ENCLOSURE D

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration
WASHINGTON, D.C. 20210

NOV 21 1979

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

Dear Mr. Minogue:

We have received a copy of your September 13, 1979, letter to Mr. David G. Hawkins of the Environmental Protection Agency concerning the Nuclear Regulatory Commission Task Force's interim report on current NRC regulations. We appreciate being apprised of the NRC's activities, and being afforded an opportunity to review the interim report.

Since OSHA's current ionizing radiation exposure standards are based, in part, on earlier versions of 10 CFR 20, we are very interested in possible revisions to those standards. Our primary comment is concerned with the recommended contents of a new radiation standard. This concern is also related to the complaint in William Dirck's memorandum that the existing standards are difficult to enforce. A reason for this situation lies in the fact that the NRC is not consistent in attempting to enforce well defined, legally defensible provisions in the standards, but has also been attempting to enforce a philosophical position. The latter "as low as reasonably achievable" (ALARA) philosophy is well accepted as the way to implement radiological safety procedures; however, because it represents, for the most part, a moving target rather than a fixed one in terms of compliance, it will always be difficult legally to enforce it in an objective manner.

Therefore, NRC should evaluate carefully all of the recommended provisions to see whether, in fact, they represent desired objective performance requirements or represent desired philosophical position statements. Clear objective regulatory requirements will result in: (1) greater acceptance of what the standards say, (2) increased compliance, because of increased clarity, (3) conservation of time and effort by all involved parties that would otherwise be lost debating subjective intents, and (4) greater agency effectiveness, because the same resources could be applied to additional compliance and safety assurance activities.

8002290258

Perhaps, as suggested in parts of the interim report, the non-enforceable radiological safety principles should be discussed separately in an appendix, while only the enforceable provisions are placed in the body of the regulations.

The inclusion of "females" as a susceptible group to receive special considerations in item b(2) on page 4 of the Interim Report raises questions relative to the policy of OSHA and other Federal government agencies to give equal protection without regard to sex. Deletion of the term "females" would only give the appearance of satisfying the issue, but in fact would not. In the development of radiation protection standards both NRC and OSHA must consider women who are exposed to ionizing radiation and who are also pregnant at the time. This is a specific consideration due to teratogenic risk and not for genetic nor somatic ones. While the latter affect both men and women, the teratogenic effects are biologically limited to females who are pregnant.

In view of this it is recommended that the term "females" in item (b)(2) on page 4 be changed to "females who are pregnant", as the susceptible group receiving special consideration when developing radiation protection standards. This does not appear to violate EEOC policy as reflected in related decisions involving female technicians whose work involved radiation exposure and whose jobs were affected because of their pregnancies. These decision (EEOC decisions 75-072 and 75-055) are attached and the appropriate paragraphs are boxed.

Thus, the EEOC position appears to provide for a means by which special considerations can be undertaken in this instance for female workers who are pregnant.

In addition to the above comments, several specific suggestions concerning the outline of the radiation protection standard are provided below:

(1) Page 5, item e: The outline does not reflect any consideration for the disposition of accumulated records under any circumstances.

(2) Page 8, item d: The contents of a radiation protection standard should address most, if not all, of the basic elements of an acceptable program. It should not be necessary to state, within a standard, the elements of such a program.

Sincerely,

Bailus Walker, Ph.D

Bailus Walker
Director
Health Standards Programs

Enclosure

POOR ORIGINAL

72-0978, CCH EEOC Decisions (1973) ¶ 6088, 6223, and 6345.

Decision

With respect to all but the segregated facilities allegation, there is reasonable cause to believe that Respondent Employer has engaged and is engaging in unlawful practices in violation of Title VII of the Civil Rights Act of 1964, as alleged.

[¶ 6442] FORCED RESIGNATION OF PREGNANT X-RAY TECHNICIAN WAS BIAS

Decision of Equal Employment Opportunity Commission. No. 75-072, November 14, 1974.

Title VII—Civil Rights Act of 1964

Sex Discrimination—Pregnancy—X-Ray Technician—Resignation Requirement—Denial of Sick Leave and Maternity Benefits.—There was reasonable cause to believe that an employer engaged in unlawful sex discrimination by requiring a female X-ray technician to resign upon becoming pregnant, and by subsequently denying her use of sick leave and maternity benefits. Possible x-ray hazard to the employee's unborn child did not justify the resignation policy where there were less discriminatory alternatives for accomplishing safe and efficient business operation, including leave of absence and the granting of sick leave and maternity benefits. Alleged difficulty in finding a temporary replacement for the employee does not justify an employment policy which did not produce the least discriminatory impact possible. 42 U. S. C. Sec. 2000e.

Back reference.—¶ 1310.

Full Text of EEOC Decision

Summary of Charge

Charging Party alleged that Respondent has engaged and is engaging in unlawful employment practices in violation of Title VII of the Civil Rights Act of 1964, as amended, by establishing a policy which required Charging Party, in the event of pregnancy, to resign and prevented her from taking a leave of absence or from using her sick leave, and further by in fact terminating her employment when Respondent learned of her pregnancy, all because of her sex.[1]

Jurisdiction

Respondent provides health care. It employed more than twenty-five persons throughout the calendar year of the alleged violation. It employed and is still employing persons in the purchasing, receiving or otherwise working on food, drugs, medical and hospital supplies and other goods, substantial quantities of which have been moved in or produced for interstate commerce. Respondent is therefore an employer within the meaning of Title VII, as amended.

On May 8, 1973, within the time limitations prescribed by Section 706 of Title VII, as amended, the Commission received and filed the charge. On February 21, 1974, pursuant to 29 C. F. R. 1601.11(b), the Commission received an amended charge which cured certain technical defects in the original charge and which added the additional allegation of an unlawful discharge. This additional allegation directly related to and grew out of the subject matter of the original charge, and, according to the regulation, related back to the original filing date.

Summary of Investigation

Charging Party began working for Respondent as a nurse's aide in 1968. She left in 1969 to attend an X-ray school from which she was graduated in June of 1971. In July of 1971 she was rehired by Respondent as an X-ray technician. The evidence of record indicates that she was the first female X-ray technician employed by Respondent. The evidence further indicates that at the time Charging Party was hired, Respondent employed one full-time and two part-time technicians.

Charging Party alleged that she was informed by Respondent some time in January of 1973 that if she became pregnant, she would have to resign, she could not take a leave of absence and could not be

[1] Although Charging Party checked off both "sex" and "national origin" on her charge sheet, it is obvious from the text of her charge and from her affidavits that she believed that she was discriminated against on the basis of her sex only. Accordingly, that is the only basis discussed in this decision.

© 1975, Commerce Clearing House, Inc.

POOR ORIGINAL

guaranteed that she could return to her job after the delivery of her baby, and she would not be entitled to use sick leave or the maternity benefits generally available to women employees outside of the X-ray department. There is some evidence of record to indicate that Charging Party was subsequently offered the alternative of taking a nurse's aide position, if one became available, at the lower salary of a nurse's aide; however, the evidence also indicates that Respondent never found such a position for Charging Party.

Respondent's practice of forbidding pregnant persons from working in the X-ray department had an obvious exclusive impact on women. Respondent defended its position by asserting that such a practice was necessary for the health of the unborn child. The Commission will accept such a purpose where it determines that the practice is necessary to the safe and efficient operation of the hospital, the practice effectively carries out the business purpose it is alleged to serve, and there is available no acceptable alternative practice which would better accomplish the business purpose advanced, or accomplish it equally well with a lesser differential impact on women. See *Robinson v. Lorillard Corp.*, 444 F. 2d 791, 3 EPD ¶8267 (4th Cir. 1971). In the present case we feel that a more acceptable alternative was available.

The Commission is aware of the current scientific debate regarding what is a "safe" dosage of radiation for a pregnant female. In particular, it is aware of the statement in Report No. 39 of The National Council on Radiation Protection and Measurements which reads:

> During the entire gestation period, the maximum permissible dose equivalent to the fetus from occupational exposure of the expectant mother should not exceed 0.5 rem.

We are also aware that Charging Party's physician thought that a lead shield would have been sufficient to protect her and that the Respondent thought that it would not have been adequate. Neither party offered any evidence to support its view or to indicate what dosage Charging Party would have received. However, assuming *arguendo* that Respondent could have proven that the lead shield was an insufficient safeguard (and, accordingly, established the business necessity of removing Charging Party from the X-ray laboratory), there still existed a less discriminatory manner by which Respondent could have accomplished its business purpose of a safe and efficient operation.

Even assuming that Charging Party could not remain in the X-ray laboratory while she was pregnant, Respondent has failed to show why it could not have given her a leave of absence or why she should not have been allowed to use her sick leave or maternity benefits. Respondent asserted that it was unable to give Charging Party a leave of absence because of the difficulty of finding a temporary X-ray technician. Believing that it could force Charging Party to resign, Respondent evidently felt that Charging Party would no longer be entitled to sick leave or maternity benefits.

Respondent's assertion that it would be "difficult" to find a temporary replacement for Charging Party is not persuasive. Respondent has made no showing that it has actually attempted to find such temporary employees. Also, the fact that Respondent has in the past found part-time technicians and the fact that near Respondent is a school which trains individuals to become X-ray technicians leads us to believe that Respondent would have found a temporary X-ray technician if it had made the effort. We certainly cannot accept the assertion of "difficulty" as a justification for a practice which does not produce the least discriminatory impact possible. Accordingly, we find that Respondent should have offered Charging Party a leave of absence and that this would have provided a more acceptable practice. Concomitantly, given the fact that the policy leading to the removal of Charging Party from the X-ray laboratory had an exclusive impact on women, regardless of whether this could have been justified by business necessity, we feel that Respondent was obligated to give Charging Party her sick leave and maternity benefits. Therefore, Respondent's policies of refusal to grant Charging Party maternity leave and to deny her sick leave and maternity benefits had a foreseeable adverse effect upon the terms and conditions of her employment without an equivalent effect upon males. Commission Decision No. 71-303, CCH EEOC Decisions (1973) ¶6170.

The record further indicates that on August 15, 1973, subsequent to the filing of the original charge, Respondent compelled Charging Party to submit her resignation due to pregnancy. Having already determined that another alternative with a lesser differential impact on women existed, we find that the implementation of such a

POOR ORIGINAL

policy violated Title VII of the Civil Rights Act of 1964.

Conclusion

There is reasonable cause to believe that Respondent has engaged and is engaging in unlawful employment practices in violation of Title VII of the Civil Rights Act of 1964, as amended, by establishing a policy which required Charging Party, in the event of pregnancy, to resign and prevented her from taking a leave of absence or from using her sick leave and maternity benefits, and further by subsequently actually compelling her resignation, all because of her sex (female).

[¶ 6443] FORCED RESIGNATION OF PREGNANT WORKER

Decision of Equal Employment Opportunity Commission, Decision No. 75-055, October 29, 1974.

Title VII—Civil Rights Act of 1964

Sex Discrimination—Pregnant Employee—Constructive Discharge—Safety—Seniority Benefits.—There was reasonable cause to believe that an employer engaged in sex discrimination where a pregnant female employee working with radiation was given the choice of taking a maternity leave of absence without pay or of resigning to avoid exposing her unborn child to radiation. The employee's resignation amounted to constructive discharge not justified by safety considerations where reasonable alternatives, including lay-off or transfer, were possible but not made available. Denial of transfer opportunities to the female employee was improper sex discrimination where transfer was arranged for a male employee unable to continue in his former position due to disease. Re-hire of the female at a lower salary and without seniority benefits accrued during her previous employment with the employer was also discriminatory. 42 U. S. C. Sec. 2000e.

Back reference.—¶ 1310.

Full Text of EEOC Decision

Summary of Charge

Charging Party alleges that Respondent has engaged and is engaging in unlawful employment practices in violation of Title VII of the Civil Rights Act of 1964, as amended, by failing to transfer her into a position which would not have exposed her to radiation, by causing her to terminate her employment, and upon her return to employment, by denying her the seniority benefits, including wages, which she would have received had she not been terminated, all because of her sex (female).

Jurisdiction

Respondent provides health care. It employed approximately 1500 persons throughout the calendar year of the alleged violation. It employed and is still employing persons in the purchasing, receiving or otherwise working on food, drugs, medical and hospital supplies and other goods, substantial quantities of which have been moved in or produced for interstate commerce. Respondent is therefore an employer within the meaning of Title VII.

The Commission received the charge on April 20, 1973. On May 8, 1973 the charge was deferred, and on July 9, 1973, within the time limitations prescribed by Section 706 of Title VII, the charge was filed.

Summary of Investigation

Charging Party had been working as a research technician in the thyroid laboratory of Respondent's facility for approximately three years when she learned that she was almost two months pregnant. Her employment exposed her to certain dosages of radiation. These dosages were considered "safe" for the general population under standards set by the Atomic Energy Commission (AEC), Occupational Safety and Health Administration (OSHA), and the National Council on Radiation Protection and Measurements; but Respondent was unable to guarantee that the dosages would be "safe" for the fetus of a pregnant woman. Therefore, upon being notified by Charging Party that she was pregnant, Respondent

© 1975, Commerce Clearing House, Inc.

POOR ORIGINAL

asked Charging Party to take a maternity leave of absence without pay or to resign. Afraid to lose both her salary and unemployment benefits, Charging Party submitted her resignation rather than take the leave without pay.

The AEC and OSHA take the position that a person under 18 years of age should not receive, in any one calendar year, a dose of radiation in excess of .5 rems to the whole body. *See e. g.*, 29 C. F. R. 1910.96(b)(2)(ii). The National Council on Radiation Protection and Measurements stated in Report No. 39:

> During the entire gestation period, the maximum permissible dose equivalent to the fetus from occupational exposure of the expectant mother should not exceed 0.5 rem.

Although Respondent's policy of removing pregnant women employees from working with radioactive materials has an obvious exclusive impact on women, she agreed with Respondent that the policy was necessary for her safety and for the safe and efficient operation of Respondent's business. However, Charging Party did challenge the policy which required her to choose between a maternity leave without pay and resignation.

Assuming that the business purpose for which Respondent maintained its policy regarding pregnant women working with radioactive materials is sufficiently compelling to override its impact on women and assuming that the challenged practice effectively carried out the business purpose it was alleged to serve, Title VII also requires that there be no acceptable alternative policies or practices which would better accomplish the business purpose announced, or accomplish it equally well with a lesser differential impact on women. *Robinson v. Lorillard Corp.*, 444 F. 2d 791, 3 EPD ¶ 8267 (4th Cir. 1971). In the instant case the Commission feels that there were more acceptable ways to treat pregnant women employees who were removed from working with radioactive materials. In particular, the Commission feels that the Charging Party should not have been confined to a choice between maternity leave without pay and resignation. The Commission feels that Respondent could have offered Charging Party the options of (1) a lay-off, (2) a transfer to another position in the same laboratory, or (3) a position outside of the laboratory. Charging Party, on her own initiative, attempted to achieve this last result, but was unsuccessful.

As to the first option, the record contains a copy of a memorandum from Charging Party's supervisor to the personnel office of Respondent. That memorandum indicates that Respondent never offered a lay-off as an alternative to be offered to Charging Party. The memorandum further indicates that Respondent could have offered the option, but did not so inform Charging Party or her supervisor. The supervisor indicated he would have offered it to Charging Party had the personnel department informed him that it was an available option. As the supervisor pointed out, a lay-off would have allowed Charging Party to collect unemployment and, at the same time, prevented her loss of seniority benefits.

As to the second option, the record indicates that another pregnant female worked in or near radioactive laboratories until her 7th month of pregnancy. That woman was transferred to another position within the laboratory to accommodate the conditions arising from her pregnancy.

The third option has several aspects worth noting. One general comment, however, can be made: instead of offering a transfer as an alternative, Respondent frustrated Charging Party's initiation of this alternative. Respondent claimed that Charging Party did not follow recognized transfer procedures in that she did not go to her immediate supervisor first. The Commission finds to the contrary. The record contains a statement by the supervisor that he was the one who relayed the transfer request to the personnel office. The Respondent alleged that Charging Party could not be transferred because she failed to submit a doctor's statement regarding her ability to do service work. The record indicates that this requirement was placed only on pregnant women. The EEOC Sex Discrimination Guidelines, 29 C. F. R. 1604.10 prohibit the application of one set of conditions to disabilities caused by pregnancy and another set for other temporary disabilities. Similarly, the record indicates that Charging Party's pregnancy was part of the reason given by Respondent for not giving her another job. Respondent neither offered a proper business justification for this practice, which has an obvious foreseeable disproportionate impact on women, nor did it even attempt to argue that it was part of some evenly applied nondiscriminatory policy.

Finally, regarding the transfer request, Respondent alleged that there were no positions available. The evidence of record does not support this allegation. The record

POOR ORIGINAL

indicates that Charging Party informed Respondent that she wished to be considered for *any* position and that she took a typing test at Respondent's personnel office. The record indicates that from the time of her formal resignation to the time she was rehired, Charging Party could have been considered for 32 positions. Two of these available positions were as a venapuncture technician. Charging Party could have easily qualified for such a position. Respondent considered Charging Party for only one transfer position. Respondent rejected Charging Party for that position, as previously stated, because she would interrupt her training for the delivery of her baby. The transfer request form filed by Charging Party indicates that Respondent's personnel office would make arrangements for interviews for a transfer to a new position. Respondent's Radiation Safety Officer indicated that Respondent should seek a transfer position for any employee who could no longer work in a radioactive area because of excessive radiation dosage. Yet the evidence indicates that Respondent did not seek to transfer Charging Party. It appears from the record that all transfer efforts made were done solely on Charging Party's initiative. In fact, the record indicates that Respondent frustrated all transfer attempts. Finally, the record indicates that there was a male who worked in the autopsy laboratory who contracted hepatitis and could no longer work in that laboratory. Respondent transferred him to a lower paying position but continued to pay him his original salary. We conclude that Respondent failed to transfer Charging Party because of her sex (female). We further conclude that Charging Party's resignation was a foreseeable consequence of Respondent's failure to provide reasonable alternatives, including transfer, to Charging Party, and constitutes a constructive discharge, occasioned by Charging Party's sex, and is unlawful within the meaning of Section 703(a) of Title VII, as amended. See Commission Decision No. 72-2062, CCH Decisions (1973) ¶ 6366.

Charging Party next alleged that she had been unlawfully deprived of her seniority benefits when she eventually got her old job back. Among other things, Charging Party's salary was dropped from $4.21 per hour to $3.76 per hour. Respondent's position was that Charging Party was made aware that she would be treated as a new hire if she terminated. They claimed that the choice was hers. But we have already concluded that the choice was not really hers. Charging Party was constructively discharged. Had Respondent laid off Charging Party or transferred her, she would have had all of her seniority rights. The present loss of her seniority rights was the direct result of the past discrimination she suffered involving the failure to transfer and her constructive discharge. The loss of her benefits, including her lower salary, works to perpetuate that discrimination. It is irrelevant that the denial of those benefits superficially is applied to all new-hires or that it exists absent a present intent to discriminate. See *Collins v. Union Carbide Corp.*, 371 F. Supp. 260, 7 EPD ¶ 9252 (S. D. Tex. 1974) and cases cited therein.

Conclusion

There is reasonable cause to believe that Respondent has engaged in unlawful employment practices in violation of Title VII of the Civil Rights Act of 1964, as amended, by failing to transfer her, by forcing her resignation by way of not giving her a reasonable alternative after deciding to remove her from her original position, and by denying her the seniority benefits, including salary, to which she was entitled, all because of her sex (female).

[¶ 6444] MANDATORY MATERNITY UNFAIR, BUT MANDATORY CONTRIBUTIONS TO PENSION AND TRUST FUNDS NON-DISCRIMINATORY

Decision of Equal Employment Opportunity Commission, Decision No. 75-095, November 18, 1974.

Title VII—Civil Rights Act of 1964

Sex Discrimination—Mandatory Maternity Leave—Loss of Seniority—Employer/Union Agreement.—Where a female employee who was pregnant was required to leave her job no later than the seventh month and required to return within two months of the termination of her pregnancy to retain her employment, the policies as mandated by the employer/union agreement, were unlawful sex discrimination since they resulted in loss of seniority and removal from the payroll. No other employees were treated in the same manner, and, in spite of a letter of intent by the employer recommending elimination

© 1975, Commerce Clearing House, Inc.

ENCLOSURE E

ENCLOSURE E

TITLE 10 - ENERGY

NUCLEAR REGULATORY COMMISSION

[10 CFR PART 20]

Standards For Protection Against Radiation

AGENCY: Nuclear Regulatory Commission

ACTION: Advance Notice of Proposed Rulemaking; Request for Public Comment

SUMMARY: The Nuclear Regulatory Commission (NRC) is considering a major revision to 10 CFR Part 20 of its regulations. The primary purpose of the revision is to bring NRC radiation protection standards into accord with developments in radiation protection that have occurred since promulgation of Part 20 in its present form in the late 1950's. In a preliminary review of this matter, the NRC staff has identified a number of areas in which Part 20 might be improved. Before proceeding further with specific structural and substantive proposed changes, the NRC is seeking public comment. Of particular interest are public views on the areas so far identified by the staff as well as suggestions for further improvements and suggestions for alternative approaches for effecting needed improvements.

DATES: Comment period expires (60 days after publication in the Federal Register)

ADDRESSES: Written comments or suggestions should be submitted to The Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments received may be examined at the Commission's Public Document Room at 1717 H Street, N.W., Washington, D.C.

FOR FURTHER INFORMATION CONTACT:

Robert A. Purple, Assistant Director
Radiological Health & Safeguards Standards
Office of Standards Development
Nuclear Regulatory Commission
Washington, D. C. 20555 (Phone -(301)443-5855)

SUPPLEMENTAL INFORMATION:

The NRC radiation protection standards were developed in the late 1950's. Since that time there have been a substantial number of revisions, some of them to bring the regulation into accord with recommendations of various scientific advisory organizations, but none of them affecting the basic structure or fundamental approach to radiation protection embodied in the original publication. With the passage of time there has been an increase in the sophistication of the general approach to radiation protection, there have been several legislative actions that affect the federal approach to radiation protection, and there have been additional information and recommendations on radiation protection from national and international bodies (e.g., United Nations Scientific Committee on the Effects of Atomic Radiation, National Council on Radiation Protection and Measurements and the International Commission on Radiological Protection). In addition, there has been a growing public interest in and concern about the potential health effects of low-level ionizing radiation. In August 1979, the Secretary of Health, Education and Welfare sent to the President a report of an Interagency Task Force on the Health Effects of Ionizing Radiation. This report, among other things, made recommendations for reducing radiation exposures and recommended the establishment of a federal radiation council responsible for formulating broad radiation protection policy. The President has approved these recommendations. As part of its participation in this Task Force effort, the NRC recognized the desirability of reexamining the adequacy of its existing radiation protection standards.

For these reasons, the NRC is initiating a rulemaking proceeding for the purpose of modernizing its radiation protection standards. It is expected that this

rulemaking proceeding will be complex and controversial. To provide for the earliest possible public participation in the development of proposed revisions, the NRC is seeking public comment and suggestions at this very early stage in the process.

The Commission is considering, as a separate matter, petitions that have recommended the lowering of numerical limits for individual doses. Accordingly, public comments on the absolute numerical limits that should be established in the radiation protection standard are not solicited as part of this notice. It is anticipated that public hearings on new EPA federal guidance for occupational exposures will be conducted jointly by EPA, NRC, and OSHA in the near future (see 44 FR 53785); numerical occupational dose limiting standards will be an appropriate issue for public comment at those hearings. If, as a result of the EPA guidance, revised numerical standards for NRC licensees are indicated, they will be promulgated. Depending on the timing of the EPA action, the matter will be addressed either in a separate rulemaking proceeding or as an integral part of the present initiative to modernize the radiation protection standard. In either event, there will be ample opportunity for public comment.

The NRC recognizes that the EPA has Federal responsibility for establishing Federal Radiation Guidance and generally applicable standards for the protection of the environment from radiation and radioactive materials, and is aware that EPA is actively developing new guidance and standards that would affect the provisions of NRC's radiation protection regulations which are derived from EPA guidance and standards. During the consideration of revisions to its radiation protection standards, NRC plans to work closely with the EPA to help ensure compatibility with forthcoming EPA guidance. One of the goals in revising the NRC radiation protection standards is to structure them in a way that will facilitate compliance with future radiation protection guidance issued by the EPA.

Function of Radiation Protection Standards

To aid in developing the framework on which to structure the new radiation protection regulations, it is helpful to have a general statement of the desirable characteristics of or objectives to be met by the new standards. To that end, the NRC staff has developed the following statement of purpose for NRC radiation protection standards:

> Purpose
> The NRC standards for protection against radiation should identify specific quantifiable and procedural requirements, and their bases, that will provide adequate protection of the health and safety of workers, individual members of the public, and the population in general. NRC standards should be consistent with the applicable Federal radiation protection guidance and include consideration of the work of recognized National and International advisory organizations. The standards should be structured in a manner that is easily understood and can be readily revised to accommodate legislative and technical changes as necessary. To ensure compli ce, implementation of the standards should be amenable to v ification by the Commission's inspection programs. The regulation should be readily inspectable and enforceable so that timely and effective enforcement actions can be taken whenever the standards are violated.

The list of essential elements of the radiation protection standards which follows was developed with these objectives in mind.

Essential Elements of the Radiation Protection Standards

The NRC Staff has tentatively identified what it considers to be the essential elements that should be contained in the NRC radiation protection regulations. The list of items follows:

a. Radiological Protection Principles

These should include:

Identification of basic assumptions used for radiation protection purposes, such as: (1) there is, within the range of exposure conditions usually encountered in radiation work, a linear relationship without threshold between dose and probability of stochastic effect; and (2) the severity of each type of stochastic effect is independent of dose.

Identifications of the basic radiation protection principles which are derived from the assumptions, such as:

(1) No practice or operation involving exposures to radiation should be adopted unless its introduction produces a positive net benefit;

(2) All exposures shall be kept as low as reasonably achievable, economic and social factors being taken into account, and

(3) The dose equivalent to individuals shall not exceed the limits selected for the appropriate circumstances.

(4) Persons occupationally exposed to radiation should be informed of the potential risk of that exposure.

b. Standards for Individual Occupational Exposures.

These should include:

(1) Numerical dose limits (internal, external, and in combination) for specific time periods.

(2) Consideration of special provisions for limiting exposures of susceptible groups (e.g. embryo/fetus, women in general, fertile women and minors), applicable laws being taken into account.

(3) Controls for transient workers, contract workers, and "moonlighters".

(4) Derived standards, e.g., maximum permissible concentration (MPC), surface contamination in restricted areas, annual limits of intakes (ALI).

(5) Provisions for planned special exposures and overexposure situations.

(6) Provisions for emergency exposures.

c. Standards for Exposures of the General Public

These should include:

(1) Numerical dose limits (internal, external, and in combination) for specific time periods including consideration of special population groups.

(2) Effluent release limits including ALARA (as low as reasonably achievable) numerical guides and consideration of special population groups.

(3) Derived standards, taking into account major exposure modes and pathways, e.g., MPC air, MPC water, milk chain, ALI, etc.

(4) Siting considerations, including special population groups. for licensed facilities and activities other than LWR power stations.

(5) Emergency dose limits reflecting Federal guidelines.

(6) Limits of contamination for the release of material for unrestricted use.

d. Requirements for a Radiation Protection Program

These should include:

(1) Training requirements

(2) Management audits and controls

(3) Designation and marking of radiation areas

(4) ALARA program requirements including guidance on lifetime accumulative doses

(5) Access controls, including alarms

(6) Personnel dosimetry requirements, (for both internal and external exposures) including performance standards for health physics measurements

(7) On-site radiation and contamination measurements (instruments, performance standards, etc.)

(8) Environmental radiation monitoring (off-site)

(9) Procedures for transportation of radioactive material

(10) Procedures for responding to emergency situations

(11) Procedures for radiation protection

(12) Procedures for managing overexposures

e. Record Keeping Requirements

These should include:

(1) Individual doses (internal and external) and bases for estimates

(2) Identity and quantity of radioactive materials released to the environment

(3) Survey and monitoring results

(4) Disposal of licensed material

f. Reporting Requirements

These should include:

(1) Routine reports of occupational doses (including both internal and external exposures)

(2) Overexposure reports

(3) Reports of effluents released to the environment

(4) Reports of theft or loss of radioactive material

(5) Notification of incidents.

Areas In Part 20 That Need Improvement

Based partly on the NRC staff's views on the necessary elements of a revised Part 20 as presented above, and also on a critical examination of the present Part 20, the following list of areas where Part 20 could be improved has been identified. It would be the intent of the staff to ensure that these areas are resolved in a proposed revision to Part 20.

a. Radiological Protection Principles

(1) The underlying radiation protection principles adopted by NRC should be presented in terms understandable to laymen.

(2) The ALARA principle and requirements for both effluents and occupational exposures should be strengthened. Quantitative ALARA guidelines should be determined, wherever possible, for facilities other than LWR stations. Collective doses should be addressed.

b. Standards for Individual Occupational Exposure

(1) Consideration should be given to adopting the ICRP recommendations on the use of "effective dose equivalents" and dose limitations for combined internal and external exposures. Present Part 20 does not preclude radiation exposure as high as a total of 17 rem of combined internal and external dose to the whole body in a single year, i.e., 5 rem internal plus (3 rem per qtr. x 4 qtr. =) 12 rem external doses.

(2) Derived limits for concentrations in air and water should be "updated" or replaced by annual limits for intake.

(3) Standards applicable to emergency or overexposure situations should be presented.

(4) Special provisions to limit collective doses should be considered.

(5) Special provisions for limiting exposures of susceptible groups (e.g. embryo/fetus, women in general, fertile women and minors) should be considered, under applicable laws.

(6) Controls for "moonlighters," contract workers, and transient workers should be strengthened.

c. Standards for Exposure of the General Public:

(1) Additional consideration should be given to exposure pathways to man other than by air and water intake.

(2) Derived limits for concentrations in air and water should be "updated" or replaced by annual limits for intake.

(3) Special provisions for limiting exposures of susceptible groups (e.g. embryo/fetus, women in general, fertile women and minors) should be considered, under applicable laws.

(4) Standards for licensee action applicable to emergency or overexposure situations should be presented.

(5) Standards for environmental monitoring for either routine or accident conditions should be presented.

d. Requirements for a Radiation Protection Program

(1) The basic elements of an acceptable radiation protection program should be presented.

e. Reporting Requirements

(1) Reporting of routine internal exposures should be required.

f. Miscellaneous

(1) The adoption of SI (System Internationale) units with related conversion formulae should be considered.

(2) Performance standards (accuracy and reliability) for health physics measurements should be presented.

(3) The technical bases for numerical limits should be readily identifiable.

It must be emphasized that the items listed above do not represent decisions or commitments. Rather, as stated previously, they are the result of a preliminary review by the NRC staff and are published at this time to solicit views of interested persons not only on the appropriateness of the specific items listed but also to facilitate identification of further improvements or revisions to Part 20 not yet identified by the staff.

(Secs. 81, 161b, Pub. Law 83-703, 68 Stat. 935, 948 (42 U.S.C. 2111, 2201); Sec. 201, Pub. Law 93-438, 88 Stat. 1242 (42 U.S.C. 5841)

Dated at Bethesda Md this _____ day of _____1979.

For the Nuclear Regulatory Commission.

Lee V. Gossick

ENCLOSURE F