

57 Rad. Reg. 2d (P & F) 1280, 100 F.C.C.2d 543, 1985 WL 260091 (F.C.C.)

\*1 National Environmental Policy Act of 1969

Radiation

Radiation, Electromagnetic, Hazardous Level

Radiation, Exposure

Radiation, Radio Frequency

Report and Order adopted amending § 1.1305 to add to the list of "major actions" a category of operations and facilities applicable to health and safety guidelines for human exposure to radiofrequency electromagnetic radiation. Applications for such facilities will be treated as "major actions" as provided in the FCC Rules implementing the National Environmental Policy Act of 1969.

-Amendment of Part 1

Gen. Docket No. 79-144

FCC 85-90

In the Matter of

Responsibility of the Federal Communications Commission to consider biological effects of radiofrequency radiation when authorizing the use of radiofrequency devices.

Potential effects of a reduction in the allowable level of radiofrequency radiation on FCC authorized communications services and equipment.

Gen. Docket No. 79-144

REPORT AND ORDER

Adopted: February 26, 1985; Released: March 14, 1985

BY THE COMMISSION:

I. Summary

1. The Commission is amending Part 1 of its rules implementing the National Environmental Policy Act of 1969 (NEPA), [42 U.S.C. §§ 4321 et seq. \(1976\)](#). The amendment provides for environmental analysis of major Commission actions that may result in non-compliance with applicable health and safety guidelines for radiofrequency (RF) radiation. Our processing guideline for determining the significance of human exposure to RF radiation will be the "Radio Frequency Protection Guides"

adopted in 1982 by the American National Standards Institute (ANSI). At this time, the rule amendment will only apply to major actions taken by the Commission with respect to the following facilities authorized by the FCC Rules and Regulations: (1) broadcast facilities authorized under Part 73; (2) broadcast facilities authorized under Part 74 (Subparts A and G only); (3) satellite-earth stations authorized under Part 25; and (4) experimental facilities authorized under Part 5. An accompanying Further Notice of Proposed Rule Making, also being issued today, proposes to categorically exclude other FCC-regulated facilities and operations from the provisions of this rule, except for shipboard satellite-earth terminals.

## II. Background

2. On June 7, 1979, the Federal Communications Commission (FCC) issued a Notice of Inquiry (NOI) concerning the responsibility of the FCC to consider biological effects of radiofrequency (RF) radiation when licensing facilities and authorizing equipment that utilize RF energy.<sup>[FN1]</sup> The NOI was designed to: (1) assist the FCC in determining whether it is appropriate for the Commission to take any action under health and safety standards for exposure to RF radiation, and (2) provide documentation so that the FCC can adequately participate in rulemaking proceedings of other agencies to assure that any standards adopted adequately take into account the impact on the licensees and equipment regulated by the FCC.

\*2 3. As a result of the comments received in response to the FCC's NOI and our assessment of the Commission's statutory responsibilities under the National Environmental Policy Act of 1969 (NEPA)<sup>[FN2]</sup>, the Commission issued a Notice of Proposed Rule Making (NPRM), on February 18, 1982, proposing to amend Section 1.1305 of the Commission's Rules and Regulations implementing NEPA<sup>[FN3]</sup>, by expanding the list of "major actions" subject to the Commission's environmental processing standards, [47 C.F.R. § 1.1305](#). It proposed that applications for equipment authorizations would be treated as "major actions" triggering environmental assessment when the equipment in question did not comply with RF radiation emission standards. It was also proposed that applications for construction permits or licenses to transmit would be treated as "major actions" triggering environmental assessment when the proposed operation would result in the exposure of workers or the general public to levels of RF radiation in excess of safe levels established by federal agencies which have jurisdiction to set such standards.

## III. Discussion

### A. General

4. A total of twenty-three filings of comments and reply comments were received at the FCC in response to the Commission's NPRM in Docket 79-144 and all comments have been considered. The respondents included individuals, broadcast groups, major corporations, trade associations, a labor union, local government officials, and the U.S. Environmental Protection Agency. A list of the parties filing comments and reply comments in this proceeding can be found in Appendix 2.

5. With a few exceptions, respondents to the NPRM generally supported the thrust of

the Commission's proposal. The general tone of the comments indicated a desire by many respondents that the Commission clearly establish a policy regarding RF radiation hazards and clarify Commission and licensee responsibilities in this area of growing public concern. Several of the respondents also suggested the Commission take actions that, we believe, go beyond the scope of this proceeding. Although various broadcast groups, such as the National Association of Broadcasters (NAB), the TV Broadcasters All Industry Committee (TVBAC), the Association for Broadcast Engineering Standards, Inc. (ABES), and the National Association of Public Television Stations basically supported the proposed rule, they and others urged the Commission to issue a policy statement dealing with federal preemption of local and state standards for RF radiation. For example, TVBAC urged the Commission to "issue a Policy Statement which clearly and forcefully asserts its authority and intention to preempt unwarranted state or local RF radiation standards that arbitrarily limit or preclude communications services to the public."

6. Two respondents felt that the Commission should not adopt the proposed rule amendment at this time. The Utilities Telecommunications Council (UTC) recommended "that the Commission postpone adoption of its proposal until the EPA or another responsible federal agency establishes a legally enforceable exposure standard." UTC felt that it would be premature for the FCC to adopt its proposed rule in view of the fact that various federal agencies "are only in the preliminary stages of standard development and in light of the disparate views and positions of scientists the world over concerning what constitutes a radiation 'hazard'...."

\*3 7. Similarly, RCA Corporation, while endorsing the concept of national standards and while recognizing the proposed Commission regulation as "meritorious," nonetheless felt that the Commission should "defer adoption of the regulations implementing NEPA until such time as the Federal agencies issue suitable radiation standards." RCA feared that if the Commission adopted regulations before the issuance of federal standards, "such regulations may be ineffective, inappropriate, or detrimental to those persons regulated thereunder." The UTC and RCA comments, however, were outweighed by those comments supportive of our taking action at this time.

8. It is our judgment that the Commission is required to make a threshold determination as to whether the facilities it approves are "major Federal actions significantly affecting the quality of the human environment," thus triggering environmental review, regardless of whether federal guidelines or standards currently exist for general public exposure to RF radiation.<sup>[FN4]</sup> The Commission cannot avoid its independent legal obligation under NEPA to make its own determination as to the environmental impact of its "major actions." Rather, the Commission must comply with its procedural duties under NEPA "to the fullest extent, unless there is a clear conflict of statutory authority."<sup>[FN5]</sup> Just as "[c]onsideration of administrative difficulty, delay or economic cost will not suffice to strip [NEPA] of its fundamental importance," id., so too, the mere absence of a federal standard or individual agency expertise does not absolve the Commission of its NEPA responsibilities. Thus, an agency "cannot refuse to give serious consideration to environmental factors merely because it thinks that another agency should assume the responsibility for promoting the policies of NEPA."<sup>[FN6]</sup>

#### B. Guidelines for RF Radiation Exposure

9. A major topic of discussion among the respondents was the matter of which RF standard or guideline the Commission should use as its criterion for identifying a "major action" for processing under the NEPA rules. The Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor has jurisdiction to establish RF exposure standards for workers. The U.S. Environmental Protection Agency (EPA) has the authority to recommend safe levels for exposure of the general public to RF radiation. Our NPRM noted that OSHA had previously issued a radiation protection guide for workers <sup>[FN7]</sup>, and that, until a federal standard for the general public was developed, we proposed to use the OSHA workers' exposure guidelines for determining what constituted a "major action" with respect to general public exposure to RF radiation. In May 1982, OSHA proposed to revoke its advisory standards, including the advisory standard for exposure of workers to non-ionizing radiation.<sup>[FN8]</sup> However, subsequently, OSHA reconsidered and decided to retain its advisory standard for RF radiation.<sup>[FN9]</sup>

\*4 10. In light of OSHA's proposed revocation, some respondents felt that the Commission should reconsider its proposal to use the OSHA guidelines. To quote the American Radio Relay League (ARRL), "OSHA's decision to now propose revocation of its advisory standard on worker exposure to nonionizing radiation would effectively knock the underpinnings out of the FCC proposed [Section 1.1305\(d\)](#)." Other parties, including most of the broadcast groups, did not think that OSHA's action should affect the Commission's proposal. For example, Satellite Business Systems expressed the opinion that "OSHA proposed to withdraw its standard for procedural reasons related to its powers under its enabling statute. It did not indicate any disapproval of the standard ..."

11. GTE Service Corporation, Aeronautical Radio, Inc. (ARINC), ARRL, Thomas Agoston, Donald E. Clark, and Motorola, Inc. advanced an alternative approach. They proposed that, in place of the OSHA guidelines, the Commission should use, as an interim or provisional standard, the voluntary RF radiation protection guides issued in 1982 by the American National Standards Institute (ANSI).<sup>[FN10]</sup> GTE maintained that:

Although the Commission has expressed the opinion that it does not have the expertise to create health standards for RF and microwave radiation, ... the Commission does have the expertise to recognize a technically sound radiation standard, and, in the absence of other federal agency standards, adopt it as an interim standard. (emphasis in the original)

12. To support its position, GTE pointed to 1982 guidance from the Office of Management and Budget encouraging reliance of federal agencies on voluntary standards.<sup>[FN11]</sup> Other parties stated that they either endorsed or did not oppose Commission reliance on the ANSI radiation protection standard as a standard for purposes of application processing under NEPA.

13. Although several of the broadcast groups would have preferred that the Commission use the OSHA radiation protection guide, they indicated that use of the ANSI standard would be acceptable. For example, to quote TVBAC, "[w]hile the ANSI

standards are more stringent than the 10 mW/cm<sup>2</sup> standard at certain frequencies, they are not so strigent as to impair broadcasting services." (TVBAC comments, at 11). Similarly, NAB expressed the view that "[t]he adoption of [the ANSI] standard would pose a hardship in only a few instances and would be infinitely better than the patchwork of unrealistic and varying local standards that is being developed in the absence of federal action." (NAB comments, at 6). NAB maintained that even though there is "no evidence" that the OSHA guideline has failed to protect the public health adequately, "NAB recognizes that good arguments have been made within the scientific community for a frequency-sensitive standard such as the new one proposed by ANSI." (Id.)

14. In its Comments, GTE Service Corporation further noted that the Commission has previously "made reference in its rules to nationally recognized standards" <sup>[FN12]</sup> as well as "recognized the work done by ANSI in other areas." <sup>[FN13]</sup> Citing "strong support" in the record of this proceeding for Commission use of the ANSI standard, GTE, therefore, recommended that "[s]ince the current ANSI standard represents the consensus of the experts active in the field, its recognition by the Commission as an interim federal standard would be in keeping with OMB's guidance and would help to stem the tide of potentially conflicting local standards."

\*5 15. Echoing GTE, Motorola, Inc. urged the Commission to "adopt without modification the ANSI standard for human exposure to radiofrequency radiation; it is technically sound and widely supported." Motorola went on to note that "in the absence of Government promulgated standards, it is entirely appropriate for the FCC to employ those formulated by voluntary standards-developing bodies." The ANSI standard, maintained Motorola, "represents the best determination of many knowledgeable parties, and could effectively be used on an interim basis unless or until an appropriate Government agency promulgates new or different standards."

16. In addition to comments filed during the official comment period following our NPRM in this proceeding, the ARRL filed a "Petition for Expedited Special Relief and Declaratory Ruling" on March 20, 1984. In its petition ARRL requested that the Commission issue "at the earliest possible moment" an interim policy statement and status report on the appropriateness of use of the ANSI standard as an RF protection guideline. ARRL restated its recommendation filed previously that the Commission adopt the ANSI C95.1-1982 standard as an interim radiation protection guideline. Similar sentiments were expressed in a letter, dated August 27, 1984, from the Electromagnetic Energy Policy Alliance (EEPA) to Mark S. Fowler, Chairman of the FCC.

17. Significant misgivings about Commission use of the OSHA guidelines were expressed from another perspective in comments of the U.S. Environmental Protection Agency (EPA). EPA noted that, "[i]n general, we are in agreement with the subject document as written, but we have reservations about the use of the OSHA occupational standard as an interim standard for exposure of the general public until EPA issues guidelines for exposure of the public." EPA observed that factors related to environmental heat stress and the health of exposed individuals suggested that the OSHA standard "may not provide adequate protection for certain segments of the public."

18. EPA advised that a plan for the development of "Federal Radiation Protection Guidance for Public Exposure to Radiofrequency Radiation" has been prepared by EPA's Office of Radiation Programs. This plan called for release of the proposed guidance for public comment by the fall of 1983 and publication of the final guidance approximately one year later. EPA suggested that "[u]ntil such time, the FCC should consider using a more conservative approach to evaluating public exposure than that provided in the OSHA standard." In December 1982, EPA issued an "Advance Notice of Proposed Recommendations," indicating its intention to develop "Federal Guidance" for exposure of the general public to RF radiation.<sup>[FN14]</sup> However, the EPA recommendations have not been officially released as of this date, and we cannot predict what action EPA will ultimately take in this area.

19. Reservations about FCC adoption of the OSHA guidelines were also expressed in comments submitted by Oregon officials Donald E. Clark and Dr. Charles P. Schade. For example, Schade maintained that occupational exposure standards "do not protect persons in the population who might be especially sensitive to radiofrequency energy." He mentioned small children and persons with chronic illnesses as examples of individuals who might be adversely affected by the Commission's use of an occupational standard as a standard for exposure of the general public.

\*6 20. There were two reasons for our initial proposal to rely on the OSHA occupational standard as an interim guideline for exposure of the general public. First, no standard had been established by the Federal Government for exposure of the general public to RF radiation. Second, as indicated in the NPRM, we believed that some guideline is necessary to facilitate the Commission's environmental review process until such time as EPA or another responsible federal agency recommends or adopts guidelines or standards for exposure of the general public to non-ionizing RF radiation.<sup>[FN15]</sup>

21. Subsequent developments, however, as noted, necessitated a reconsideration of our initial proposal. In 1982, OSHA proposed to revoke the occupational RF radiation protection guide. Although OSHA reconsidered its original proposal and ultimately decided to retain the RF advisory standard, that reconsideration was for procedural rather than scientific reasons. Moreover, some of the respondents as noted, pointed out serious problems with Commission reliance on the OSHA occupational standard to evaluate public exposure to RF radiation. Finally, as noted, EPA has not yet developed "Federal Guidance" for public exposure to RF radiation.

22. Absent a federal standard for exposure of the general population, and in the face of the Commission's acknowledged statutory obligation under NEPA, two questions, therefore, remain. Under these circumstances can the Commission rely on existing exposure guidelines in view of the lack of federal standards? If it can, upon which guidelines should it reply?

23. First, we believe that the Commission can rely on existing exposure guidelines as long as they are technically sound and scientifically supportable. This reliance will enable us to fulfill our explicit NEPA statutory obligation to assess the environmental impact of our "major actions" with respect to potential RF and micro-

wave radiation hazards.

24. Second, regarding the exposure guidelines on which the Commission will rely, in light of recent developments, and as a result of comments received in this proceeding, we are modifying our original proposal for evaluating RF radiation exposure (see Appendix 1). We are incorporating by reference into our NEPA rules the guidelines recommended by the American National Standards Institute (ANSI) entitled "American National Standard Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz" (ANSI C95.1-1982).<sup>[FN16]</sup> We believe that, for the present, our use of the ANSI guidelines will best implement our statutory obligations under NEPA.

25. We have selected the non-government ANSI guidelines to evaluate general population and worker exposure to RF radiation because they are scientifically based and widely accepted guidelines that are applicable to the general population as well as to workers. These ANSI guidelines were both mentioned in the NPRM and, as discussed in more detail below, advocated by a number of the respondents in lieu of the OSHA occupational exposure guidelines. Although we have neither the expertise nor the jurisdiction to develop our own radiation exposure guidelines, we believe, as supported by comments received in this proceeding, that the Commission does have the expertise and authority to recognize technically sound standards promulgated by reputable and competent organizations such as ANSI. The OSHA radiation protection guide upon which we had originally proposed to rely was based directly on the prior ANSI standard of 10 milliwatts per square centimeter originally issued in 1966.<sup>[FN17]</sup> ANSI's revision of that standard, in 1982, reflected recently acquired knowledge of the biological effects of RF radiation. We, therefore, believe that the 1982 ANSI standard is more appropriate than the OSHA advisory guideline. Furthermore, the OSHA guidelines were written as an exposure guide for workers, whereas the 1982 ANSI recommendations "are intended to apply to non-occupational as well as to occupational exposures." The revised ANSI guidelines also apply to a broader frequency range than the OSHA guidelines and, unlike the OSHA guidelines, contain recommendations for exposure in the standard (AM) broadcast band.

\*7 26. We would prefer to defer in this area to the expert federal health and safety agencies. We believe, however, that NEPA requires us to consider the environmental impact of the operations and facilities we license or approve, regardless of whether federal standards currently exist or we have the requisite expertise to set such standards. For our purposes we require technically sound and widely recognized guidelines which are scientifically supportable. Therefore, we have chosen with this rule amendment to rely upon the widely recognized 1982 ANSI RF radiation protection guidelines as an environmental processing trigger.

27. The Commission will be relying upon the ANSI guidelines to facilitate our environmental review obligations under NEPA.<sup>[FN18]</sup> Under our NEPA rules, environmental concerns, such as RF radiation exposure, are weighed and balanced in making a public interest determination. If a proposed operation or facility will result in human exposure in excess of the ANSI limits, environmental analysis will be required. However, the application can be amended to reduce or eliminate the possibility for excessive exposure. If an environmental impact statement is necessary,

with regard to RF radiation, the ANSI guidelines will be used in determining whether the environmental impact or risks outweigh the benefits of the proposal.

28. We are aware of new or proposed recommendations for exposure to RF radiation promulgated by other organizations subsequent to the issuance of our NPRM. For example, new exposure guidelines, more restrictive than the ANSI standard for exposure of the general public, were released in April, 1984, by the International Radiation Protection Association (IRPA).<sup>[FN19]</sup> The National Council on Radiation Protection and Measurements (NCRP) is currently developing RF exposure guidelines for workers and the public. In addition, the American Conference of Governmental Industrial Hygienists (ACGIH) and the National Institute for Occupational Safety and Health (NIOSH) have recommended or are developing recommendations for occupational exposure to RF radiation, and, as discussed previously, EPA has been in the process of developing federal guidelines for RF exposure. While IRPA has now issued guidelines and other groups may do so in the future, we believe that the Commission should act on the basis of the record before us at the present time rather than postpone action indefinitely as we seek the ultimate standard. It is possible that we may revisit this issue and recommend use of a different standard in the future. However, for the present, the record before us supports use of the 1982 ANSI standard.

#### C. License Renewals and Modifications

29. We have determined that we are legally obligated under NEPA to include license renewal and facility modification applications within the scope of our environmental processing guidelines. To clarify as well as qualify the applicability of our amended NEPA processing rules to such applications, we would note the following points. First, both the NEPA case law<sup>[FN20]</sup> and regulations of the Council on Environmental Quality implementing the statute<sup>[FN21]</sup> make clear that the statutory term "major Federal action" includes both new and continuing federal activities such as initial licensing as well as license renewals and modifications.

\*8 30. Second, NEPA encompasses continuing as well as initial federal actions so as to make environmental quality and environmental protection ongoing concerns of every federal agency.<sup>[FN22]</sup> Third, with its emphasis on ongoing environmental quality and protection under ever changing environmental circumstances, the NEPA statute does not provide for grandfathering of any existing facility or project.<sup>[FN23]</sup> The procedural requirements of the statute, however, are not applicable to, or triggered by, existing facilities but only apply to, and are triggered by, applications for new facilities, or renewals or modifications, the approval of which would constitute "major Federal actions significantly affecting the quality of the human environment."<sup>[FN24]</sup>

31. Finally, based on industry comments received in this proceeding, it is our expectation that, in fact, the vast majority of license renewal and facility modification applications will comply with the ANSI standard we are incorporating today into our NEPA processing guidelines.<sup>[FN25]</sup> Thus, our approval of such applications in most instances will not constitute a "major Federal action significantly affecting the quality of the human environment" so as to trigger environmental processing with respect to RF radiation. Therefore, as indicated earlier, we expect that

most licensed operations seeking renewal or modification of a previously approved facility without increasing their RF emissions, would, in effect, be exempted from further Commission environmental processing of the particular application. Remaining then for such processing would be those applications which would not comply with the RF radiation standards, including a minority of applications for new facilities, license renewals, and modifications of existing facilities.

#### D. Evaluation of Compliance

32. Many respondents raised questions that related to the evaluation of whether a facility or operation was in compliance with a given standard. For example, American Telephone and Telegraph (AT&T) expressed its concern that "the intent of the proposed rule is not sufficiently clear and ... this slight ambiguity may result in an unnecessary burden to the Commission as well as applicants." AT&T argued that the proposed rule should address "real, not merely hypothetical, situations in which the emission or exposure guidelines would be exceeded." AT&T urged that the rule make specific reference to exposure "under normal working conditions" and "using standard maintenance and repair practices" and, with respect to public exposure, should make specific reference to exposure "in normally accessible areas."

33. Concern over measurement procedures, particularly in the near-field of a radiating source, was expressed by some respondents. Motorola felt that adoption of the proposed rules without establishing measurement procedures was "in effect, adoption of no [r]ules at all .... [E]nforcement of the rules could be next to impossible in near-field situations. We urge the Commission to promulgate [r]ules only after appropriate measurement procedures have been established...." (emphasis in original). Motorola, therefore, suggested that the Commission consider relying upon the new ANSI standard as a basis for an RF radiation criterion in its NEPA processing rules because that standard provides for an alternative measurement technique for near-field exposure.

\*9 34. NAB also mentioned potential measurement problems and pointed out that far-field measurement techniques and formulas may not be applicable in the near-field. NAB suggested that broadcasters be allowed to rely on actual measurements made by qualified engineers in lieu of being obliged to use far-field formulas for characterizing RF energy levels.

35. In its comments, NAB also discussed the problem of locations where many different sources of RF energy are present. NAB contended that "[i]n some instances, there is no practical alternative but to locate a variety of transmitting antennas on one tall building or mountain peak. At these locations, the cumulative radiation levels might exceed the new ANSI standard—but almost never in any area accessible to the public." NAB suggested that the Commission should consider various methods to prevent exposure to hazardous radiation at these sites but maintained that "[n]o licensee or applicant should be subjected to special processing where transmitting equipment under that licensee's control by itself produces radiation levels not in excess of the standards."

36. In order to address these various concerns related to the determination of com-

pliance with standards, and to give guidance to our licensees, we plan to issue a technical bulletin which will be developed by Commission staff before the effective date of our rule amendment. This bulletin will discuss prediction methodology, evaluation of exposure situations, measurement problems, multiple source siting, and other relevant issues. For example, in the case of a simple, isolated, broadcast antenna, a "worst-case" prediction for power density in the far-field of the antenna can be made by dividing the effective isotropic radiated power (EIRP) by either  $4\pi R^2$  or  $\pi R^2$  (depending on whether 100% ground reflection is assumed), where  $R$  = the minimum distance from the antenna where people might be exposed. Although generally applicable in the far-field, this prediction method could also be used to estimate a "worst-case" upper limit for intensities in the near-field of simple, isolated, broadcast antennas. The use of such a formula could provide prima facie evidence that a station would be in compliance with the ANSI standard. Other appropriate methods would be acceptable for evaluating compliance, including actual measurement data as suggested by NAB.

37. With regard to AT&T's concerns over the interpretation of standards, we believe that the ANSI standard on which we propose to rely is reasonably clear as to its applicability. Since we intend to rely on guidelines established and defined by a qualified, non-government, standard-setting organization, we are not in a position to rewrite or modify them. Such guidelines should be self-explanatory, and it will be the responsibility of the applicant to demonstrate compliance with them. However, to avoid confusion our forthcoming bulletin will discuss applicability of the ANSI standard and its interpretation. It should be emphasized that accessibility is a key factor in determining compliance with an exposure standard. Compliance can often be realized by appropriate restrictions on accessibility to the environment surrounding an RF transmitting source.

\*10 38. In the future, it is expected that various standard-setting agencies and organizations will be issuing information on prediction methods and measurement procedures for use in evaluating exposure to RF radiation. For example, ANSI, EPA, and NCRP (see para. 28, supra) are all working separately to develop further documentation on this topic. In the meantime, as noted, the ANSI C95.1-1982 standard incorporates certain measurement guidelines.<sup>[FN26]</sup> Therefore, our reliance on the ANSI standard should address the concerns expressed regarding the need for Commission clarification of measurement procedures.

39. Concerning the problem of multiple transmitters at the same location, if a proposed facility or modification would result in an incremental increase in RF radiation in an accessible area causing overall non-compliance with the specified guidelines, then we can see no practical way to address this situation other than to require an environmental assessment of the proposal. Existing facilities that are not proposing modifications in their operations or are not applying for renewal would not be subjected to NEPA processing under our rules. In the case of renewals at multiple-use sites, all licensees involved will be jointly responsible for resolving problems that may arise relative to exposure to RF radiation. Further guidance on evaluation of multiple-use situations will be provided in the bulletin.

E. Docket 79-163 and Categorical Exclusion

40. Motorola, Inc., although generally supporting the Commission's proposed rule, urged us to incorporate the substance of Docket No. 79-163 into this rulemaking proceeding. Docket 79-163 involves amending the Commission's rules for implementing NEPA so that the rules will be in accordance with the latest directives of the Council on Environmental Quality (CEQ).<sup>[FN27]</sup> In particular, Motorola argued that the "categorical exclusion" principle of the rules proposed in Docket 79-163 should be incorporated here.<sup>[FN28]</sup> According to Motorola, incorporation of the categorical exclusion principle "will most effectively accommodate the likelihood that most applications for equipment authorizations or transmitting facilities will not have a significant affect [sic] on the quality of the human environment and thus be explicitly excluded from the Commission's environmental processing requirements." (emphases in original)

41. The Commission understands the concerns of Motorola regarding this issue. We believe, however, that it is beyond the scope of this present rulemaking proceeding to incorporate into it the substance of Docket No. 79-163. This present proceeding is narrowly limited in both scope and purpose and is designed solely and simply to add an RF radiation criterion to the Commission's environmental processing rules. Docket No. 79-163, on the other hand, is a much broader proceeding which would amend the entire set of Commission rules for implementing NEPA in accordance with revised NEPA regulations issued by the Council on Environmental Quality. We believe this latter proceeding deserves separate, thorough consideration by the Commission. Inclusion of this more extensive proceeding within the confines of the present rulemaking would only confuse the latter's consideration and delay its completion. With regard to Motorola's desire for "categorical exclusion" as proposed in Docket 79-163, we point out that, by establishing a threshold for radiation review under our NEPA procedures in Docket 79-144, we are, in effect, already categorically excluding certain types of transmitting operations and facilities. Moreover, we are proposing in the accompanying Further Notice a broader application of the principle of categorical exclusion.<sup>[FN29]</sup>

**\*11 F. Federal Preemption of Local and State Standards**

42. We continue to be aware that, largely due to the lack of a federal standard, various state and local jurisdictions around the country either have adopted or have proposed standards for exposure of the general public to RF radiation. The issue of federal preemption of such local and state RF standards was a recurring theme in many of the comments. Several of the respondents stressed the need for a federal radiation standard to preempt possibly inconsistent and nonuniform state and local regulation of RF radiation.<sup>[FN30]</sup> Others called for the issuance of a Commission policy statement on federal preemption of state and local RF exposure standards that may adversely affect operations and public availability of interstate telecommunications services.<sup>[FN31]</sup>

43. We have reviewed these comments closely and given the matter serious consideration. However, we do not believe it is necessary at this time to resolve the issue of federal preemption of state and local RF radiation standards.<sup>[FN32]</sup> Should non-federal RF radiation standards be adopted, adversely affecting a licensee's ability to engage in Commission-authorized activities, the Commission will not hesitate to consider this matter at that time.

#### G. Other Issues

44. Various respondents raised a few other issues, mostly dealing with particular operations or exposure situations. For example, the Radio Officers Union (ROU) of the National Marine Engineers' Beneficial Association, AFL-CIO, submitted comments pertinent to the maritime mobile service. Although ROU could foresee no RF hazards associated with conventional maritime radio transmitters and ship radar equipment, the union felt that shipboard satellite earth stations posed a potential hazard that should be promptly addressed by OSHA and the FCC. The ROU stressed that there are presently no safety regulations with regard to both installation and operation of ship earth terminals. According to the ROU, the primary hazard of such equipment results from their antennas frequently being mounted only a few feet above deck level. The union also expressed concern about port operation of satellite equipment with regard to tankers, LNG carriers, ammunition ships, and similar vessels, as well as the potential for exposure of persons standing dockside.

45. Some respondents urged the Commission to exclude certain types of transmitters from consideration under the NEPA processing rules because of the apparent incapacity of these devices to cause potentially hazardous exposure to RF radiation. For example, Motorola mentioned portable radios operating between 300 kHz and 1 GHz with output powers of seven watts or less. NAB suggested an exemption for mobile electronic news gathering ("ENG") equipment used by broadcasters. According to NAB, "these services also pose virtually no health hazard because of the transient nature of the exposure." NAB further urged the Commission to exclude all transmitters with power outputs below ten watts from the environmental assessment rules. Similarly, ARINC urged the Commission to exclude the aeronautical mobile service from consideration under [Section 1.1305](#), and ARRL proposed an exemption for amateur radio.

\*12 46. These issues are important and are of concern to the Commission. Suggestions concerning the placement of antennas and the possible categorical exclusion of specific types of transmitters provide us with useful information that can be used in the development of FCC policy with respect to the evaluation of the environmental impact of Commission actions. Our rule amendment will only apply to transmitting facilities that, in our judgment, could have a significant environmental effect with regard to RF radiation exposure. Other types of transmitters such as those discussed above would be categorically excluded from the provisions of the rule as proposed in our Further Notice.<sup>[FN33]</sup>

47. Another topic mentioned by several respondents was the matter of FCC participation in the rulemaking activities of health and safety agencies such as EPA and OSHA. TVBAC pointed out that one of the original purposes of this docket was to provide documentation the Commission could use in assisting other government agencies in developing RF safety standards that would adequately take into account the impact of standards on FCC regulatees. TVBAC, ABES, and CBS all encouraged the Commission to be an active participant in the proceedings of other federal agencies. To quote TVBAC, "[t]he FCC should actively encourage and assist EPA and OSHA in developing definitive national RF radiation standards with due regard for their effect on publicly important communications services."

48. In this context, it should be noted that the Commission has cooperated with EPA in its development of "Federal Guidance" for public exposure to RF radiation. The Commission has participated in meetings of an interagency working group that was established by EPA to assist it in preparation of its guidelines. The FCC also maintains a liaison relationship with other agencies which may be involved in future standard-setting activities with regard to RF radiation.

#### IV. Conclusions

49. As a result of our consideration of the comments and reply comments received in this proceeding and an analysis of the Commission's statutory obligations, we have come to the following conclusions regarding potential radiofrequency (RF) radiation hazards from FCC-regulated operations and facilities. Although the Commission has neither the expertise nor the authority to develop its own health and safety standards, we are required by the National Environmental Policy Act of 1969 (NEPA), [42 U.S.C. §§ 4321 et seq. \(1976\)](#), to consider whether Commission actions will significantly affect the quality of the human environment, [42 U.S.C. § 4332\(2\)\(c\)](#). For this reason, we are today amending our rules implementing NEPA to provide for assessment under our environmental rules of applications for construction permits or licenses to transmit, including renewals and modifications thereof, which would result in non-compliance with applicable health and safety standards for exposure to RF radiation. Our concern is that any significant impact on the human environment with respect to RF radiation should be taken into account as a part of Commission procedures for approving transmitting facilities and operations.

**\*13** 50. We had originally proposed to evaluate exposure of the population at large on the basis of the advisory guidelines issued by the Occupational Safety and Health Administration (OSHA) for exposure of workers to RF radiation. However, the OSHA radiation protection guide was based on a non-government exposure standard which has since been revised in light of current knowledge of the biological effects of RF radiation. The revised standard is written to apply to both workers and the general public. Several respondents in this proceeding urged us to use this widely recognized RF exposure standard, issued in 1982 by the American National Standards Institute (ANSI), as an interim guideline. Some respondents, including the EPA, expressed concern over our original proposal to use a standard that may not offer sufficient protection for the public with regard to radiation exposure. Additionally, the Office of Management and Budget has encouraged government use of voluntary, non-government standards whenever possible.

51. We believe the fact that there are currently no mandatory federal standards for exposure of the public to RF radiation does not excuse us from our obligations under NEPA to evaluate FCC actions for significant environmental impact. Therefore, we have modified our original proposal by adding a provision for using the revised ANSI standard as a processing guideline for human exposure to RF radiation. The ANSI standard will be the triggering mechanism for environmental assessment in all situations where our rule amendment applies.

52. We believe that applications for transmitting facilities which are in compli-

ance with applicable health and safety standards for RF radiation would not ordinarily have a significant effect on the environment and thus would not fall within our NEPA analytical processes, at least with regard to RF radiation. On the other hand, applications for facilities that are not in compliance with applicable health and safety standards for RF radiation will require a more thorough analysis of their environmental impact.<sup>[FN34]</sup> The amendment to our rules that we are making today will assure that analysis. In our view then, our statutory obligations under NEPA with respect to RF radiation will have been satisfied.

53. Therefore, we are today adding a new paragraph (d) to Subpart I of Part 1 of the Commission's Rules (see Appendix 1).<sup>[FN35]</sup> Under this rule, a narrative environmental statement and processing under our NEPA rules will be required for initial and renewal licensing applications or for applications seeking modifications of existing facilities for the services and facilities listed below if the operation in question would not comply with applicable guidelines for exposure of workers or the general public to radiofrequency radiation. This rule change uses noncompliance with guidelines issued by a widely recognized, non-government organization as the processing trigger for invoking our environmental processing procedures.

**\*14** 54. The rule amendment we are adopting today will initially only apply to actions taken by the Commission with respect to the following facilities authorized by the FCC Rules and Regulations: (1) broadcast facilities authorized under Part 73; (2) broadcast facilities authorized under Part 74 (Subparts A and G only); (3) satellite-earth stations authorized under Part 25; and (4) experimental facilities authorized under Part 5. Based on information received to date in this proceeding, we believe that there is sufficient evidence that transmitting facilities in these categories could possibly create situations in which applicable safety standards for exposure to RF radiation might be exceeded. Because facilities in the above categories may operate with relatively high power levels or may be located in or near accessible areas, such facilities will be subject to this rule amendment and possible NEPA processing.

55. Maximum power limitations for broadcast facilities authorized under Part 73 range from 50 kilowatts (AM radio) to over 5 megawatts (UHF television). Also, for applicable Part 74 facilities there are no limitations on maximum power under Subpart A (experimental broadcast stations), and under Subpart G (low power television) no maximum for effective radiated power is stipulated. Therefore, these various broadcast facilities may operate with effective radiated powers (ERP) of thousands to millions of watts. Since broadcast transmitters are sometimes located in areas that are accessible to workers or the general public, and broadcast stations generally transmit over major portions of a 24 hour day, it is possible that such transmitters could cause exposures in excess of safety standards. Moreover, comments filed previously in this proceeding presented evidence that it is possible for some broadcast facilities to create conditions that might lead to significant human exposure to RF radiation.<sup>[FN36]</sup>

56. Transmitting satellite-earth stations authorized under Part 25 of the FCC Rules and Regulations operate with very high ERPs. However, the high degree of directionality of the transmitted beam makes excessive exposure unlikely. Our experi-

ence over the past several years in this area and on-site measurements have demonstrated that normal design and operating practice make it highly unlikely that workers or the general public would be exposed to excessive levels of RF radiation from these facilities. Nevertheless, we believe it necessary to subject these facilities to the provisions of this rule because of the high amounts of RF energy involved. Similarly, experimental facilities authorized under Part 5 may operate with relatively high power levels, and, therefore, will be subject to this rule amendment.

57. It should be noted at this point that we have already been reviewing radiation hazards of land based satellite-earth stations as part of our domestic satellite-earth station licensing process since our 1972 Memorandum Opinion and Order in Docket No. 16495.<sup>[FN37]</sup> Since the rule amendment we adopt today will be applicable to satellite-earth stations authorized under Part 25 of the FCC Rules, it will supersede the 1972 action.

**\*15** 58. With regard to other categories of FCC-regulated operations and facilities, because of relatively low operating power levels, intermittent use, or relative inaccessibility, it appears unlikely that they would cause exposure in excess of safety standards during routine use. Therefore, we are today also issuing a Further Notice of Proposed Rule Making<sup>[FN38]</sup> in which we propose to exclude from the provisions of this rule other transmitting facilities and sources which are not included in the categories listed above. Through this Further Notice we are soliciting information, comments, opinions, and suggestions relevant to the legitimacy of this proposed categorical exclusion. Comments received in response to this Further Notice will be used to determine whether further revisions are necessary at this time in the FCC's rules with respect to this issue and whether there are other RF sources and transmitting facilities which should be subject to this rule amendment. As discussed in note 34, supra, even though we are proposing to exclude a large number of Commission actions from consideration under this rule, the Commission "on its own motion or on motion of any interested person, may determine that the environmental consequences of a particular action are such as to warrant preparation of an environmental impact statement." See [§ 1.1305\(c\)](#) of the FCC Rules and Regulations.

59. In our Further Notice we are also proposing the inclusion of shipboard-satellite earth stations, authorized under Part 83, Subpart AA, of the FCC Rules and Regulations, in the category of facilities to which our rule amendment would apply. We believe that, because of the relatively high effective radiated power of ship-satellite earth stations, and because of the questions regarding safety raised by the ROU, an environmental analysis of some of these transmitters may be necessary. Even though the transmitted beams from these antennas are highly directional, there may be reason to be concerned over the possibility of excessive exposure. However, we point out that at this time the inclusion of these facilities is only a proposal, and we believe that a complete record in support of this action is needed. We invite comment on this proposal.

60. Regarding paperwork burden, it should be noted that most applicable FCC forms already incorporate, or will be modified to incorporate, a short provision inquir-

ing as to whether the application would constitute a major action under our NEPA rules. This check-off procedure will still be applicable with regard to the amended rule. Moreover, we believe that the overwhelming majority of applications to the Commission will not be subject to environmental impact analysis as provided for in our NEPA rules and by this amendment.

61. While we are aware of the adoption of standards in this area by local and state authorities, we do not believe it is necessary at this time to resolve the issue of federal preemption of state and local RF radiation standards. Should non-federal standards be adopted, adversely affecting a licensee's ability to engage in Commission-authorized activities, the Commission will not hesitate to consider this matter at that time.

**\*16** 62. In summary, because of the requirements of the National Environmental Policy Act, we are adopting an amendment to Part 1 of our rules which will enable the Commission to consider whether its actions will significantly affect "the quality of the human environment" with respect to human exposure to radiofrequency radiation. At the present time we will rely on provisions of the ANSI RF radiation standard as a processing guideline to evaluate applications under our environmental processing rules. We believe that our use of the widely recognized ANSI standard will, at this time, best meet our obligations under NEPA for environmental analysis of exposure to RF radiation.

#### V. Regulatory Flexibility Act Final Analysis <sup>[FN39]</sup>

##### A. Reason for action

The Commission has considered comments received in response to its Notice of Proposed Rule Making in Docket 79-144. The comments received generally support the view that a clarification of Commission responsibilities is required to avoid confusion among those entities regulated by the Commission regarding their own responsibilities with respect to potential hazards of radiofrequency (RF) radiation. Furthermore, the National Environmental Policy Act of 1969 (NEPA), [42 U.S.C. §§ 4321 et seq. \(1976\)](#), requires the Commission to consider whether the facilities and operations it licenses or authorizes will significantly affect "the quality of the human environment." For these reasons, we are amending our rules implementing NEPA to address situations involving non-compliance with standards for exposure to RF radiation.

##### B. The objective

The Commission is amending its rules implementing NEPA in order to clarify its policy with regard to potential hazards from RF radiation emitted by transmitting facilities that we license or authorize and to comply with our legal obligations under NEPA.

##### C. Legal basis

This action is based on the obligations imposed on the Commission by NEPA, *supra*, and is in furtherance of §§ 4(i), 4(j), and 303(r) of the Communications Act of 1934, as amended, [47 U.S.C. §§ 154\(i\), 154\(j\) and 303\(r\) \(1978\)](#). These provisions permit the Commission to make rules and regulations not inconsistent with other ex-

isting laws, "as may be necessary in the execution of its functions," and "to carry out the provisions of" the Communications Act.

D. Description, potential impact and number of small entities affected

It is expected that there will be no significant impact on most small entities that the FCC regulates. Small entities that may be in violation of present or future health and safety standards for RF radiation could be affected because of corrective actions that might be necessary to bring them into compliance. However, we believe that the great majority of the facilities licensed or authorized by the Commission will be in compliance with the indicated radiation guidelines.

E. Recording, recordkeeping, and other compliance requirements

No specific record-keeping requirements are contained in the new rules. Certain applicants for construction permits, licenses, renewals, and facility modifications may be expected to show compliance with an RF radiation exposure standard. "Major actions," as defined under our NEPA rules, will include facilities not in compliance with provisions of standard C95.1-1982 recommended by the American National Standards Institute. Applicants for construction permits, licenses to transmit or renewals thereof, or modifications to existing facilities must notify the Commission when the operation in question would not comply with the provisions of the guidelines indicated in [Section 1.1305\(d\)](#) and indicate what corrective measures or precautions will be taken to assure compliance. Such notice can be provided through applicable FCC forms which already incorporate, or will be modified to incorporate, a short provision inquiring as to whether particular applications constitute a "major action" under our NEPA rules.

\*17 F. Federal rules which overlap, duplicate, or conflict with these rules

There are none of which we are aware. This action is designed to bring our rules into compliance with the provisions of NEPA, as well as to inform our regulatees what the Commission expects of them with regard to RF radiation exposure. We are pointing to existing or future standards and regulations which may apply to our regulatees, and no overlap or duplication is foreseen.

G. Any significant alternative minimizing impact on small entities and consistent with the stated objective

Because of our legal obligations under NEPA, we believe it necessary to amend our rules to address the environmental impact of RF radiation emitted from transmitting facilities we authorize. We see no reasonable alternative to this action, and the new rule appears to offer the most logical approach to assure compliance with applicable standards. There are alternative ways of addressing this issue. For example, we might have considered adopting our own radiation standards independent of those set by other agencies. Such standards could conceivably have less impact (or more) on small entities. However, we believe that we have neither the expertise nor the authority to set health and safety standards, and we choose to defer to other agencies or a qualified non-government organization in establishing safe levels for RF radiation. We might also have chosen to take no action at all. However, this would be inadvisable for at least two reasons. First, we are legally obligated under NEPA to determine whether Commission "major actions" significantly affect "the quality of the human environment." Secondly, we believe that

our regulatees desire and expect us to clarify our mutual responsibilities in this important area of growing public concern.

#### VI. Ordering Clauses

ACCORDINGLY, IT IS ORDERED that, effective October 1, 1985, Part 1 of the Commission's Rules and Regulations, 47 C.F.R. Part 1, IS AMENDED as set forth in Appendix 1, and that the amendment will be applicable to applications filed on or after this effective date. This action is taken pursuant to the provisions of [Sections 4\(i\), 4\(j\), and 303\(r\)](#) of the Communications Act of 1934, as amended, [47 U.S.C. §§ 154\(i\), 154\(j\) and 303\(r\)](#), and [Section 553](#) of the Administrative Procedure Act, [5 U.S.C. § 553](#).

Further information on this matter may be obtained by contacting Dr. Robert Cleveland, Office of Science and Technology, (202) 632-7040, or Mr. Stephen Klitzman, Office of General Counsel, (202) 632-6405.

FEDERAL COMMUNICATIONS COMMISSION

WILLIAM J. TRICARICO, Secretary

FN1. Notice of Inquiry, General Docket No. 79-144, 44 [Fed.Reg. 37008 \(1979\)](#), 72 [F.C.C.2d 482 \(1979\)](#).

FN2. [42 U.S.C. §§ 4321 et seq. \(1976\)](#).

FN3. Notice of Proposed Rule Making, General [Docket No. 79-144](#), 47 [Fed.Reg. 8214 \(1982\)](#), 89 [F.C.C.2d 214 \(1982\)](#). See also 47 [Fed.Reg. 10871 \(1982\)](#) and 47 [Fed.Reg. 27384 \(1982\)](#) (Correction and Order Extending Time for Filing Comments and Reply Comments).

FN4. See 42 U.S.C. § 4322(2)(c) (1976). See also NOI, supra note 1, at para. 12-13; NPRM, supra note 3, at para. 11; [State of Alaska v. Andrus](#), 591 F.2d 537, 540-41 (1979), quoting [Natural Resources Defense Council, Inc. v. Morton](#), 388 F.Supp. 829, 834 (D.D.C.1974), aff'd mem., 527 F.2d 1386 (D.C.Cir.), cert. denied, 427 U.S. 913 (1976). ("The term 'actions' refers not only to actions taken by federal agencies; but also to decisions made by the agencies such as the decision to grant a license, which allows another party to take an action affecting the environment.") Under NEPA, each federal agency is required to prepare a detailed environmental impact statement for any "major" action it takes "significantly affecting the quality of the human environment." [42 U.S.C. § 4332\(2\)\(c\)](#). Such a statement need not be prepared whenever the agency can satisfy itself that its proposed action will not significantly affect the environment. The NEPA guidelines issued by the Council on Environmental Quality (CEQ) also permit agencies to exclude categorically from NEPA processing those actions "which do not individually or cumulatively have a significant effect on the human environment ..." [40 C.F.R. § 1508.4 \(1980\)](#). Even when a proposed action does have a significant effect on the human environment, that action may still be taken if the benefits of the action outweigh

the environmental consequences. NEPA requires only that the benefits be weighed against the costs in any environmental assessment or environmental impact statement.

FN5. See [Calvert Cliffs' Coordinating Committee, Inc. v. United States A.E. Com'n.](#), 449 F.2d 1109, 1115 (D.C.Cir.1971).

FN6. See [Natural Resources Defense Council, Inc. v. S.E.C.](#), 432 F.Supp. 1190, 1207-1208 (D.C.D.C.1977), rev'd on other grounds, 606 F.2d 1031 (D.C.Cir.1979), citing S.Rpt. No. 91-296, 91st Cong., 1st Sess. 18-19 (1969).

FN7. See [29 C.F.R. § 1910.97\(a\)\(2\)](#). The OSHA guide recommended that exposure not exceed a power density of 10 milliwatts per square centimeter ( $\text{mW}/\text{cm}^2$ ) or the mean-squared electric field strength and mean-squared magnetic field strength equivalents of 40,000 volts squared per meter squared or 0.25 amperes squared per meter squared, respectively, averaged over any six-minute period. These OSHA guidelines were not developed by OSHA itself, but, rather, represented a direct adoption by OSHA of a preexisting standard developed by a non-government, independent organization, the American National Standards Institute (ANSI). (See para. 24, *Infra*.)

FN8. See [47 Fed.Reg. 23477 \(1982\)](#).

FN9. See [49 Fed.Reg. 5318 \(1984\)](#).

FN10. ANSI C95.1-1982 (revision of ANSI C95.1-1974). Copyright 1982 by the Institute of Electrical and Electronics Engineers, Inc., New York, N.Y. 10017. The ANSI protection guides recommend various time-averaged values for safe exposure in five different frequency bands. Recommended equivalent plane-wave, free-space power density levels are 100 milliwatts per square centimeter ( $\text{mW}/\text{cm}^2$ ) for 300 kHz to 3 MHz, 1  $\text{mW}/\text{cm}^2$  for 30-300 MHz, and 5  $\text{mW}/\text{cm}^2$  for 1500 MHz to 100 GHz, with transitional levels in the intervening frequency bands. Copies of the ANSI recommendations are available from the American National Standards Institute, 1430 Broadway, New York, N.Y. 10018 or from: Standard Sales-IEEE, 445 Hoes Lane, Piscataway, N.J. 08854.

FN11. See Office of Management and Budget, "Final [Issuance of OMB Circular No. A-119, 'Federal Participation in the Development and Use of Voluntary Standards'](#)", [47 Fed.Reg. 49496 \(1982\)](#).

FN12. See GTE Comments, at 5, citing Commission Rules, § 73.317(g)(1)(ii), incorporating the National Electrical Code.

FN13. *Id.*, citing [Order Terminating Proceeding in Docket No. 21371, released August 6, 1982 \(FCC 82-359\)](#) (Commission terminated docket proceeding to develop standards for RF test sites partially because ANSI was creating such a standard.) See also the NOI in this proceeding, *supra* note 1, at para. 9, citing previous Commission reliance on an earlier OSHA/ANSI RF radiation standard.

FN14. See [47 Fed.Reg. 57338 \(1982\)](#).

FN15. See NPRM, note 3, *supra*.

FN16. See note 10, *supra*.

FN17. See [29 C.F.R. § 1910.99](#), "Source of standards," identifying the basis for OSHA's RF radiation guide.

FN18. See note 4, *supra*.

FN19. "Interim Guidelines on Limits of Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 100 kHz to 300 GHz," published in *Health Physics*, Vol. 46, No. 4, pp. 975-984 (April 1984).

FN20. See, e.g., [Metropolitan Edison Co. v. People Against Nuclear Energy, 460 U.S. 766, 775 \(1983\)](#) ("The federal action that affects the environment in this case is permitting renewed operation of [the Three Mile Island-1 nuclear reactor].") (emphasis added); [People vs. Nuclear Energy vs. Nuclear Regulatory Commission, 678 F.2d 222, 231 \(D.C.Cir.1982\)](#) (The "'major federal action' in the case of TMI-1 is ... the Commission's continued exercise of supervisory responsibility over its operation and maintenance."). See also [Far East Broadcasting Co., Inc., 65 F.C.C.2d 496 \(1977\)](#) (FCC denied petition opposing license renewal on basis of alleged radiation effects.)

FN21. See, e.g., [40 C.F.R. § 1508.18 \(1978\)](#) defining "major Federal actions" to "include new and continuing activities." See also [Lee v. Resor, 348 F.Supp. 389, 395 \(M.D.Fla.1972\)](#) (citing CEQ guidelines applying NEPA requirements to continuing programs or activities.)

FN22. See, e.g., [Lathan v. Volpe, 455 F.2d 1111, 1116, 1121 \(9th Cir.1971\)](#) (NEPA does not apply retroactively, but is applicable to continuing or ongoing federal projects, including those commenced prior to January 1, 1970, the effective date of the NEPA statute); [40 C.F.R. § 1502.9\(c\)\(1\)\(ii\)](#), the CEQ regulation requiring agencies to modify environmental analyses in order to take into account "significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impact;" [Scientists' Institute for Public Information, Inc. v. AEC, 481 F.2d 1079, 1088 \(1973\)](#); [Monarch Chemical Works, Inc. v. Exxon, 452 F.Supp. 493 \(D.C.Neb.1978\)](#), *aff'd* [604 F.2d 1083 \(8th Cir.1979\)](#); [Bennett v. Taylor, 505 F.Supp. 800 \(D.C.La.1980\)](#).

FN23. Although both the NEPA statute and the accompanying legislative history are silent on grandfathering, the legislative intent is explicit in its enunciation of concern for ongoing environmental quality, a value which will be endangered by, and inconsistent with, grandfathering of facilities despite possibly changing environmental circumstances and standards. Consider for example, the situation of an FM radio facility first licensed under one RF exposure standard in 1985. When it comes up for renewal seven years later, the application should be examined in the

light of current environmental circumstances and RF exposure standards in 1992 in order to protect both environmental quality and the public health and safety at that time. Grandfathering such a facility in 1985, however, would preclude such an examination.

FN24. See, e.g., [40 C.F.R. § 1508.18](#) defining "major Federal actions."

FN25. See, e.g., Comments of Motorola, Inc., the NAB, and the TVBAC, para. 11-13, *supra*.

FN26. See ANSI C95.3-1973, "American National Standard Techniques and Instrumentation for the Measurement of Potentially Hazardous Electromagnetic Radiation at Microwave Frequencies" and ANSI C95.5-1981, "American National Standard Recommended Practice for Measurement of Hazardous Electromagnetic Fields—RF and Microwave." Both publications are available from ANSI. See note 10, *supra*, for address.

FN27. See [44 Fed.Reg. 38913 \(1979\)](#).

FN28. The CEQ guidelines allow agencies to identify actions which do not normally have a significant effect on the quality of the human environment and to "categorically exclude" such actions from environmental processing requirements. See 40 C.F.R. §§ 1500-1508, *et seq.*

FN29. See para. 58, *infra*, for discussion of our proposal regarding categorical exclusion.

FN30. See, e.g., Comments and Reply Comments of the American Radio Relay League (ARRL), and CBS, Inc.

FN31. See, e.g., Comments and Reply Comments of the TVBAC, and NAB, and Thomas C. Agoston.

FN32. To our knowledge, only Portland and Multnomah County, Oregon, the Commonwealth of Massachusetts, the state of New Jersey, and the New York Port Authority have adopted RF radiation standards concerning general population exposure. The New York Port Authority standard applies solely to facilities transmitting from the World Trade Center in New York City. A few other states are also considering the adoption of RF radiation exposure standards. For further details of these state and local actions, see comments or reply comments filed in this proceeding by the American Radio Relay League, the Association for Broadcast Engineering Standards, Inc., the National Association of Broadcasters, and the TV Broadcasters All Industry Committee.

FN33. See para. 58, *infra*.

FN34. It should also be noted that under the Commission's present rules implementing NEPA, the Commission may, on its own motion or on the motion of an interested person, decide that the preparation of an environmental impact statement is war-

ranted. [47 C.F.R. § 1.1305\(c\) \(1977\)](#). See also [47 C.F.R. § 1.1313\(b\)\(2\)](#) with regard to staff responsibility for preparing a draft environmental impact statement.

FN35. The final language of the rule we are issuing has been modified from the text of the proposed rule in several respects, all of which, we believe, are within the scope of our original NPRM. We have modified the proposed rule so that it will only apply to certain services and have added a note to that effect. We have clarified the introductory clause to make clear that we are adding to the "major actions" listed in paragraph (a) and to the provisions of paragraph (c) of [Section 1.1305](#) of the Commission's NEPA rules. We have deleted the proposed paragraph dealing with emission standards for RF radiation since the only applicable standard would be the one established for microwave ovens by the Food and Drug Administration, and no evidence has been presented that microwave ovens constitute a hazard to the public from RF radiation. We have added language to clarify the applicability of this rule to license renewals and modifications of existing facilities, as fully explained in para. 29-31, supra. We have revised the language in paragraph (d) to incorporate by reference into our NEPA processing rules the ANSI standard, C95.1-1982. Finally, we have deleted reference to federal standards or guidelines in order to allow for flexibility in our consideration of the applicability of such standards or guidelines to our statutory obligations under NEPA.

FN36. See NPRM, note 1, supra, at para. 19, 39-43, 95-96.

FN37. See In the [Matter of Establishment of Domestic Communications-Satellite Facilities by Non-Government Entities](#), 38 F.C.C.2d 665, 700-704 (1972).

FN38. Further Notice of Proposed Rule Making, Gen.Docket 79-144, Fed.Reg. (1985).

FN39. This analysis is made pursuant to the provisions of the Regulatory Flexibility Act of 1980, [5 U.S.C. § 603](#).

\*18 Appendix 2—may be seen in the FCC Dockets Branch, 1919 M Street, N.W., Washington, D.C.

#### Amendment of Part 1

#### Appendix 1

Subpart I, Part 1, Chapter 1 of Title 47 of the Code of Federal Regulations is amended by adding a new paragraph (d) to [Section 1.1305](#) to read as follows:

#### [Section 1.1305](#) Major actions

\* \* \*

(d) In addition to the actions listed in paragraph (a) and to the provisions of paragraph (c) of this section, and notwithstanding the provisions of paragraph (b) of this section, Commission actions granting construction permits, licenses

to transmit or renewals thereof, or Commission actions authorizing modifications in existing facilities, will be treated as major actions if the facility or operation in question would result in exposure of workers or the general public to levels of radiofrequency radiation in excess of the "Radio Frequency Protection Guides" recommended in "American National Standard Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz," (ANSI C95.1-1982), issued by the American National Standards Institute (ANSI), 1430 Broadway, New York, New York 10018, and copyright 1982 by the Institute of Electrical and Electronics Engineers, Inc., 345 East 47th Street, New York, New York 10017.

Note: The provisions of paragraph (d) shall only apply to facilities and services licensed or authorized under Parts 5, 25, 73, and 74 (Subparts A and G only) of the FCC Rules and Regulations.

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57 Rad. Reg. 2d (P & F) 1280, 100 F.C.C.2d 543, 1985 WL 260091 (F.C.C.)  
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