the publication of these questions and answers that would justify such a change. Even more dangerous will be the tendency for persons who disagree, to "fail" to report incidents that previously would have been reported.

The proposed changes to Part 20 could possibly reduce the reported exposures to approximately 0.5% of the individuals participating in NRC licensed activities. The cost involved to have this reduction in exposure to approximately 0.5% of the participating individuals will be passed on from the licensee ultimately to the taxpayer and the consumer.

Copy of 7905250454

In summary, until some sound reason is presented to justify a change, let us use our present regulations to protect our whole population not only from radiation, but also higher taxes and inflation.

Very truly yours,

YUBA HEAT TRANSFER CORPORATION

Allen Cash
Radiation Safety Officer

ACC:CD

cc: T. R. Harrington

Southern California Chapter

Health Physics Society (48)

-1920 (44FR 10388)

LEGISLATION AND STANDARDS COMMITTEE

17 April 1979

Address Reply to:
Radiation Safety Office
Center for the Health Sciences
University of California
405 Hilgard Avenue
Los Angeles, CA 90024

Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Attn: Docketing and Service Branch

Re: Comments on Proposal to Eliminate 5(N-18) Rule

The Legislation and Standards Committee, with approval of the Executive Committee, of the Southern California Chapter of the Health Physics Society, has decided to make several comments on the proposed elimination of the 5(N-18) whole body accumulated dose rule from 10 CFR Part 20. The proposed change to NRC regulations was published in the Federal Register on 20 February 1979, in Volume 44, Number 35.

Our comments are as follows:

A) Section 20.101 Radiation protection standards for individuals in restricted areas.

1) Regulatory requirements for occupational radiation exposure control must not be regarded as limits defining the boundary between harm and no harm. Rather, they are guidelines that can be used to judge the effectiveness of the licensee's radiation protection program. This is certainly a proper regulatory function. However, it is most important that these regulatory requirements do not restrict the qualified expert (certified health physicist or equivalent) in providing operational procedures that balance benefit versus risk judgments in certain limited radiation use situations. The use of the dose averaging concept was one way of providing such flexibility. However, this arbitrary lifetime dose limit is not the only method to provide this needed flexibility. Therefore, it is our recommendation that if the 5(N-18) rem accumulated dose concept is to be eliminated, then it is vital that some criteria be included in the regulations which establishes the procedure for waiver of the 5 rem annual limit. This waiver need not be automatic (as with the present 5(N-18) rule),

... by card....................

Dupe of 7906280235 change PDR Add LP&L