

FOR FURTHER INFORMATION CONTACT:

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SUPPLEMENTARY INFORMATION: This final rule has been reviewed under Secretary's Memorandum 1512-1 and Executive Order 12291, and has been designated a "non-major" rule. William T. Manley, Deputy Administrator, Agricultural Marketing Service, has certified that this action will not have a significant economic impact on a substantial number of small entities.

This final rule is issued under Marketing Order No. 910, as amended (7 CFR Part 910) regulating the handling of lemons grown in California and Arizona. The order is effective under the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601-674). The action is based upon recommendations and information submitted by the Lemon Administrative Committee and upon other available information. It is found that this action will tend to effectuate the declared policy of the Act.

This action is consistent with the marketing policy currently in effect. The committee met publicly on December 11, 1984, at Redlands, California, to consider the current and prospective conditions of supply and demand and recommended a quantity of lemons deemed advisable to be handled during the specified week. The committee reports that lemon demand is good.

It is further found that it is impracticable and contrary to the public interest to give preliminary notice, engage in public rulemaking, and postpone the effective date until 30 days after publication in the *Federal Register* (5 U.S.C. 553), because of insufficient time between the date when information became available upon which this regulation is based and the effective date necessary to effectuate the declared purposes of the Act. Interested persons were given an opportunity to submit information and views on the regulation at an open meeting. It is necessary to effectuate the declared purposes of the Act to make these regulatory provisions effective as specified, and handlers have been apprised of such provisions and the effective time.

List of Subjects in 7 CFR Part 910

Marketing agreements and orders, California, Arizona, Lemons.

PART 910—[AMENDED]

Section 910.794 is added as follows:

§ 910.794 Lemon Regulation 494.

The quantity of lemons grown in California and Arizona which may be handled during the period December 16, 1984, through December 22, 1984, is established at 250,000 cartons.

(Secs. 1-19, 48 Stat. 31, as amended; 7 U.S.C. 601-674)

Dated: December 12, 1984.

Thomas R. Clark,

Deputy Director, Fruit and Vegetable Division, Agricultural Marketing Service.

[FR Doc. 84-32746 Filed 12-13-84; 8:45 am]

BILLING CODE 3410-02-M

CONSUMER PRODUCT SAFETY COMMISSION**16 CFR Part 1610****Standard for the Flammability of Clothing Textiles; Revocation of Definition**

AGENCY: Consumer Product Safety Commission.

ACTION: Final rule.

SUMMARY: The Commission issues a final rule to revoke 16 CFR 1610.31(k), defining the term "initial test" for purposes of administrative and enforcement rules implementing the Standard for the Flammability of Clothing Textiles (16 CFR Part 1610). The Commission is revoking the rule defining "initial test" because that term is no longer used in the administrative and enforcement rules as a result of a recent amendment of Part 1610.

EFFECTIVE: This revocation will become effective on January 14, 1985.

FOR FURTHER INFORMATION CONTACT: Elizabeth Gomilla, Division of Regulatory Management, Consumer Product Safety Commission, Washington, D.C. 20207; telephone: (301) 492-6400.

SUPPLEMENTARY INFORMATION: Elsewhere in this issue of the *Federal Register*, the Consumer Product Safety Commission issues a final amendment of 16 CFR 1610.37, which prescribes requirements for testing to support guaranties of products, fabrics, and related materials subject to the Standard for the Flammability of Clothing Textiles (16 CFR Part 1610). The notice issuing the final amendment discusses issues raised by written comments on the Commission's proposal to amend the rule, and the Commission's resolution of those issues.

The notice proposing the amendment of 16 CFR 1610.37 was published in the *Federal Register* of August 12, 1982 (47 FR 35006). In that notice, the

Commission observed that if the proposed amendment of § 1610.37 is issued on a final basis, the term "initial test," as defined in § 1610.31(k) will no longer be used in the enforcement rules implementing the clothing textiles flammability standard. For that reason, in the notice of August 12, 1982, the Commission also proposed to revoke § 1610.31(k), defining the term "initial test."

The amendment of § 1610.37 has been issued on a final basis. For that reason, the Commission is publishing this notice to revoke § 1610.31(k).

List of Subjects in 16 CFR Part 1610

Clothing, Consumer protection, Flammable materials, Textiles, Warranties, Records.

Therefore, in accordance with provisions of the Flammable Fabrics Act (sec. 5, Pub. L. 90-189, 81 Stat. 569 (15 U.S.C. 1194)) and the Consumer Product Safety Act (sec. 30, Pub. L. 92-573, 86 Stat. 1231 (15 U.S.C. 2079)), the Commission hereby amends the Code of Federal Regulations, Title 16, Chapter II, Subchapter B, as follows:

PART 1610—STANDARD FOR THE FLAMMABILITY OF CLOTHING TEXTILES**§ 1610.31 [Amended]**

Part 1610, Subpart B is amended by revoking, removing, and reserving § 1610.31(k).

(Sec. 5, Pub. L. 90-189, 81 Stat. 569, 15 U.S.C. 1194; sec. 30, Pub. L. 92-573, 86 Stat. 1231, 15 U.S.C. 2079)

Dated: December 7, 1984.

Sadye E. Dunn,

Secretary, Consumer Product Safety Commission.

[FR Doc. 84-32479 Filed 12-13-84; 8:45 am]

BILLING CODE 6355-01-M

16 CFR Part 1610**Standard for the Flammability of Clothing Textiles; Requirements for Testing and Recordkeeping To Support Guaranties**

AGENCY: Consumer Product Safety Commission.

ACTION: Final rules.

SUMMARY: The Commission issues final amendments of regulations which prescribe requirements for testing to support guaranties of products, fabrics, and related materials subject to the Standard for the Flammability of

Clothing Textiles.¹ These amendments provide that each person or firm issuing guaranties of items subject to the standard shall devise and implement a program of reasonable and representative tests to support those guaranties, but do not prescribe any specific requirements for the number or frequency of tests. The Commission is issuing these amendments because it concludes that existing requirements for testing to support guaranties of items subject to the Standard can be made less burdensome to the regulated industry without diminishing the level of safety afforded to the public. The Commission also withdraws a proposal to reduce the period required for retention of records of testing to support guaranties from three years to one year. Although enforcement of the Standard would not be hindered by that proposal, the Commission acknowledges that such a change could increase the difficulty of enforcing requirements applicable to issuance of guaranties of items subject to the Standard, and would provide little if any reduction in burden to persons and firms issuing those guaranties.

EFFECTIVE DATE: The amendments will become effective on January 14, 1985.

FOR FURTHER INFORMATION CONTACT: Elizabeth Gomilla, Division of Regulatory Management, Consumer Product Safety Commission, Washington, D.C. 20207; telephone (301) 492-6400.

SUPPLEMENTARY INFORMATION: The Standard for the Flammability of Clothing Textiles (the Standard, 16 CFR Part 1610) and the Flammable Fabrics Act (FFA, 15 U.S.C. 1191 *et seq.*) requires that articles of wearing apparel and fabrics used or intended for use as clothing textiles must not exhibit "rapid and intense burning" when tested in accordance with the Standard.

The manufacture for sale, importation into the United States, or introduction in commerce of any item of wearing apparel or fabric which is subject to the Standard and which exhibits "rapid and intense burning" when tested in accordance with the Standard violates section 3 of the FFA (15 U.S.C. 1192) and section 5 of the Federal Trade Commission Act (15 U.S.C. 45). Such a violation may give rise to an administrative order to cease and desist from further violation of the FFA and the FTCA, as well as to a civil action in a United States District Court under provisions of the FFA for injunction or

seizure of items which fail to comply with an applicable standard of flammability.

In addition to seeking an administrative order, or initiating civil actions for violation of the Standard, the FFA, and the FTCA, the Commission may also proceed under section 7 of the FFA (15 U.S.C. 1196) to seek criminal penalties against any person who "willfully" violates the FFA.

Section 8(a) of the FFA (15 U.S.C. 1197(a)) provides that no person shall be subject to criminal prosecution under section 7 of the FFA if that person establishes a guaranty received in good faith which meets all requirements set forth in section 8 of the FFA. A guaranty does not provide the holder any defense to an administrative action for an order to cease and desist from further violation of the applicable standard, the FFA, and the FTCA; nor to any civil action for injunction or seizure brought under the FFA.

Requirements for Guaranties

Section 8 of the FFA provides for two types of guaranties. The first is an initial guaranty, which must be based on "reasonable and representative tests" made in accordance with the applicable standard of flammability issued under the FFA. The second is a guaranty based on a guaranty, received in good faith, to the effect that reasonable and representative tests made in accordance with the applicable standard show conformance with that Standard.

Requirements for the types and amounts of testing deemed to be "reasonable and representative" for purposes of supporting initial guaranties of items subject to the Standard appear in regulations implementing the Standard at § 1610.37. Requirements for maintenance of records of testing to support guaranties appear at § 1610.38.

Section 8(b) of the FFA (15 U.S.C. 1197(b)) prohibits the issuance of a false guaranty.

Review of Standard

Although the FFA and the Standard do not require any person or firm to issue guaranties, information available to the Commission indicates that approximately 1,000 firms conduct testing each year to support initial guaranties of items subject to the Standard. That information also indicates that on the average, each of these firms conducts approximately 100 tests, for an industry total of about 100,000 tests each year. (1,7)²

During fiscal year 1982, the Commission staff reviewed the Standard and implementing regulations to determine if any burden which they may impose on the textiles industry could be eliminated or reduced, without decreasing the level of safety available to consumers. Among the alternatives considered by the staff were the following:

1. Revocation of the Standard and implementing regulations.
2. Simplification of the test procedures in the Standard.
3. Revision of the regulations implementing the Standard which prescribe the frequency of testing required to support guaranties.
4. Revision of the regulations implementing the Standard which prescribe requirements for maintenance of records of testing to support guaranties.

The staff prepared a memorandum describing its review of the Standard and implementing regulations and setting forth recommendations for revisions of the implementing regulations intended to reduce the burden imposed by the Standard on the regulated industry without diminishing the level of safety afforded to consumers. (1)

Staff Recommendations

The staff recommended against revocation of the Standard after concluding that the Standard is still needed to protect the public from risks of injury and death which might otherwise result from garments made from fabrics which are dangerously flammable because of rapid and intense burning. (1, 4, 5, 6)

With regard to the possibility of simplifying the test procedures in the Standard, the staff observed that issuance of an administrative rule to allow use of alternate apparatus and procedures for testing to support guaranties of fabrics and garments subject to the Standard could result in a significant reduction of the burden then imposed on the textile industry by the Standard and implementing regulations. (1, 8) In the *Federal Register* of May 17, 1982 (47 FR 21081), the Commission proposed a rule to allow persons and firms performing testing to support guaranties to use apparatus and procedures other than the ones specified in the Standard, provided that the apparatus or procedure is as stringent

¹ Vice-Chairman Sandra Brown Armstrong dissented on the basis of her vote against issuance of the amendment of 16 CFR 1610.37(c) published in this notice.

² Numbers in parentheses identify reference documents listed in the Bibliography at the end of this notice. Requests for inspection of any of these

documents should be made at the Commission's public reading room, 1111 18th Street, NW., 8th Floor, Washington, D.C., or by calling the Office of the Secretary at (301) 492-6800.

as, or more stringent than, the apparatus and procedure prescribed by the Standard. That rule was issued on a final basis on May 12, 1983 (48 FR 21310) and is codified at 16 CFR 1610.40.

The staff memorandum recommended revision of § 1610.37 of the regulations implementing the Standard to allow persons and firms greater flexibility to determine the amounts and frequency of testing to support guaranties of items subject to the Standard. (1, 4, 6) Before issuance of the amendments published below, that section set forth a schedule for the amounts and frequency of testing deemed to be "reasonable and representative" for purposes of supporting guaranties. The staff also recommended revision of § 1610.38 of the regulations to reduce the period required for maintenance of records of testing to support guaranties from three to one year. (1, 6)

After consideration of the staff memorandum and an informational briefing, the Commission voted to propose revision of §§ 1610.37 1610.38 in the manner recommended by the staff memorandum.

Proposed Amendments

In the Federal Register of August 12, 1982 (47 FR 35006), the Commission proposed amendment of the rules implementing the Standard to replace the schedule of testing established by § 1610.37 with a requirement that each person or firm issuing an initial guaranty of a product, fabric, or related material which is subject to the Standard shall support that guaranty with a "program of reasonable and representative test." (12)

Section 1610.37(c)(2) of the proposal stated that the number and frequency of tests which comprise such a program of reasonable and representative tests shall be left to the discretion of the person or firm issuing the initial guaranty. However, proposed § 1610.37(c)(2) provided that a "program of reasonable and representative tests" requires at least one test with results demonstrating conformance with the Standard for the item which is the subject of an initial guaranty. (12)

Proposed § 1610.37(c)(3) contained provisions allowing a program of reasonable and representative tests to support an initial guaranty to include tests of a fabric or related material of the same class of fabrics for related materials as the one which is the subject to an initial guaranty. The provisions of the proposal relating to class tests were similar to provisions in former § 1610.37, and did not impose any new restriction or limitation on the use of class tests to support guaranties. (12)

In addition to allowing persons and firms issuing initial guaranties greater discretion to devise and implement testing programs to support those guaranties, § 1610.37(d) of the proposal contained provisions to exempt certain types of fabrics from any requirements for further testing to support guaranties because those types of fabrics consistently yield acceptable results when tested in accordance with the Standard. The types of fabrics proposed for exemption from requirements for further testing to support guaranties were:

(1) All plain surface fabrics weighing 2.6 ounces or more per square yard, regardless of fiber content;

(2) All fabrics made entirely from acrylic, modacrylic, nylon, olefin, or polyester fibers, or entirely from combinations of those fibers, both plain surface and raised-fiber surface, regardless of weight.

The proposal acknowledged that this list may not include all fabrics which consistently yield acceptable results when tested in accordance with the Standard and solicited comments concerning other types of fabrics which may be eligible for exemption from testing to support guaranties. (12)

The Commission also proposed amendment of § 1610.38(d) of the regulations to reduce the period required for retention of records of testing to support guaranties from three years to one year. The proposal expressed the Commission's belief that such change might reduce the burden on the regulated industry to some extent without unduly hindering activities to enforce the Standard and implementing regulations. (12)

Comments on Proposal

In response to the proposal of August 12, 1982, the Commission received written comments from three manufacturers, seven trade associations, and one consumer group.

Comments from three manufacturers and six trade associations favored issuance of final amendments based on the proposal. (13, 14, 15, 16, 18, 19, 20, 22, 23) Comments from a consumer group and one trade association opposed issuance of final amendments. (17, 21)

Those comments and a staff briefing package concerning the proposed amendments (11) were considered by the Commission. At a meeting on September 22, 1983, to consider issuance of final amendments based on the proposal, the Commission expressed concern that consumer groups may not have been aware of or may not have fully understood the proposal for amendment of the guaranty testing rules.

Although the notice of proposal contained a certification that the proposed amendments, if issued on a final basis, would not have a significant economic impact on a substantial number of small businesses, the Commission also expressed concern at that meeting that many small businesses and associations representing such firms may have been unaware of the proceeding for amendment of the guaranty testing rules.

The Commission directed the staff to contact individuals and groups representing the interests of consumers and small businesses to ensure that they were aware of the proceeding and their opportunity to comment on the proposal. (29, 31)

After the meeting on September 22, 1983, the consumer group submitted an additional comment concerning the effect of the proposed amendments on small businesses. (30)

In the Federal Register of December 14, 1983, the Commission published a notice to reopen the period for receipt of written comments on the proposed amendments. (33) In response to the notice of December 14, 1983, the Commission received ten comments. These comments were submitted by a county consumer affairs office (35); four consumer organizations (36, 39, 40, 43); two foundations concerned with treatment of accident victims (38, 42); a textile manufacturer (41); and two trade associations (37, 44). Some of these comments were from parties who had submitted comments in response to the proposal of August 12, 1983.

The issues raised by all comments concerning the proposal, and the Commission's response to the comments are discussed below.

Requirements for Testing

Comments favoring the proposal to replace the schedule for testing to support guaranties with provisions allowing each person or firm issuing an initial guaranty to devise and implement a program of reasonable and representative tests to support those guaranties state that such a change will provide greater flexibility to persons and firms issuing guaranties without reducing the level of protection afforded to the public by the Standard. (15, 18, 19, 23, 44)

A comment from a trade association of garment manufacturers favoring the proposal expressed the view that issuance of final amendments might encourage suppliers to issue guaranties to the association's member firms. (37)

A comment from another trade association favored the proposed

amendments as long as they would not lead to an increase in the importation of noncomplying foreign-made goods. This comment expressed uncertainty about the effect of the proposal on compliance with the Standard by imported items. (22)

In the notice of proposal the Commission solicited information about the extent of savings which might result each year if the amendments were issued on a final basis, expressed in terms of hours of testing and recordkeeping, as well as in dollar amounts. (12)

Two of the comments favoring the proposal expressed the opinion that issuance of final amendments would eliminate some unnecessary costs imposed by the testing and recordkeeping requirements of the regulations implementing the Standard. (18, 19) Another comment expressed the opinion that issuance of final amendments could result in "significant savings" to manufacturers required to perform testing by the regulations. (41) However, none of these comments provided estimates of anticipated annual savings in terms of hours or dollars.

Opposition to the proposed amendments was expressed in comments from three consumer organizations (17 and 39, 40, 43); two foundations for treatment of accident victims (38, 42); and one trade association (21). A comment from a county consumer affairs office opposed amendment of the regulations if such action "might result in increased hazards for consumers." (35)

The trade association restated its opposition to the rule which allows use of alternate apparatus and procedures by persons and firms performing tests to support guaranties of items subject to the Standard. (As noted above, that rule was issued on a final basis on May 12, 1983 (48 FR 21310), and became effective June 13, 1983.) The association states that the combined effect of the rule allowing use of alternate test apparatus and procedure and the proposal of August 12, 1982, would be to allow guaranties to be issued on the basis of a single test, not necessarily conducted by use of the apparatus and procedures specified in the Standard. Such a result, this comment alleges, would "emasculate and cheapen the meaning of the guaranty." (21)

This comment observes correctly that guaranties supported by tests conducted in accordance with the provisions of the amendments issued below will continue to provide persons and firms receiving and relying on them in good faith immunity from criminal prosecution in

the event any item subject to a guaranty does not comply with the Standard. However, this comment contends that consumers who wear garments made from fabrics guaranteed under the terms of amended § 1610.37 will suffer a reduction in the degree of protection afforded by that guaranty. (21)

The comment from the three consumer groups and the two foundations also expressed concern that the proposed amendments would be detrimental to public safety. Comments from one of these groups state that a reduction in burden to the regulated industry can result only if persons and firms issuing guaranties reduce the amount of testing performed to support guaranties (17, 39). Comments from this association contended that such a reduction in testing will have an adverse effect on quality control programs of manufacturers and on the safety of consumers. (17) Comments from two other consumer organizations (40, 43) and two foundations to assist accident victims (38, 42) endorse this position. Comments from one consumer group also express the view that the Commission has no documentation to suggest any "technical justification" for reducing the frequency of testing required to support guaranties. (17)

While the Commission anticipates that some persons and firms issuing initial guaranties will reduce the amount of testing they conduct to support those guaranties as a result of the amendments issued below, the Commission expects that such a reduction in testing will have little, if any, impact on the overall extent of compliance with the Standard. As noted in the proposal of August 12, 1982, most fabrics and garments which are subject to the Standard consistently meet its requirements. (12) The high degree of compliance with the Standard is documented in TABLE of the briefing package considered by the Commission before it proposed the amendments, and is primarily a function of the minimal requirements of the Standard and the flammability characteristics of most fabrics used for the production of clothing, rather than of the frequency with which those fabrics are tested. (6)

With regard to the comment expressing uncertainty about the impact of the amendment of § 1610.37 on compliance with the Standard by imported goods, the Commission observes that during the period from 1978 through 1982, it learned of six imported garments which failed to comply with the Standard, as opposed to two noncomplying garments of domestic manufacture during the same period. (6) However, the larger number

of noncomplying garments of foreign manufacture appears to have resulted from incorrect testing, or the total absence of testing, by foreign suppliers, rather than from the frequency of testing. (26) For this reason, the Commission concludes that the amendment of § 1610.37 issued below will have little if any effect on the extent of compliance with the Standard by imported goods.

In response to the contention that the Commission lacked documentation to justify the proposed amendment of § 1610.37, the Commission observes that the staff briefing package recommending revision of the guaranty rules included not only the memorandum from the Directorate for Compliance and Administrative Litigation describing the extent of compliance with the Standard, discussed above, but also two memoranda from the Directorate of Engineering Sciences, addressing, among other topics, the feasibility of reducing the amount of testing required to support initial guaranties of items subject to the Standard. (4, 6, 9)

Comments from a consumer group and one foundation (17 and 39,38) also oppose amendment of § 1610.37 on the grounds that such an action would hamper the ability of the Commission to bring legal actions to enforce the clothing textiles standard. This position is endorsed in the comments of another consumer group and another foundation. (40,42)

The Commission's ability to bring actions for violation of the FFA and the FTCA by the manufacture, importation, or sale of fabrics for garments which are subject to, but fail to comply with, the requirements of the Standard is not altered in any way by the amendment of § 1610.37, issued below. The only enforcement actions which are affected by the amendment are those which may arise from the issuance of a "false guaranty" of items subject to the Standard, in violation of section 8(b) of the FFA (15 U.S.C. 1197(b)).

In its enforcement of the FFA, the Commission usually has not taken legal action in cases involving the alleged issuance of a false guaranty in violation of section 8(b) unless the product involved also fails to comply with the applicable standard. In such instances, the failure to comply with the applicable standard has been the principal charge, and the issuance of a false guaranty has been treated as a secondary matter. (6)

Impact on Small Businesses

Finally, comments from a consumer group object to the proposed amendment of § 1610.37 on the grounds

that such action may have a negative economic impact on small businesses. In a comment submitted in response to the notice of August 12, 1982, the consumer group stated that in the absence of a minimum schedule of tests established by regulation to define a program of "reasonable and representative tests" to support guaranties, the meaning of that term will evolve through a number of enforcement actions brought by the Commission. This comment argues that such a development will force fabric manufacturers, including small businesses, to consult with legal counsel to determine the significance of the enforcement actions brought by the Commission, and to incur the costs of those consultations. (17)

When the Commission published the proposal of August 12, 1982, it certified in accordance with section 605(b) of the Regulatory Flexibility Act (5 U.S.C. 605(b)) that the proposed amendments, if issued on a final basis, will not have a significant economic impact on a substantial number of small entities, including small businesses. (12) In support of this certification, the Commission stated that the proposed amendments would not add any new requirements for the issuance of guaranties. The Commission also stated that while the proposed amendments were intended to reduce any burden on the textiles industry which may be imposed by regulations implementing the Standard, the reduction of burden, if any, which may result from the amendments is not expected to be significant for small businesses. (12)

After consideration of the comment regarding the impact of the proposed amendment of § 1610.37 on small businesses and a memorandum from the Directorate of Economics which discusses this topic, the Commission concludes that larger firms, rather than smaller ones, are most likely to derive advantage from the amendment of § 1610.37, issued below. (25)

If any firm issuing initial guaranties of items subject to the clothing textiles standard concludes that § 1610.37, prior to the amendments issued below, sets forth a program of reasonable and representative tests to support such guaranties, no provision of the amendment issued below would prohibit the continued use of the schedule for testing specified by former § 1610.37. Information available to the Commission indicates that most small firms either will continue to use the schedule of testing specified by former § 1610.37, or will not make significant changes to their testing programs. For this reason, the Commission concludes

that small firms will not require extensive consultation with legal counsel as a result of the amendments issued below. (25)

In a separate comment dated October 6, 1983, the same group suggested that issuance of final amendments based on the proposal might place small manufacturers at a competitive disadvantage with large firms if large firms will be the only ones to derive any significant cost savings from the change in guaranty testing requirements. (30)

While large firms will likely derive greater benefit from the amendments issued below than small firms, the Commission finds that testing to support guaranties accounts for only a small part of the total cost of production of goods which are subject to the clothing textiles standard for any firm regardless of size. (46) Consequently, the reduction in testing costs which may result for larger firms from the amendments issued below will not have a significant effect on the competitive position of large and small firms within the clothing textiles industry. (46)

The Commission affirms the certification made in the notice of proposal that the amendments issued below will not have a significant economic impact on a substantial number of small entities, including small businesses.

Exemptions From Testing

As noted above, proposed § 1610.37(d) contained provisions to exempt certain types of fabrics from any requirements from "further testing to support guaranties of those fabrics." The Commission proposed these provisions because experience gained by the Commission and industry from years of testing demonstrates that certain fabrics consistently yield acceptable results when tested in accordance with the Standard. The types of fabrics for which the exemption was proposed included all plain-surface fabrics weighing 2.6 ounces or more per square yard, and all fabrics made entirely from acrylic, modacrylic, nylon, olefin, or polyester fibers, or entirely from combinations of those fibers.

A comment from one trade association opposes any provision to exempt any fabric from requirements for testing to support guaranties. This comment observes that many manufacturers performed more testing to support guaranties than was required by former § 1610.37. For this reason, the comment anticipates that if the Commission exempts certain types of fabrics from requirements for testing to support guaranties, some firms will continue testing exempted fabrics. The

comment contends that the proposal to exempt certain fabrics from requirements for testing will give a cost-advantage to any firm which relies upon the amendment of § 1610.37 to discontinue testing the exempted fabrics. This comment expresses the view that such a result is unfair. (21)

The Commission does not agree that unfairness will result if some firms voluntarily continue to test fabrics which have been exempted from requirements for testing to support guaranties on the basis of their performance for many years in tests conducted in accordance with the Standard. As noted by the comment under consideration, some firms elected to perform more testing than was required by former § 1610.37 to support guaranties. The Commission observes that many business decisions are based on considerations beyond compliance with applicable laws and regulations. When businesses decide to do more than is required by law, they usually do so because they perceive that such a course of action will result in benefits which equal or exceed the additional costs incurred.

A comment from another trade association urges clarification of the language of proposed § 1610.37(d). This comment observes that the proposal stated that certain fabrics would be exempted from "further testing" to support guaranties. The comment states that this language could be interpreted to mean that after the effective date of the amendment, no testing of any fabric listed in § 1610.37(d) is required to support a guaranty, whether or not a person or firm has ever issued a guaranty of the fabric. However, the comment notes that the phrase "further testing" could suggest that any firm relying on provisions of proposed § 1610.37(d) must have results of at least one test of any of the fabrics listed in that section to support a guaranty of such a fabric. (22)

This comment expresses the view that the Commission appears to have intended the former interpretation. The comment suggests that the ambiguity could be resolved by rewording the final amendment to state that the fabrics listed in § 1610.37(d) "are exempted from any requirement for testing to support guaranties." (22)

When the Commission proposed § 1610.37(d), it intended to totally exempt the fabrics listed in that section of the proposal from testing because of the results of years of testing of those fabrics by the government and industry. (27) The wording change suggested by the comment has been made in

§ 1610.37(d) of the amendments issued below.

Requests for Exemptions for Other Fabrics

Two comments urge the Commission to expand the list of fabrics exempted from requirements for testing by proposed § 1610.37(d) to include fabrics made entirely from wool, and fabric made entirely from blends of wool and the other fibers listed in proposed § 1610.37(d). (22, 23) One of these comments was accompanied by test results to support the requested addition to the list of fabrics exempted from testing. (23)

After consideration of these comments, an analysis of the test data submitted by one of the commenters, and experience gained from testing under the Standard by the Commission and industry, the Commission has added fabrics made entirely from wool and entirely from blends of wool and other specified fibers to the list of fabrics exempted from requirements for testing to support guaranties by § 1610.37(d) of the amendments issued below. (27)

Comments from one firm urged the addition of raised-fiber surface fabrics made from blends of 80 percent polyester and 20 percent cotton, and from blends of 50 percent acrylic and 50 percent cotton to the list of fabrics exempted from requirements for testing by proposed § 1610.37(d) and submitted supporting test data. (13, 41) After consideration of these comments and the accompanying test data, the Commission declines to make the requested addition to the list of exempted fabrics. The Commission's laboratory has tested raised-fiber surface fabrics with blends of man-made fibers and cotton similar to those of the fabrics which are the subject of this comment. This testing has yielded some results indicating "intermediate flammability, class 2" and in one case, failing results ("rapid and intense burning, class-3"). (27)

One other comment requested addition of all hosiery fabrics and garments to the list of fabrics exempted from requirements for testing to support guaranties by proposed § 1610.37(d). (16) This comment states that hosiery fabrics and garments consistently yield acceptable results when tested in accordance with the Standard. This comment also states that the requested exemption should be made because hosiery is usually covered by another garment, and for that reason not ordinarily exposed to flame; hosiery products are produced from small denier yarn which provides for less bulk material to be exposed to ignition

sources; and hosiery is generally form fitting and ordinarily has no loose folds of fabric which could be exposed to flame. (16) However, this comment did not submit any results of testing to support the requested exemption.

After consideration of this comment, the Commission declines to make a blanket exemption in § 1610.37(d) for all fabrics used for hosiery, because it lacks sufficient test data to justify such an exemption. (27) The Commission observes, however, that as issued below, § 1610.37(d) exempts from requirements for testing all fabrics made entirely of acrylic, modacrylic, nylon, olefin, polyester, and wool, and all fabrics made entirely from blends of those fibers. Those are the fabrics from which most hosiery products are manufactured.

Requirements for Recordkeeping

The notice of August 12, 1982, also proposed amendment of § 1610.38, which establishes requirements for maintenance of records of testing to support guaranties.

The Commission proposed to modify § 1610.38(a) so that its provisions concerning the content of test records supporting guaranties would be applicable to any person of firm "issuing an initial guaranty," rather than to any person "who has made the tests" required by the FFA and implementing regulations to support guaranties. The Commission proposed this amendment to make the language of § 1610.38 consistent with provisions of proposed § 1610.37(c), which allow persons or firms issuing initial guaranties to rely on tests conducted by others to support those guaranties.

The Commission received no comment specifically addressed to this aspect of the proposal, and has included a revision of § 1610.38(a) as proposed, in the amendment issued below.

The Commission also proposed a revision of § 1610.38(d) to reduce the period required for retention of records of testing to support guaranties from three years to one year.

As noted above, several comments expressed general agreement with and support for the proposal of August 12, 1982. However, none of these comments specifically addressed amendment of the record retention requirements of § 1610.38(d), and none made any estimate of the saving, if any, which might result from issuance of proposed § 1610.38(d) on a final basis.

Comments from two consumer groups, one foundation, and a trade association urged the Commission not to reduce the three-year period now required by § 1610.38 for retention of records of

testing to support guaranties. (17, 43, 38, 21) That position was endorsed in comments from another consumer group and another foundation. (40, 42)

Comments opposed to amendment of § 1610.38 express the view that a reduction of the required period for retention of test records to one year could hamper the Commission's enforcement efforts. These comments argue that six months to a year may elapse from the time a fabric is tested for purposes of supporting an initial guaranty until the time that garments made from that fabric are purchased by consumers. For this reason, these comments contend that in many cases, test records may not be available for inspection by Commission personnel if a question should arise about the basis for issuance of a guaranty. (17, 38, 21)

The comment from the trade association also states that the proposal to reduce the required period for record retention could create a similar problem for any garment manufacturer relying on a guaranty of a fabric in the defense of a product liability suit involving a garment made from the guaranteed fabric. If records of testing to support guaranties are required to be maintained for only one year, this comment argues that in many cases the records may not be available if needed to demonstrate that a particular fabric had been tested for compliance with the Standard. (21)

The comment from the trade association also observes that the major cost imposed by the guaranty rules is associated with development of the test data supporting the guaranty. (21) Both the trade association and the consumer group state that reduction of the period for retention of records will result in no significant cost saving to firms issuing guaranties of items subject to the Standard. (17, 21)

After consideration of all comments received in response to the proposal, the Commission concludes that any savings which may result from the proposed amendment of § 1610.38(d) would be negligible. Although enforcement of the Standard would not be hindered by the proposed amendment of § 1610.38(d), the Commission acknowledges that the proposed amendment could create potential problems in enforcement of the guaranty rules. Therefore, after consideration of the proposed amendment of § 1610.38(d) and all relevant comments, the Commission withdraws that part of the proposal of August 21, 1982. Section 1610.38(d) is unchanged by the amendments issued below.

Other Issues

One comment expressing agreement with the proposal suggested that similar changes should be made to regulations implementing the Standard for the Flammability of Vinyl Film (16 CFR Part 1611). (14) The notice of August 12, 1982, was limited to proposed amendments of particular sections of 16 CFR Part 1610. The suggestion for similar modification of requirements of 16 CFR Part 1611 is beyond the scope of the proposal. If the Commission acts on the suggestion made in this comment, it will do so in a separate rulemaking proceeding addressed to specific provisions of Part 1611.

Comments from two consumer groups (39, 43) and one foundation (42) suggest that the requirements of the clothing textiles standard should be made more stringent to improve the level of safety provided by the standard.

The Commission observes that this proceeding does not involve any proposal to change the requirements of the clothing textiles standard. The proposal of August 12, 1982, is limited to regulations implementing the standard which specify the frequency of testing required to support guaranties of compliance with the standard, and the period of time of retention of records of guaranty testing.

If the Commission finds that a new or amended standard for clothing textiles and articles of wearing apparel may be needed to adequately protect the public, it will begin a separate proceeding for issuing a new standard or amending the current one in accordance with provisions of section 4 of the FFA (15 U.S.C. 1193).

Environmental Considerations

As stated in the notice of proposal, the Commission's environmental review procedures provide at 16 CFR 1021.5(c)(2) that issuance, amendment or revocation of rules relating to product certification normally has little or no potential for affecting the human environment.

The Commission does not foresee any special or unusual circumstances surrounding the amendments issued below. For this reason, neither an environmental assessment or an environmental impact statement is required.

List of Subjects in 16 CFR Part 1610

Clothing, Consumer protection, Flammable materials, Textiles, Warranties, Records.

Conclusion and Promulgation

After consideration of written comments on the proposed amendments,

analysis of those comments by the Commission staff, and other relevant information, the Commission concludes that the proposed amendment of 16 CFR 1610.38(d) should not be adopted, and that the proposed amendments of 16 CFR 1610.31, 1610.37, and 1610.38(a) should be issued on a final basis, with the modifications discussed above, to become effective on January 14, 1985.

Therefore, in accordance with the provisions of the Flammable Fabrics Act (sec. 5, Pub.L. 90-189, 81 Stat. 569 (15 U.S.C. 1194)) and the Consumer Product Safety Act (sec. 30, Pub. L. 92-573, 86 Stat. 1231 (15 U.S.C. 2079)), the Commission hereby amends the Code of Federal Regulations, Title 16, Chapter II, Subchapter B, as follows:

PART 1610—STANDARD FOR THE FLAMMABILITY OF CLOTHING TEXTILES

Part 1610, Subpart B is amended by revising § 1610.37 to read as follows:

§ 1610.37 Reasonable and representative tests to support guaranties.

(a) *Purpose.* The purpose of this § 1610.37 is to establish requirements for reasonable and representative tests to support initial guaranties of products, fabrics, and related materials which are subject to the Standard for the Flammability of Clothing Textiles (the Standard, 16 CFR Part 1610).

(b) *Statutory provisions.* (1) Section 8(a) of the Flammable Fabrics Act (FFA, 15 U.S.C. 1197(a)) provides that no person shall be subject to criminal prosecution under section 7 of the FFA (15 U.S.C. 1196) for a violation of section 3 of the FFA (15 U.S.C. 1192) if such person establishes a guaranty received in good faith to the effect that the product, fabric, or related material complies with the applicable flammability standard. A guaranty does not provide the holder any defense to an administrative action for an order to cease and desist from violation of the applicable standard, the FFA, and the Federal Trade Commission Act (15 U.S.C. 45), nor to any civil action for injunction or seizure brought under section 6 of the FFA (15 U.S.C. 1195).

(2) Section 8 of the FFA provides for two types of guaranties:

(i) An initial guaranty based on "reasonable and representative tests" made in accordance with the applicable standard issued under the FFA; and

(ii) A guaranty based on a previous guaranty, received in good faith, to the effect that reasonable and representative tests show conformance with the applicable standard.

(c) *Requirements.* (1) Each person or

firm issuing an initial guaranty of a product, fabric, or related material subject to the Standard shall devise and implement a program of reasonable and representative tests to support such a guaranty.

(2) The term "program of reasonable and representative tests" as used in this § 1610.37 means at least one test with results demonstrating conformance with the Standard for the product, fabric or related material which is the subject of an initial guaranty. The program of reasonable and representative tests required by this § 1610.37 may include tests performed before the effective date of this section, and may include tests performed by persons or firms other than the one issuing the initial guaranty. The number of tests and the frequency of testing shall be left to the discretion of the person or firm issuing the initial guaranty.

(3) In the case of an initial guaranty of a fabric or related material, a program of reasonable and representative tests may consist of one or more tests of the particular fabric or related material which is the subject of the guaranty, or of a fabric or related material of the same "class" of fabrics for related materials as the one which is the subject of the guaranty. For purposes of this § 1610.37, the term "class" means a category of fabrics for related materials having general constructional or finished characteristics, sometimes in association with a particular fiber, and covered by a class or type description generally recognized by the trade.

(d) *Exemptions.* Experience gained from years of testing in accordance with the Standard demonstrates that certain fabrics consistently yield acceptable results when tested in accordance with the Standard. Therefore, persons and firms issuing an initial guaranty of any of the following types of fabrics, or of products made entirely from one or more of these fabrics, are exempt from any requirement for testing to support guaranties of those fabrics:

(1) Plain surface fabrics, regardless of fiber content, weighing 2.6 ounces per square yard or more; and

(2) All fabrics, both plain surface and raised-fiber surface, regardless of weight, made entirely from any of the following fibers or entirely from combination of the following fibers: acrylic, modacrylic, nylon, olefin, polyester, wool.

3. Section 1610.38 is amended by revising paragraph (a) to read as follows:

§ 1610.38 Maintenance of records by those furnishing guaranties.

(a) Any person or firm issuing an initial guaranty of a product, fabric, or related material which is subject to the Standard for the Flammability of Clothing Textiles (the Standard, 16 CFR Part 1610) shall keep and maintain a record of the test or tests relied upon to support that guaranty. The records to be maintained shall show:

(1) The style or range number, fiber composition, construction and finish type of each textile fabric or related material covered by an initial guaranty; or the identification, fiber composition, construction and finish type of each textile fabric (including those with a nitrocellulose fiber, finish or coating), and of each related material, used or contained in a product of wearing apparel covered by an initial guaranty.

(2) The results of the actual test or tests made of the textile fabric or related material covered by an initial guaranty; or of any fabric or related material used in the product of wearing apparel covered by an initial guaranty.

(3) When the person or firm issuing an initial guaranty has conducted the test or tests relied upon to support that guaranty, that person or firm shall also include with the information required by paragraphs (a) (1) and (2) of this section, a sample of each fabric or related material which has been tested.

(Sec. 5, Pub.L. 90-189, 81 Stat. 569, 15 U.S.C. 1194; sec. 30, Pub.L. 92-573, 86 Stat. 1231, 15 U.S.C. 2079)

Dated: December 7, 1984.

Sadye E. Dunn,

Secretary, Consumer Product Safety Commission.

Bibliography

1. Memorandum from Allen F. Braunerger, OGC, to the Commission describing staff review of the Standard for Clothing Textiles and implementing regulations and recommending amendment of regulations; 15 pages; March 24, 1982. The TABS to this memorandum are listed separately.
2. TAB A, Letter from James C. Miller, III, Administrator for Information and Regulatory Affairs to Chairman Nancy Harvey Steorts, CPSC; 1 page; September 14, 1981.
3. TAB B, letter from Richard A. Gross, Executive Director, CPSC, to Mahesh Podar, Office of Management and Budget; 1 page; September 28, 1981.
4. TAB C, Memorandum from Elaine A. Tyrrell, ESMT, to Margaret Neilly, ESMT, concerning rule review of the Standard for Clothing Textiles, with attachments; 30 pages; December 10, 1981.
5. TAB D, Memorandum from Bea Harwood, HIEA, to James Sharman, OPM, concerning review of the Standard for Clothing Textiles, with attachments; 4 pages; November 30, 1981.
6. TAB E, Memorandum from Liz Gomilla, CARM, to James Sharman, OPM, concerning

review of the Standard for Clothing Textiles, with attachments; 17 pages November 24, 1981.

7. TAB F, Memorandum from Liz Gomilla, CARM, to James Sharman, OPM, supplementing memorandum of November 24, 1981, with attachments; 7 pages January 26, 1982.

8. TAB G, Memoranda of telephone conversations between Liz Gomilla and Stephen Wood, Miliken Research Corporation, on November 5, 1981; and between Liz Gomilla and O.P. Beckwith of the William Carter Company, on November 20, 1981; 2 pages; undated.

9. TAB H, Memorandum from Elaine A. Tyrrell, ESMT, to Margaret Neilly, ESMT, supplementing memorandum of December 10, 1981; 2 pages; February 26, 1982.

10. Vote sheet concerning review of Standard for the Flammability of Clothing Textiles (16 CFR Part 1610) from Allen F. Braunerger, OGC, to Commission; 2 pages; March 24, 1982.

11. Staff briefing package prepared by L.J. Sharman, Office of Program Management, concerning amendment of rules establishing requirements for testing and recordkeeping to support guaranties under the clothing textiles standard; pages: —, 1983. The tabs to this package are listed separately.

12. TAB A, Federal Register notice proposing amendment of rules establishing requirements for testing and recordkeeping to support guaranties of items subject to the clothing textiles standard; 6 pages; August 12, 1982. TAB B, comments on the proposed rule.

13. Comment from Bassett-Walker, Inc., with enclosures; 6 pages; September 13, 1982.

14. Comment from The Proctor & Gamble Company; 1 page; September 14, 1982.

15. Comment from Kimberly-Clark Corp.; 1 page; September 30, 1983.

16. Comment from the National Association of Hosiery Manufacturers; 3 pages; October 11, 1982.

17. Comment from Citizens' Committee for Fire Protection; 3 pages; undated.

18. Comment from National Knitwear Manufacturers Association; 1 page; October 8, 1982.

19. Comment from National Retail Merchants Association; 3 pages October 12, 1982.

20. Comment from Textile Distributors Association, Inc.; 1 page; October 5, 1982.

21. Comment from American Apparel Manufacturers Association; 4 pages October 22, 1982.

22. Comment from American Textile Manufacturers Institute; 2 pages; October 26, 1982.

23. Comment from The Wool Bureau, Inc., with enclosures; 13 pages; October 26, 1982.

24. TAB C, chart summarizing comments; 4 pages; undated. TAB D, staff analysis of comments.

25. Memorandum from Dale Ray, ECCP, to L. James Sharman, EX-P, analyzing comments on proposed revision of testing and recordkeeping rules; 2 pages; December 16, 1982.

26. Memorandum from Liz Gomilla, CARM, to L.J. Sharman, OPM, analyzing comments on proposed revision of testing and recordkeeping requirements; 5 pages; December 14, 1982.

27. Memorandum from Patricia A. Fairall, ESMT, to Margaret Neilly, ESMT, analyzing comments on proposed revision of testing and recordkeeping requirements; 4 pages; January 14, 1983.

28. TAB E, draft Federal Register notice to issue final amendments; 30 pages; undated.

29. Vote sheet concerning issuance of final amendments of guaranty testing and recordkeeping rules; 2 pages, July 26, 1983.

30. Comment from Citizens Committee for Fire Protection concerning economic consequences to small businesses of proposed amendments; 1 page; October 6, 1983.

31. Executive summary and ballot vote sheet concerning draft Federal Register notice to reopen comment period; 11 pages; November 9, 1983.

32. Staff briefing package prepared by L.J. Sharman, Office of Program Management, concerning additional comments on proposed amendment of guaranty testing and recordkeeping rules; 5 pages; July 13, 1984. The tabs to this package are listed separately.

33. TAB A, Federal Register notice reopening comment period; 2 pages; December 14, 1983.

34. TAB B, correspondence from L.J. Sharman to consumer organizations and small business association, with enclosures; 29 pages; December 23, 1983. Tab C, comments received in response to notice of December 14, 1983.

35. Comment from Office of Consumer Affairs, Montgomery County, Maryland; 2 pages; January 17, 1984.

36. Comment from American Association of Retired Persons; 1 page; January 20, 1984.

37. Comment from Clothing Manufacturers Association; 1 page; February 9, 1984.

38. Comment from Burn Foundation; 3 pages; February 10, 1984.

39. Comment from Citizens Committee for Fire Protection, with enclosures; 5 pages; February 13, 1984.

40. Comment from National Consumers League; 1 page; February 13, 1984.

41. Comment from Bassett-Walker, Inc.; 1 page; January 25, 1984.

42. Comment from Trauma Center Foundation; 1 page; February 27, 1984.

43. Comment from Consumer Federation of America; 2 pages; February 13, 1984.

44. Comment from INDA, Association of the Nonwoven Fabrics Industry; 3 pages; March 31, 1984.

45. TAB D, Summary of comments in response to notice of December 14, 1983; 2 pages; undated.

46. TAB E, Memorandum from Dale Ray, ECCP, to Jim Sharman, OPM, concerning a comment dated October 6, 1983, from Citizens Committee for Fire Protection commenting on the economic impact on small businesses of proposed amendments; 1 page; June 25, 1984.

47. TAB F, Draft Federal Register notice to issue amendments of 16 CFR 1610.37 and 1610.38; 35 pages; undated.

[FR Doc. 84-32460 Filed 12-13-84; 8:45 am]

BILLING CODE 6355-01-M

PENSION BENEFIT GUARANTY CORPORATION

29 CFR Part 2619

Valuation of Plan Benefits in Non-Multiemployer Plans; Amendment Adopting Additional PBGC Rates

AGENCY: Pension Benefit Guaranty Corporation.

ACTION: Final rule.

SUMMARY: This amendment to the regulations on Valuation of Plan Benefits in Non-Multiemployer Plans contains the interest rates and factors for the period beginning January 1, 1985. The interest rates and factors are to be used to value benefits provided under terminating non-multiemployer pension plans covered by Title IV of the Employee Retirement Income Security Act of 1974.

The valuation of plan benefits is necessary because, under section 4041 of the Act, the Pension Benefit Guaranty Corporation ("PBGC") and the plan administrator must determine whether a terminating pension plan has sufficient assets to pay all benefits under the plan that are guaranteed by the PBGC under the Title IV plan termination insurance program.

The interest rates and factors set forth in Appendix B to Part 2619 are adjusted periodically to reflect changes in financial and annuity markets. This amendment adopts the rates and factors applicable to plans that terminate on or after January 1, 1985, and will enable the PBGC and plan administrators to value the benefits provided under those plans. These rates and factors will remain in effect until Appendix B of the regulation is again amended.

EFFECTIVE DATE: January 1, 1985.

FOR FURTHER INFORMATION CONTACT:

Mrs. Renae R. Hubbard, Special Counsel, Corporate Policy and Regulations Department, Code 611, Pension Benefit Guaranty Corporation, 2020 K Street, NW., Washington, D.C. 20006, 202-254-6476, (202-254-8010 for TTY and TDD). These are not toll-free numbers.

SUPPLEMENTARY INFORMATION: On

January 28, 1981, the PBGC published a final regulation on Valuation of Plan Benefits in Non-multiemployer Plans (46 FR 9492). That regulation, codified at 29 CFR Part 2619 (1984), sets forth the methods for valuing plan benefits of terminating non-multiemployer plans covered under Title IV of the Employee Retirement Income Security Act of 1974, 29 U.S.C. 1001 *et seq.* (1976), as amended. The regulation contains formulas for valuing different types of

benefits. Appendix B to the regulation sets forth the interest rates and factors that are to be used in the formulas. Because these rates and factors are intended to reflect current conditions in the financial and annuity markets, it is necessary to update the rates and factors periodically.

As published in the 1984 edition of 29 CFR, Appendix B of Part 2619 contains interest rates and factors for valuing benefits in plans that terminated during various periods from September 2, 1974 through July 1, 1984. In July, August, October, and September of 1984, the PBGC published new rates and factors for plans terminating during the months of August through December of 1984 (49 FR 28551, 49 FR 32573, 49 FR 40161 and 49 FR 45129).

At this time, changes in the financial and annuity markets require a decrease in the rates used for valuing benefits. Accordingly, this amendment adds to Appendix B a new set of interest rates and factors for valuing benefits in plans that terminate on or after January 1, 1985, which set reflects a decrease of 1/4 percent in the interest rate to 9 3/4 percent.

Generally, the interest rates and factors will be in effect for at least one month. However, any published rates and factors will remain in effect until such time as PBGC publishes another amendment concerning them. Any change in the rates normally will be published in the **Federal Register** by the 15th of the month preceding the effective date of the new rates or as close to that date as circumstances permit.

The PBGC has determined that notice and public comment on this amendment are impracticable and contrary to the public interest. This determination is based on the need to determine and issue new interest rates and factors promptly so that the rates can reflect, as accurately as possible, current market conditions. The PBGC has found that the public interest is best served by issuing the rates and factors on a prospective basis so that plans may be able to calculate the value of plan benefits before submitting a notice of intent to terminate. Also, plans will be able to

predict employer liability more accurately prior to plan termination.

Because of the need to provide immediate guidance for the valuation of benefits of plans that will terminate on or after January 1, 1985, and because no adjustment by ongoing plans is required by this amendment, the PBGC finds that good cause exists for making the rates set forth in this amendment to the final regulation effective less than 30 days after publication.

The PBGC has determined that this is not a "major rule" under the criteria set forth in Executive Order 12291, February 17, 1981, because it will not result in an annual effect on the economy of \$100 million or more, a major increase in costs for consumers or individual industries, or significant adverse effects on competition, employment, investment, productivity, or innovation.

List of Subjects in 29 CFR Part 2619

Employee benefit plans, Pension insurance, Pensions.

PART 2619—[AMENDED]

In consideration of the foregoing, Part 2619 of Chapter XXVI, Title 29, Code of Federal Regulations, is hereby amended as follows:

1. The authority citation for Part 2619 is revised to read as follows:

Authority: Secs. 4002(b)(3), 4041(b), 4044, and 4062(b)(1)(A), Pub. L. 93-406, 88 Stat. 1004, 1020, 1025, and 1029, as amended by secs. 403(1), 403(d), and 402(a)(7), Pub. L. 96-364, 94 Stat. 1302, 1301, and 1299 [29 U.S.C. 1302, 1341, 1344, 1362].

2. Rate Set 52 of Appendix B is revised and Rate Set 53 of Appendix B is added to read as follows:

Appendix B—Interest Rates and Quantities Used to Value Immediate and Deferred Annuities

In the table that follows, the immediate annuity rate is used to value immediate annuities, to compute the quantity "C" for deferred annuities and to value both portions of a refund annuity. An interest rate of 5% shall be used to value death benefits other than the decreasing term insurance portion of a refund annuity. For deferred annuities, k_1 , k_2 , k_3 , n_1 , and n_2 , are defined in § 2619.45.

Rate set	For plans with a valuation date		Immediate annuity rate (per cent)	Deferred annuities					
	On or after	Before		k_1	k_2	k_3	n_1	n_2	
52	12-1-84	1-1-85	10.00	1.0925	1.0800	1.0400	7	8	
53	1-1-85		9.75	1.0900	1.0775	1.0400	7	8	

Royal S. Dellinger,

Acting Executive Director, Pension Benefit Guaranty Corporation.

[FR Doc. 84-32573 Filed 12-13-84; 8:45 am]

BILLING CODE 7708-01-M

VETERANS ADMINISTRATION

38 CFR Part 21

Dependents' Educational Assistance; Entitlement

AGENCY: Veterans Administration.

ACTION: Final regulations.

SUMMARY: These regulations address an eligible person's entitlement to dependents' educational assistance. They update terminology and cross references. There are no policy changes.

EFFECTIVE DATE: November 21, 1984.

FOR FURTHER INFORMATION CONTACT:

June C. Schaeffer (225), Assistant Director for Policy and Program Administration, Education Service, Department of Veterans Benefits, Veterans Administration, 810 Vermont Avenue, NW., Washington, D.C. 20420 (202-389-2092).

SUPPLEMENTARY INFORMATION: On pages 26609 and 26610 of the Federal Register of June 28, 1984, there was published a notice of intent to amend part 21 in order to update terminology and cross references.

Interested people were given 30 days in which to submit comments, suggestions or objections. The VA received no comments, suggestions or objections. Accordingly, the agency is making the proposal final.

The VA has determined that these regulations are not major rules as that term is defined by Executive Order 12291, entitled "Federal Regulation". The regulations will not cause a major increase in costs or prices for anyone. They will have no significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets.

The Administrator of Veterans' Affairs hereby certifies that these regulations will not have a significant economic impact on a substantial number of small entities as they are defined in the Regulatory Flexibility Act (RFA), 5 U.S.C. 601-612. Pursuant to 5 U.S.C. 605(b), these regulations, therefore, are exempt from the initial and final regulatory flexibility analyses requirements of sections 603 and 604.

This certification can be made because entitlement affects only payments made directly to individuals. These regulations address calculation of entitlement. Furthermore, the changes are technical in nature, and should have a small impact.

The Catalog of Federal Domestic Assistance number for the program affected by these regulations is 64.117.

List of Subjects in 38 CFR Part 21

Civil rights, Claims, Education, Grant programs—education, Loan programs—education, Reporting and recordkeeping requirements, Schools, Veterans, Vocational education, Vocational rehabilitation.

Approved: November 21, 1984.

By direction of the Administrator.

Everett Alvarez, Jr.,
Deputy Administrator.

PART 21—VOCATIONAL REHABILITATION AND EDUCATION

The Veterans Administration is amending 38 CFR Part 21 to read as set forth below:

1. Section 21.3044 is revised as follows:

§ 21.3044 Entitlement.

(a) *Limitations on entitlement.* Each eligible person is entitled to educational assistance not in excess of 45 months, or the equivalent thereof in part-time training. The Veterans Administration will not authorize an extension of entitlement except as provided in paragraph (c) of this section. The period of entitlement when added to education or training received under any or all of the laws cited in § 21.4020 will not exceed 48 months of full-time educational assistance. The period of entitlement will not be reduced by any period during which employment adjustment allowance was paid after the eligible person completes a period of rehabilitation and reaches a point of employability. (38 U.S.C. 1711(a))

(b) *Continuous pursuit is not required.* The 45-month period of entitlement is any 45 months within the period of eligibility. The eligible person is not required to pursue his or her program for 45 consecutive months. (38 U.S.C. 1711(a))

(c) *Exceeding the 45 months limitation.* The 45 months limitation may be exceeded only in the following cases:

(1) Where no charge against the entitlement is made based on a course or courses pursued by a spouse or surviving spouse under the special assistance for the educationally disadvantaged program (See § 21.4237(d); or

(2) Where special restorative training authorized under § 21.3300 exceeds 45 months. (38 U.S.C. 1741(b), 1733(b))

2. Section 21.3045 is revised as follows:

§ 21.3045 Entitlement charges.

Charges against the period of entitlement of an eligible person pursuing a program of education will be made in accordance with § 21.1045 (a) through (d) and (f) through (k). (38 U.S.C. 1661, 1677(b), 1682(e), 1691, 1712, 1733, 1786(a), 1787)

[FR Doc. 84-32820 Filed 12-13-84; 8:45 am]

BILLING CODE 8320-01-M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 60 and 61

[EPA Docket Nos. AM701WV and 702WV; A-3-FRL-2712-41]

Performance Standards for New Stationary Sources and National Emission Standards for Hazardous Air Pollutants; Delegation of Authority to the State of West Virginia

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: This notice Amends 40 CFR 60.4 and 40 CFR 61.04 to reflect delegation to the State of West Virginia for authority to implement and enforce New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPS) respectively, under the Clean Air Act.

EFFECTIVE DATE: December 14, 1984.

FOR FURTHER INFORMATION CONTACT: Michael Giuranna, U.S. Environmental Protection Agency, Region III, Curtis Building, 6th & Walnut Streets, Philadelphia, PA 19106 (215) 597-9189.

SUPPLEMENTARY INFORMATION:

I. Background

On June 13, 1984, Don R. Richardson, Chairman, West Virginia Air Pollution Control Commission, requested delegation on authority to implement and enforce existing regulations for New Source Performance Standards (NSPS), under section 111(c) of the Clean Air Act (CAA), and National Emission Standards for Hazardous Air Pollutants (NESHAPS) under section 112(d) of the Clean Air Act.

The request was reviewed and, on July 24, 1984 a letter was sent to Don R. Richardson stating that delegation of

authority for the NSPS and NESHAPS in West Virginia is approved subject to the conditions set forth in that letter as follows:

Certified mail

Return Receipt Requested

Mr. Don R. Richardson, Chairman,
West Virginia Air Pollution Control
Commission, 1558 Washington Street,
East Charleston, West Virginia 25311

Re: Delegation of authority for New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants pursuant to Sections 111(c) and 112(d) of the Clean Air Act, as amended.

Dear Mr. Richardson: This is in response to a letter of June 13, 1984, to Thomas P. Eichler, Regional Administrator, requesting delegation of authority for implementation and enforcement of existing New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPS) in West Virginia.

We have reviewed the pertinent laws and regulations governing the control of air pollution in West Virginia and have determined that they provide an adequate and effective procedure for implementation and enforcement of the NSPS and NESHAPS regulations by the Air Pollution Control Commission (the Commission).

Therefore, we hereby delegate authority to the Commission, as follows:

The Commission is delegated and shall have authority for all sources located in the State of West Virginia subject to the Standards of Performance for New Stationary Sources, with the exception of Glass Manufacturing Plants (subpart CC), and all categories of National Emission Standards for Hazardous Air Pollutants, presently promulgated, or subject to any standards promulgated in the future in 40 CFR Parts 60 and 61.

This delegation is based upon the following conditions:

1. Quarterly reports will be submitted to EPA by the Commission and should include the following:

A. For New Source Performance Standards:

- (i) Sources determined to be applicable during that quarter;
- (ii) applicable sources which started operation during that quarter or which started operation prior to that quarter which have not been previously reported;
- (iii) the compliance status of the above; including the summary sheet from compliance test(s); and
- (iv) any legal actions which pertain to these sources.

B. For National Emission Standards for Hazardous Air Pollutants:

- (i) NESHAPS sources granted a permit to construct;
- (ii) NESHAPS sources inspected during that quarter and their compliance status [except under § 61.22 (d) and (e)];
- (iii) the requirements of A.i), A.ii), and A.iv) above.

2. Enforcement of the NSPS and NESHAPS regulations in the State of West Virginia will be the primary responsibility of the

Commission. Where the Commission determines that such enforcement is not feasible and so notifies EPA, or where the Commission acts in a manner inconsistent with the terms of this delegation, EPA will exercise its concurrent enforcement authority, pursuant to Section 113 of the Clean Air Act, as amended, with respect to sources within the State of West Virginia subject to NSPS and NESHAPS regulations.

3. Acceptance of these delegations does not commit the State of West Virginia to request or accept delegation of future standards and requirements. A new request for delegation will be required for any additional standards not included in the State's request of June 13, 1984.

4. The West Virginia Air Pollution Control Commission will at no time grant a waiver of compliance under the NESHAPS regulations.

5. The Commission will not grant a variance for compliance with the applicable NSPS regulations if such variance delays compliance with the Federal Standards (Part 60). Should the Commission grant such a variance, EPA will consider the source receiving the variance to be in violation of the applicable Federal regulations and may initiate enforcement action against the source pursuant to Section 113 of the Clean Air Act. The granting of such variances by the Commission shall also constitute grounds for revocation of delegation by EPA.

6. The Commission and EPA will develop a system of communication sufficient to guarantee that each office is always fully informed regarding the interpretation of applicable regulations. In instances where there is a conflict between a Commission interpretation and a Federal interpretation of applicable regulations, the Federal interpretation must be applied if it is more stringent than that of the Commission.

7. If at any time there is a conflict between a Commission regulation and a Federal regulation, 40 CFR Part 60 or 61, the Federal regulation must be applied if it is more stringent than that of the Commission. If the Commission does not have the authority to enforce the more stringent Federal regulation, this portion of the delegation may be revoked.

8. The Commission will utilize the methods in 40 CFR Parts 60 and 61 in performing source tests pursuant to these regulations.

9. If the Director of the Air Management Division determines that a Commission program for enforcing or implementing the NSPS or NESHAPS regulations is inadequate, or is not being effectively carried out, this delegation may be revoked in whole or in part. Any such revocation shall be effective as of the date specified in a Notice of Revocation to the Commission.

A notice announcing this delegation will be published in the *Federal Register* in the near future. The notice will state, among other things, that effective immediately, all reports required pursuant to the above-referenced NSPS or NESHAPS regulations by sources located in the State of West Virginia should be submitted to the Commission in addition to EPA Region III. Any original reports which have been or may be received by EPA Region III will be promptly transmitted to the Commission.

Since this delegation is effective immediately, there is no requirement that the Commission notify EPA of its acceptance. Unless EPA receives from the Commission written notice of objections within ten (10) days of receipt of this letter, the Air Pollution Control Commission will be deemed to have accepted all of the terms of the delegation.

Sincerely,

W. Ray Cunningham,
Director, Air Management Division.

Therefore, pursuant to the authority delegated by the Administrator, the Air Management Division Director notified Don R. Richardson that authority to implement and enforce New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants was delegated to the West Virginia Air Pollution Control Commission. Part 60, Performance Standards for New Stationary Sources, is delegated with the condition that the WVAPCC submit to EPA any excess emission reports, as defined in 40 CFR 60.7(c).

II. Regulations Affected by This Action

EPA is today amending 40 CFR 60.4 and 61.04 to reflect the delegation discussed above. The amended § 60.4 and § 61.04 which state the address of the West Virginia Air Pollution Control Commission (to which all reports, requests, applications, and communications to the Administrator regarding this subpart must be addressed) is set forth below.

The Administrator finds good cause to make this rulemaking effective immediately without prior public notice since it is an administrative change and not one of substantive content. No additional substantive burdens are imposed on the parties affected.

This rulemaking is effective immediately, and is issued under the authority of sections 110 and 301 of the Clean Air Act, as amended.

The Office of Management and Budget has exempted this action from Executive Order 12291.

List of Subjects

40 CFR Part 60

Air pollution control, Aluminum, Ammonium sulfate plants, Cement industry, Coal, Copper, Electric power plants, Glass and glass products, Grains, Intergovernmental relations, Iron, Lead, Metals, Motor vehicles, Nitric acid plants, Paper and paper products industry, Petroleum, Phosphate, Sewage disposal, Steel, Sulfuric acid plants, Waste treatment and disposal, Zinc.

40 CFR Part 61

Air pollution control, Asbestos, Beryllium, Hazardous materials, Mercury, Vinyl chloride.

(42 U.S.C. 7401 *et seq.*)

Dated: October 17, 1984.

Thomas P. Eichler,
Regional Administrator.

PART 61—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Part 61 of Chapter I, Title 40 of the Code of Federal Regulations is amended as follows:

In § 61.04, Paragraph (b) is amended by adding subparagraph (XX) to read as follows:

§ 61.04 Address.

* * * * *

(b) * * *

(XX) State of West Virginia: Air Pollution Control Commission, 1558 Washington Street, East, Charleston, West Virginia 25311.

[FR Doc. 84-29399 Filed 12-13-84; 8:45 am]

BILLING CODE 6560-50-M

40 CFR Part 271

[SW-4-FRL-2737-8]

North Carolina; Decision on Final Authorization of State Hazardous Waste Management Program

AGENCY: Environmental Protection Agency.

ACTION: Notice of final determination on North Carolina's application for final authorization.

SUMMARY: North Carolina has applied for Final Authorization under the Resource Conservation and Recovery Act (RCRA). EPA has reviewed North Carolina's application and has reached a final determination that North Carolina's Hazardous Waste Program satisfies all of the requirements necessary for Final Authorization. Thus, EPA is granting Final Authorization to the State to operate its program in lieu of the Federal program.

EFFECTIVE DATE: Final Authorization for North Carolina, for purposes of judicial review, shall be effective at 1:00 p.m. Eastern time on December 31, 1984.

FOR FURTHER INFORMATION CONTACT: Allan E. Antley, Chief, Waste Planning Section, Residuals Management Branch, Waste Management Division, U.S. Environmental Protection Agency, 345 Courtland Street NE., Atlanta, Georgia 30365, (404) 881-4727.

SUPPLEMENTARY INFORMATION: Section 3006 of the Resource Conservation and

Recovery Act (RCRA) allows the Environmental Protection Agency (EPA) to authorize state hazardous waste management programs to operate in the state in lieu of the Federal program. To qualify for Final Authorization, a state's program must: (1) Be "equivalent" to the Federal program, (2) be consistent with the Federal program and other state programs, and (3) provide for adequate enforcement (Section 3006(b) of RCRA, 42 U.S.C. 6226(b)).

On July 10, 1984, North Carolina submitted a complete application to obtain Final Authorization to administer a RCRA program. On September 28, 1984, EPA published a tentative decision announcing its intent to grant North Carolina Final Authorization. Further background on the tentative decision appears at 49 FR 38302, September 28, 1984.

Along with the tentative determination, EPA announced the availability of the State's application for public review and comment and the date of a public hearing on the application. The public hearing was not held as scheduled on November 13, 1984, since neither EPA nor the North Carolina Department of Human Resources received significant interest in holding the hearing.

To date, all RCRA hazardous waste management permits in North Carolina have been issued by the State under the authority granted to the State during interim authorization. Therefore, there will be no change in the status of permits or permitting authority on the effective date of this rule.

North Carolina is not authorized by the Federal government to operate the RCRA program on Indian Lands and this authority will remain with EPA.

Decision

It is my conclusion that North Carolina's application for Final Authorization meets all of the regulatory and statutory requirements established by RCRA.

Accordingly, North Carolina is granted final authorization to operate its hazardous waste management program. This means that North Carolina now has the responsibility for permitting treatment, storage and disposal facilities within its borders and for carrying out all other aspects of the RCRA program. North Carolina also has primary enforcement responsibility, although EPA retains the right to take enforcement action under Section 3008 of RCRA.

Compliance With Executive Order 12291

The Office of Management and Budget has exempted this rule from the

requirements of Section 3 of Executive Order 12291.

Certification Under the Regulatory Flexibility Act

Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that this authorization will not have a significant economic impact on a substantial number of entities. This authorization effectively suspends the applicability of certain Federal regulations in favor of North Carolina's program, thereby eliminating duplicative requirements for handlers of hazardous waste in the State. It does not impose any new burdens on small entities. This rule, therefore, does not require a regulatory flexibility analysis.

List of Subjects in 40 CFR Part 271

Hazardous materials, Indian lands, Reporting and recordkeeping requirements, Waste treatment and disposal, Intergovernmental relations, Penalties, Confidential business information.

Authority

This notice is issued under the authority of Sections 2002(a), 3006, and 7004(b) of the Solid Waste Disposal Act as amended 42 U.S.C. 6912(a), 6926, 6974(b), and EPA delegation 8-7.

Dated: November 26, 1984.

Charles R. Jeter,
Regional Administrator.

[FR Doc. 84-32728 Filed 12-13-84; 8:45 am]

BILLING CODE 6560-50-M

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 2, 15, 21, 22, 23, 74, 81, 83, 87, 90, 95, 97, and 99

[Gen. Docket No. 80-739; FCC 84-510]

Provision for New System of Emission Designators Described in Article 4 of the International Telecommunication Union Radio Regulations

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: This action provides for the use of new emission designators described in Article 4 of the International Telecommunication Union Radio Regulations. The present emission designators have been converted to the new emission designators, thereby causing our present system to become obsolete. The intended effect of this action is to provide for a single system

of emission designators as opposed to a dual system.

EFFECTIVE DATE: January 3, 1985.

FOR FURTHER INFORMATION CONTACT: Dan Yates, Office of Science and Technology, (202) 653-8117.

SUPPLEMENTARY INFORMATION:

List of Subjects

47 CFR Part 2

Communications equipment, Radio.

47 CFR Part 15

Communications equipment, Radio.

47 CFR Part 21

Communications equipment.

47 CFR Part 22

Communications equipment.

47 CFR Part 23

Radio.

47 CFR Part 74

Communications equipment, Radio.

47 CFR Part 81

Communications equipment, Radio.

47 CFR Part 83

Communications equipment, Radio.

47 CFR Part 87

Communications equipment, Radio.

47 CFR Part 90

Administrative practice and procedure.

47 CFR Part 95

Communications equipment, Radio.

47 CFR Part 97

Radio.

47 CFR Part 99

Radio.

Third Report and Order

In the matter of amendment of Part 2¹ of the Commission's Rules regarding implementation of the final acts of the World Administrative Radio Conference, Geneva, 1979 (General Docket No. 80-739).

Adopted: October 26, 1984.

Released: November 27, 1984.

By the Commission.

Purpose

1. The purpose of this proceeding is to implement into Part 2 of the Commission's Rules and Regulations the Final Acts of the 1979 World Administrative Radio Conference (1979 WARC). This is necessary because the

¹The proposed amendments to Part 2, Subpart C. Emissions also requires amendment to the other Rule sections as shown herein.

Final Acts of the 1979 WARC, which comprise an international treaty, became effective internationally on January 1, 1982 for administrations which ratified the treaty prior to that date and for other nations on deposit with the ITU of their instrument of ratification. The United States Senate gave its advice and consent to ratify the treaty in December 1982 and submitted it to the President who signed it on September 6, 1983. The treaty now has the force of law in the United States and we are obligated to adhere to its provisions.

2. During the period prior to ratification, the Commission prepared for national implementation by issuing five *Notices of Inquiry* (NOI's).² These *Inquiries* solicited public comment on proposed modifications to Part 2 of the Rules that we felt were necessary and appropriate to make it compatible with the Final Acts and to satisfy our domestic allocation needs. This Order is limited in scope to the issue of emission designators discussed in the *Fourth* and *Fifth NOI's*. The remaining issues of the *Fifth NOI* will be covered in appropriate rulemakings relative to specific services.

3. Rockwell International Corporation (Rockwell), American Telephone and Telegraph Company (AT&T), GTE Service Corporation (GTE), and Communications Satellite Corporation (Comsat) filed comments on the proposed emission designators in the *Fourth NOI*. M/A-COM Laboratories and Harris Corporation filed comments on the *Fifth NOI*. Neither Harris nor M/A-Com filed comments on the use of the new emission designators.

Intentions

4. The international treaty, now ratified by the United States, has the force of law in the United States, and we are obligated to adhere to its provisions. In our domestic implementation actions, we must take full account of the

²The *First Notices of Inquiry* was adopted by the Commission on November 25, 1980 (FCC 80-695, 46 FR 3060) and released on December 30, 1980. It proposed modifications to §§ 2.100 through 2.105, § 2.106 (Table of Frequency Allocations) up through 28 MHz, and the addition of § 2.107. The *Second Notice of Inquiry* was adopted by the Commission on May 21, 1981 (FCC 81-247, 46 FR 31693) and released on June 15, 1981. It proposed modifications to § 2.106 from 28 MHz through 1215 MHz. The *Third Notices of Inquiry* was adopted by the Commission on July 16, 1981 (FCC 81-323, 46 FR 40536) and released on August 7, 1981. It proposed modifications to § 2.1 (Definitions) and to § 2.106 from 1215 MHz through 40.5 GHz. The *Fourth Notice of Inquiry* was adopted by the Commission on October 1, 1981. It proposed modifications to § 2.106, from 40.5 GHz through 400 GHz, and to Subpart C of Part 2, the Emission Designators. The *Fifth Notice of Inquiry* was adopted by the Commission on May 12, 1982 (FCC 82-213), and released on June 7, 1982.

international provisions even though in some instances they do not fully agree with those that the United States had proposed. The treaty does provide some flexibility, however, through Radio Regulation 342 that states:

Administrations of the Members shall not assign to a station any frequency in derogation of either the Table of Frequency Allocations given in this Chapter or the other provisions of these Regulations, except on the express condition that harmful interference shall not be caused to services carried on by stations operating in accordance with the provisions of the Convention and these Regulations

This enables the enactment of domestic provisions different from international provisions in cases where the physical characteristics of the radio spectrum and of the domestic uses permit operations within the stated interference constraint.

5. This Order specifies appropriate modifications to Part 2, Subpart C of the FCC Rules and Regulations and other Parts of the Rules containing emission designators to implement the Final Acts of the 1979 WARC. The new emission designators proposed in the *Fourth NOI* use three symbols. The first symbol indicates the type of modulation of the main carrier, the second symbol indicates the nature of signal(s) modulating the main carrier, and the third symbol indicates the type of information to be transmitted. An optional fourth and fifth symbol are also described in Appendix 6 of the ITU Radio Regulations. The fourth and fifth symbols provide detailed information concerning the baseband frequencies rather than the radio frequencies (RF) which the first three symbols address. The fourth symbol provides such information as the type of code, error-correction, quality of sound, and the type of picture for video broadcast. The fifth symbol indicates the type of multiplexing, e.g., code-division, frequency-division, time-division, or combinations of the above.

6. Under the present system of emission designators, two symbols are normally used to identify the class of emission. In some cases, a third supplementary symbol is used. The first symbol indicates the type of modulation, and the second symbol indicates the type of transmission such as telephony.

7. In the *Fifth NOI*, it was indicated that each Bureau or Office having primary responsibility for certain parts of the Rules would propose actual changes in future proceedings for the Rules. A number of proceedings addressing the technical requirements addressed in the *Fifth NOI* have been

adopted.³ Additional proceedings will be developed to address these technical requirements on a case-by-case basis. After considering the differences between the new and present system of emission designators, it was determined that the Rule parts involving emission designators would best be changed by a single action. Therefore, this proceeding changes the emission designators in all applicable parts of the Rules.

Discussion

8. We are presenting, as Appendix A, a revision of Part 2, Subpart C and other parts of the Rules that have emission designators. The revisions to Part 2, Subpart C, are essentially the same as presented and discussed in the *Fourth NOI* with several appropriate changes arising from the comments received in response to the *Fourth NOI*. These are indicated below. The revisions to the other Rule parts should provide the appropriate new emission designators for the various emissions required.

9. All of the parties supported the proposed new emission designators. GTE summarized the issue by stating, "There appears to be no reason for maintaining a system of designation in the United States which is contrary to international practice." Rockwell, AT&T, and Comsat supported the Commission's proposal of not requiring the optional fourth and fifth symbol provided in the ITU Radio Regulations. As indicated in Rockwell's comments the world-wide replacement of the basic emission designators will be a major undertaking in itself. In light of this we have not included the fourth and fifth optional symbols. A note has been added to § 2.201 to indicate that the optional fourth and fifth symbol are provided for in the ITU Radio Regulations, but they are not required by the Commission.

10. Rockwell expressed concern over the possibility of different interpretations for specifying the emission designator for single-sideband transmitters. The Radio Regulations, as amended by the Final Acts, 1979 WARC, specify the use of A1A and F1B emissions in certain instances. A common technique for generating signals conforming to the A1A emission is to use a single-sideband transmitter operated in the suppressed carrier mode modulated with a sinusoidal frequency that is manually keyed on-off to produce an emitted radio frequency signal after translation to the operating frequency. If frequency shift keying is used to deviate the modulating frequency to a mark or

space position, the emitted radio frequency signal produced at the operating frequency conforms to an F1B emission. In that interpretation under the old system of designators the suppressed carrier was not considered as the main carrier. However, under the new system of designation, the suppressed carrier is considered as the main carrier, and the two emissions are expressed as J2A and J2B respectively.

11. We agree with Rockwell that confusion could arise in specifying certain emission designators. However, we intend to provide for maximum flexibility in the emission designators used in the Rule parts that use single-sideband transmissions. Therefore, we intend to permit the use of A1A, F1B, J2A and J2B designators to accommodate single-sideband transmitters which are widely used in the maritime mobile service (Parts 81 and 83) and the land mobile service (Part 90).

12. In § 2.202, the new system for specifying the necessary bandwidth and a table showing the calculations of necessary bandwidth for various types of emissions is shown. AT&T pointed out that the tables in Appendix 6 of the ITU Radio Regulations do not contain examples of wideband, high bit rate, digital microwave emission for telephony as currently exist in § 2.202 of the Commission's Rules. In General Docket Number 81-743 (FCC 83-110, 32846), the Commission adopted three new examples of necessary bandwidth calculations for multi-channel radio telephony transmissions. These three examples have been added to the new table in § 2.202, paragraph (g).

13. Comsat does not believe that the tables in Appendix 6 provide sufficient information to allow the determination of the peak deviation for multi-channel radio-relay carrier transmissions. Comsat suggested that the introductory material for the tables include the basic equation for deriving the peak deviation. We do not believe that it is necessary to add the basic equation for deriving the peak deviation. Docket No. 81-743 discussed the development of the multiplying factors for determining the peak deviation in detail, and a table was added to § 2.202(f) showing the multiplying factors used to derive the peak deviation for radio-relay carriers having from 12 to more than 240 circuits. The information shown in § 2.202(f) should be sufficient to determine the peak deviation.

14. Rockwell was concerned that the proposed revision to § 2.202 did not include a table for the determination of necessary bandwidth and examples of

the designation of emissions using the new symbols. This would require users of the Commission's Rules to obtain a copy of ITU Radio Regulations, and obtain copies of the International Frequency List if reference to examples of supplementary calculations published by the International Frequency Radio Board should be needed. Rockwell urged the Commission to reconsider this matter and provide all of the applicable information within Part 2 of its Rules so that it will be readily available to the many who require access to this information. The revisions shown in § 2.202, paragraph (g) should be responsive to this matter.

15. Rockwell pointed out an apparent error in Appendix 6 of the 1979 WARC Final Acts. In Appendix 6, the emission designator for a continuous wave emission with no modulating signal is given as "NONE". This is contrary to Article 4 of the Final Acts which indicates that the emission classification should be "N0N" (0 used here indicates zero). The difference between Article 4 and Appendix 6 apparently come about as a result of translating the original Article 4 to French where it appears as "NON" (the letter O), and Spanish where it appears as "ninguna" (translated as NONE in English). The Commission agrees with Rockwell that the emission designator for a continuous wave with no modulation should be "N0N" (zero) as it appears in Article 4 of the 1979 Final Acts.

16. The new emission designators also distinguished between phase (G), and frequency (F) modulation. Under the Commission's present system both phase and frequency modulated emissions are indicated by "F". Although there are differences in the methods of obtaining phase and frequency modulation the RF emission generally appears the same. Therefore, the Commission's Rules and earlier ITU emission designators did not distinguish between them. However, the ITU Radio Regulations specify phase modulation for some operations, and the new designators provide for a separate indication for such emissions. Therefore, manufacturers should begin to specify emission designators for either phase modulation (G) or frequency modulation (F) for their equipment. In the Rules we have indicated either frequency or phase modulation where the current emission designator is shown as F3. Either F3E or G3E is acceptable, except for Parts 81 and 83 where phase modulation is required and only G3E is shown. Equipment that is type accepted for Parts 81 and 83 with the F3 emission designator may continue to be used.

³ PR FCC 84-220, 49 FR 21737 amended the frequency tolerances in Part 87.

17. The emission designators F9, A9, and F9Y in the present system are the most difficult to convert to the new system. With an A9 emission designator, the A stands for amplitude modulation and the 9 stands for any type of emission not covered by other symbols. Not all A9's will be the same when they are converted to the new system. For example, the emission designator for emergency locator transmitters (ELTs) is A9 in the present system. The new emission designator for ELTs is A3X.

18. Some paging systems now use F9, F9Y, F1 or F2 as an emission designator in the present system. The new system should reduce the number of emission designators used to identify paging systems. The new emission designators F1D, F2D and F3D will identify the emissions used for paging systems. The first symbol "F" indicates frequency modulation; the second symbol indicates a single channel containing quantized or digital information without the use of a modulating subcarrier when a "1" is used, a single channel containing quantized or digital information with the use of a modulating subcarrier when a "2" is used, and a single channel containing analogue information when a "3" is used; the third symbol "D" indicates a data transmission, telemetry, or telecommand. In Part 22, there has been some confusion over the emission designators used to describe paging systems. The new emission designators should resolve this problem since the "1" and "2" both provide for quantized or digital information.

19. In General Docket No. 82-625 (See 48 FR 32991, July 20, 1983), the Commission adopted a *Report and Order* providing for the use of high frequency spectrum by the Special Industrial, Petroleum, Telephone Maintenance and Power Radio Services. The emission designator F1 (present system) was inadvertently left out of § 90.237 paragraph (g). In the body of the *Order*, F1 was listed as one of the emission types permitted. The new emission designators specified in § 90.237(g) should permit the type of emissions presently used.

20. The new system for emission designators will not require modification to equipment. It changes only the system used to identify emissions. Therefore, we are specifying only those changes necessary to conform with the new system. After April 1, 1985, all applications for new equipment authorizations (such as: Type acceptance, type approval, certification, etc.) will be expected to specify the new emission designators, and the equipment authorization grants issued by the

Commission will reflect the new emission designators. We do not propose that the grantees for existing equipment file a modification for existing equipment authorizations to change the emission designators. We realize there may be some concern since equipments in the Commission's Radio Equipment List will have the present emission designators and in the future new equipments will be identified by the new emission designators. We would like to make the transition to the new emission designators without creating a burden for the manufacturers and users of equipments approved by the Commission. We believe that any difficulties will be minimal and can be addressed on a case-by-case basis.

21. The data automation systems used in license processing are much more complicated than the one used to enter the emission designators on the equipment authorization grant, and the Commission's Radio Equipment List. The licensing divisions will be issuing Public Notices to notify licensees when license applications should be submitted with the new emission designators. Until this time, licensees should continue to use the present emission designators on license applications.

22. There are also some questions on the Amateur Radio Operator License Examinations that will have to be changed. These examination questions are revised periodically through a series of bulletins (Bulletin 1035 series). As these bulletins are periodically updated, the questions with the new emission designators may be inserted.

23. The rules modified herein do not alter the authorization of or substantive requirements imposed upon equipment manufacturers. They simply modify the Commission's nomenclature for specifying emission designators from the current method to another method specified under the International Radio Regulations. Such procedural rule changes are exempt from the notice and comment requirements of the administrative procedures act. See 5 U.S.C. 553(b)(A). Thus, a notice of proposed rulemaking was unnecessary.

24. Regarding questions on matters covered in this document contact Dan Yates (202) 653-6288.

25. Accordingly, it is ordered, That effective January 3, 1985, Parts 2, 15, 21, 22, 23, 74, 81, 83, 87, 90, 95, 97, and 99 of the Commission's Rules and Regulations are amended as set forth in the attached Appendix.

26. It is further ordered, That this proceeding is terminated.
(Secs. 4, 303, 48 stat., as amended, 1066, 1082; 47 U.S.C. 154, 303)

Federal Communications Commission.
William J. Tricarico,
Secretary.

Appendix

PART 2—[AMENDED]

A. Part 2 of Chapter I of Title 47 of the Code of Federal Regulations is amended as follows:

1. Section 2.201 is revised to read as follows:

§ 2.201 Emission, modulation, and transmission characteristics.

The following system of designating emission, modulation, and transmission characteristics shall be employed.

(a) Emissions are designated according to their classification and their necessary bandwidth.

(b) A minimum of three symbols are used to describe the basic characteristics of radio waves. Emissions are classified and symbolized according to the following characteristics:

- (1) First symbol—type of modulation of the main character;
- (2) Second symbol—nature of signal(s) modulating the main carrier;
- (3) Third symbol—type of information to be transmitted.

Note.—A fourth and fifth symbol are provided for additional information and are shown in Appendix 6, Part A of the ITU Radio Regulations. Use of the fourth and fifth symbol is optional. Therefore, the symbols may be used as described in Appendix 6, but are not required by the Commission.

(c) First Symbol—types of modulation of the main carrier:

- (1) Emission of an unmodulated carrier..... N
- (2) Emission in which the main carrier is amplitude-modulated (including cases where sub-carriers are angle-modulated):
 - Double-sideband..... A
 - Single-sideband, full carrier..... H
 - Single-sideband, reduced or variable level carrier..... R
 - Single-sideband, suppressed carrier..... J
 - Independent sidebands..... B
 - Vestigial sideband..... C
- (3) Emission in which the main carrier is angle-modulated:
 - Frequency modulation..... F
 - Phase modulation..... G

NOTE.—Whenever frequency modulation "F" is indicated, Phase modulation "G" is also acceptable.

- (4) Emission in which the main carrier is amplitude and angle-modulated either simultaneously or in a pre-established sequence..... D
- (5) Emission of pulses:¹
 - Sequence of unmodulated pulses..... P
 - A sequence of pulses:
 - Modulated in amplitude..... K
 - Modulated in width/duration..... L
 - Modulated in position/phase..... M
 - In which the carrier is angle-modulated during the period of the pulse..... Q
 - Which is a combination of the foregoing or is produced by other means..... V
- (6) Cases not covered above, in which an emission consists of the main carrier modulated, either simultaneously or in a pre-established sequence, in a combination of two or more of the following modes: amplitude, angle, pulse..... W

(7) Cases not otherwise covered..... X

¹ Emissions where the main carrier is directly modulated by a signal which has been coded into quantized form (e.g. pulse code modulation) should be designated under (2) or (3).

(d) Second Symbol—nature of signal(s) modulating the main carrier:

- (1) No modulating signal..... 0
- (2) A single channel containing quantized or digital information without the use of a modulating sub-carrier, excluding time-division multiplex..... 1
- (3) A single channel containing quantized or digital information with the use of a modulating sub-carrier, excluding time-division multiplex..... 2
- (4) A single channel containing analogue information..... 3
- (5) Two or more channels containing quantized or digital information..... 7
- (6) Two or more channels containing analogue information..... 8
- (7) Composite system with one or more channels containing quantized or digital information, together with one or more channels containing analogue information..... 9
- (8) Cases not otherwise covered..... X

(e) Third Symbol—type of information to be transmitted:²

- (1) No information transmitted..... N
- (2) Telegraphy—for aural reception..... A
- (3) Telegraphy—for automatic reception..... B
- (4) Facsimile..... C
- (5) Data transmission, telemetry, telecommand..... D
- (6) Telephony (including sound broadcasting)..... E
- (7) Television (video)..... F
- (8) Combination of the above..... W
- (9) Cases not otherwise covered..... X

(f) Type B emission: As an exception to the above principles, damped waves are symbolized in the Commission's rules and regulations as type B emission. The use of type B emissions is forbidden.

(g) Whenever the full designation of an emission is necessary, the symbol for that emission, as given above, shall be

preceded by the necessary bandwidth of the emission as indicated in §2.202(b)(1).

2. Section 2.202 is amended by adding paragraphs (1), (2), and (3) to paragraph (b), and revising paragraphs (e) and (g) to read as follows:

§ 2.202 Bandwidths.

- (b) * * *
- (1) The necessary bandwidth shall be expressed by three numerals and one letter. The letter occupies the position of the decimal point and represents the unit of bandwidth. The first character shall be neither zero nor K, M or G.
- (2) Necessary bandwidths:
 - between 0.001 and 999 Hz shall be expressed in Hz (letter H);
 - between 1.00 and 999 kHz shall be expressed in kHz (letter K);
 - between 1.00 and 999 MHz shall be expressed in MHz (letter M);
 - between 1.00 and 999 GHz shall be expressed in GHz (letter G).

- (3) Examples:
 - 0.002 Hz—H002
 - 0.1 Hz—H100
 - 25.3 Hz—25H3
 - 400 Hz—400H
 - 2.4 kHz—2K40
 - 6 kHz—6K00
 - 12.5 kHz—12K5
 - 180.4 kHz—180K
 - 180.5 kHz—181K
 - 180.7 kHz—181K
 - 1.25 MHz—1M25
 - 2 MHz—2M00
 - 10 MHz—10M0
 - 202 MHz—202M

5.65 GHz—5G65

(e) In the formulation of the table in paragraph (g) of this section, the following terms are employed:

- B_n = Necessary bandwidth in hertz
- B = Modulation rate in bauds
- N = Maximum possible number of black plus white elements to be transmitted per second, in facsimile
- M = Maximum modulation frequency in hertz
- C = Sub-carrier frequency in hertz
- D = Peak frequency deviation, i.e., half the difference between the maximum and minimum values of the instantaneous frequency. The instantaneous frequency in hertz is the time rate of change in phase in radians divided by 2
- t = Pulse duration in seconds at half-amplitude
- t_r = Pulse rise time in seconds between 10% and 90% of maximum amplitude
- K = An overall numerical factor which varies according to the emission and which depends upon the allowable signal distortion.
- N_c = Number of baseband telephone channels in radio systems employing multichannel multiplexing
- P = Continuity pilot sub-carrier frequency (Hz) (continuous signal utilized to verify performance of frequency-division multiplex systems).

(g) Table of necessary bandwidths:

Description of emission	Necessary bandwidth		Designation of emission
	Formula	Sample calculation	
I. NO MODULATING SIGNAL			
Continuous wave emission			NON (zero)
II. AMPLITUDE MODULATION			
1. Signal With Quantized or Digital Information			
Continuous wave telegraphy	$B_n = BK$, $K=5$ for fading circuits, $K=3$ for non-fading circuits	25 words per minute; $B=20$, $K=5$, Bandwidth: 100 Hz	100HA1A
Telegraphy by on-off keying of a tone modulated carrier	$B_n = BK + 2M$, $K=5$ for fading circuits, $K=3$ for non-fading circuits	25 words per minute; $B=20$, $M=1000$, $K=5$, Bandwidth: 2100 Hz = 2.1 kHz	2K10A2A
Selective calling signal, single-sideband full carrier	$B_n = M$	Maximum code frequency is: 2110 Hz, $M=2110$, Bandwidth: 2110 Hz = 2.11 kHz	2K11H2B
Direct-printing telegraphy using a frequency shifted modulating sub-carrier single-sideband suppressed carrier	$B_n = 2M + 2DK$, $M=B/2$	$B=50$, $D=35$ Hz (70 Hz shift), $K=1.2$, Bandwidth: 134 Hz	134HJ2B
Telegraphy, single sideband reduced carrier	$B_n = \text{central frequency} + M + DK$, $M=B/2$	15 channels; highest central frequency is: 2805 Hz, $B=100$, $D=42.5$ Hz (85 Hz shift), $K=0.7$ Bandwidth: 2.885 Hz = 2.885 kHz	2K69R7B
2. Telephony (Commercial Quality)			
Telephony double-sideband	$B_n = 2M$	$M=3000$, Bandwidth = 6000 Hz = 6 kHz	6K00A3E
Telephony, single-sideband, full carrier	$B_n = 2M$	$M=3000$, Bandwidth: 3000 Hz = 3 kHz	3K00H3E

² In this context the word "information" does not include information of a constant, unvarying nature such as is provided by standard frequency emissions, continuous wave and pulse radars, etc.

Description of emission	Necessary bandwidth		Designation of emission
	Formula	Sample calculation	
Telephony, single-sideband suppressed carrier	$B_n = M$ —lowest modulation frequency	$M = 3000$, lowest modulation frequency is 3000 Hz, 2700 Hz Bandwidth: 2700 Hz = 2.7 kHz	2K70J3E
Telephony with separate frequency modulated signal to control the level of demodulated speech signal, single-sideband, reduced carrier	$B_n = M$	Maximum control frequency is 2990 Hz, $M = 2990$, Bandwidth: 2990 Hz = 2.99 kHz	2K99R3E
Telephony with privacy, single-sideband, suppressed carrier (two or more channels)	$B_n = N_c M$ —lowest modulation frequency in the lowest channel	$N_c = 2$, $M = 3000$ lowest modulation frequency is 250 Hz, Bandwidth: 5750 Hz = 5.75 kHz	5K75J8E
Telephony, independent sideband (two or more channels)	$B_n = \text{sum of } M \text{ for each sideband}$	2 channels, $M = 3000$, Bandwidth: 6000 Hz = 6 kHz	6K00B8E

3. Sound Broadcasting

Sound broadcasting, double-sideband	$B_n = 2M$, M may vary between 4000 and 10000 depending on the quality desired	Speech and music, $M = 4000$, Bandwidth: 8000 Hz = 8 kHz	8K00A3E
Sound broadcasting, single-sideband reduced carrier (single channel)	$B_n = M$, M may vary between 4000 and 10000 depending on the quality desired	Speech and music, $M = 4000$, Bandwidth: 4000 Hz = 4 kHz	4K00R3E
Sound broadcasting, single-sideband, suppressed carrier	$B_n = M$ —lowest modulation frequency	Speech and music, $M = 4500$, lowest modulation frequency = 50 Hz, Bandwidth: 4450 Hz = 4.45 kHz	4K45J3E

4. Television

Television, vision and sound	Refer to CCIR documents for the bandwidths of the commonly used television systems	Number of lines = 525; Nominal video bandwidth: 4.2 MHz, Sound carrier relative to video carrier = 4.5 MHz Total vision bandwidth: 5.75 MHz; FM aural bandwidth including guardbands: 250,000 Hz Total bandwidth: 6 MHz	5M75C3F 250K3E 6M25C3F
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5. Facsimile

Analogue facsimile by sub-carrier frequency modulation of a single-sideband emission with reduced carrier	$B_n = C - N + 2 + DK$, $K = 1.1$ (typically)	$N = 1100$, corresponding to an index of cooperation of 352 and a cypher rotation speed of 60 rpm. Index of cooperation is the product of the drum diameter and number of lines per unit length $C = 1900$, $D = 400$ Hz, Bandwidth = 2.890 Hz = 2.89 kHz	2K89R3C
Analogue facsimile; frequency modulation of an audio frequency sub-carrier which modulates the main carrier, single-sideband suppressed carrier	$B_n = 2M + 2DK$, $M = N/2$, $K = 1.1$ (typically)	$N = 1100$, $D = 400$ Hz, Bandwidth: 1960 Hz = 1.96 kHz	1K98J3C

6. Composite Emissions

Double-sideband, television relay	$B_n = 2C + 2M + 2D$	Video limited to 5 MHz, audio on 6.5 MHz frequency modulated subcarrier deviation = 50 kHz; $C = 6.5 \times 10^4$, $D = 50 \times 10^3$ Hz, $M = 15,000$, Bandwidth: 13.13×10^4 Hz = 13.13 MHz	13M2A8W
Double-sideband radio relay system	$B_n = 2M$	10 voice channels occupying baseband between 1 kHz and 164 kHz; $M = 164,000$ bandwidth = 328,000 Hz = 328 kHz	328KA8E
Double-sideband emission of VOR with voice (VOR = VHF omnidirectional radio range)	$B_n = 2C_{max} + 2M + 2DK$, $K = 1$ (typically)	The main carrier is modulated by: —a 30 Hz sub-carrier—a carrier resulting from a 9960 Hz tone frequency modulated by a 30 Hz tone—a telephone channel—a 1020 Hz keyed tone for continual Morse identification. $C_{max} = 9960$, $M = 30$, $D = 480$ Hz, Bandwidth: 20,940 Hz = 20.94 kHz	20K9A9W
Independent sidebands; several telegraph channels together with several telephone channels	$B_n = \text{sum of } M \text{ for each sideband}$	Normally composite systems are operated in accordance with standardized channel arrangements, (e.g. CCIR Rec. 348-2) 3 telephone channels and 15 telegraphy channels require the bandwidth 12,000 Hz = 12 kHz	12K0B9W

III-A. FREQUENCY MODULATION

1. Signal With Quantized or Digital Information

Telegraphy without error-correction (single channel)	$B_n = 2M + 2DK$, $M = B \div 2$, $K = 1.2$ (typically)	$B = 100$, $D = 85$ Hz (170 Hz shift), Bandwidth: 304 Hz	304HF1B
Four-frequency duplex telegraphy	$B_n = 2M + 2DK$, $B = \text{Modulation rate in bands of the faster channel. If the channels are synchronized: } M = B \div 2$, otherwise $M = 2B$, $K = 1.1$ (typically)	Spacing between adjacent frequencies = 400 Hz; Synchronized channels; $B = 100$, $M = 50$, $D = 600$ Hz, Bandwidth: 1420 Hz = 1.42 kHz	1K42F7B

2. Telephony (Commercial Quality)

Commercial telephony	$B_n = 2M + 2DK$, $K = 1$ (typically, but under conditions a higher value may be necessary)	For an average case of commercial telephony, $M = 3,000$, Bandwidth: 16,000 Hz = 16 kHz	16K0F3E
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3. Sound Broadcasting

Sound broadcasting	$B_n = 2M + 2DK$, $K = 1$ (typically)	Monaural, $D = 75,000$ Hz, $M = 15,000$, Bandwidth: 18,000 Hz = 18 kHz	18K0F3E
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Description of emission	Necessary bandwidth		Designation of emission
	Formula	Sample calculation	
4. Facsimile			
Facsimile by direct frequency modulation of the carrier; black and white	$B_n = 2M + 2DK, M = N + 2, K = 1.1$ (typically)	$N = 1100$ elements/sec; $D = 400$ Hz, Bandwidth: 1980 Hz = 1.98 kHz	1K98F1C
Analogue facsimile	$B_n = 2M + 2DK, M = N + 2, K = 1.1$ (typically)	$N = 1100$ elements/sec; $D = 400$ Hz, Bandwidth: 1980 Hz = 1.98 kHz	1K98F3C
5. Composite Emissions (See Table III-B)			
Radio-relay system, frequency division multiplex	$B_n = 2P + 2DK, K = 1$	Microwave radio relay system specifications: 60 telephone channels occupying baseband between 60 and 300 kHz; rms per-channel deviation 200 kHz; pilot at 331 kHz produces 200 kHz rms deviation of main carrier. Computation of $B_n: D = (200 \times 10^3) \times 3 \times 3.76 \times 1.19$, Hz = 0.895×10^6 , $P = 0.331 \times 10^6$ Hz; Bandwidth: 2.452×10^6 Hz	2M45F8E
Radio-relay system frequency division multiple	$B_n = 2M + 2DK, K = 1$	Microwave radio relay systems specifications: 1200 telephone channels occupying baseband between 60 and 5564 kHz; rms per channel deviation 200 kHz; continuity pilot at 6199 kHz produces 140 kHz rms deviation of main carrier. Computation of $B_n: D = (200 \times 10^3) \times 3.76 \times 3.63 = 2.73 \times 10^6$, $M = 5.64 \times 10^4$ Hz; $P = 6.2 \times 10^4$ Hz; $(2M + 2DK) < 2P$; Bandwidth 16.59×10^6 Hz	18M6F8E
Radio-relay system, frequency division multiplex	$B_n = 2P$	Microwave radio relay system specifications: Multiplex 600 telephone channels occupying baseband between 60 and 2540 kHz; continuity pilot at 8500 kHz produces 140 kHz rms deviation of main carrier. Computation of $B_n: D = (200 \times 10^3 \times 3.76 \times 2.565) = 1.93 \times 10^6$ Hz; $M = 2.54 \times 10^4$ Hz; $2DK < 2P$ Bandwidth: 17×10^6 Hz	17M0F8E
Unmodulated pulse emission	$B_n = 2K + t, K$ depends upon the ratio of pulse rise time. Its value usually falls between 1 and 10 and in many cases it does not need to exceed 6	Primary Radar Range resolution: 150 m, $K = 1.5$ (triangular pulse where $t = t_r$, only components down to 27 dB from the strongest are considered) Then $t = 2 \times$ range resolution \div velocity of light = $2 \times 150 \div 3 \times 10^8 = 1 \times 10^{-6}$ seconds, Bandwidth: 3×10^6 Hz = 3 MHz	3M00P0N
2. Composite Emissions			
Radio-relay system	$B_n = 2K + t, K = 1.6$	Pulse position modulated by 36 voice channel baseband, pulse width at half amplitude = 0.4 us, Bandwidth: 8×10^6 Hz = 8 MHz (Bandwidth independent of the number of voice channels)	8M00M7E

PART 15—[AMENDED]

B. Part 15 of Chapter I of Title 47 of the Code of Federal Regulations is amended as follows:

§ 15.116 [Amended]

3. Section 15.116 is amended by changing "(F3 or A3)" to "(F3E, G3E or A3E)" and "(A1)" to "(A1A or A1B)" in paragraph (a) of this section.

PART 21—[AMENDED]

C. Part 21 of Chapter I of Title 47 of the Code of Federal Regulations is amended as follows:

§ 21.104 [Amended]

4. Section 21.104 is amended by changing 'F0 and A0' to 'N0N' in paragraph (b) of this section.

5. Section 21.105 is revised as follows:

§ 21.105 Bandwidth.

Each authorization issued pursuant to these rules will show, as the emission designator, a symbol representing the class of emission which shall be

prefixed by a number specifying the necessary bandwidth. This figure does not necessarily indicate the bandwidth actually occupied by the emission at any instant. In those cases where Part 2 of this chapter does not provide a formula for the computation of the necessary bandwidth, the occupied bandwidth may be used in the emission designator.

6. Section 21.121 is amended by revising paragraph (c)(3) to read as follows:

§ 21.121 Replacement of equipment.

(c) * * *
 (3) Name of the Manufacturer and the FCC ID number of the transmitter installed.

7. Section 21.703 is amended by revising the table in paragraph (e) as follows:

§ 21.703 Bandwidth and emission limitations.

(e) * * *

Type of emission	50-150 MHz		15-500 MHz	
	Authorized bandwidth (kHz)	Frequency deviation (kHz)	Authorized bandwidth (kHz)	Frequency deviation (kHz)
A1A.....	1		1	
A2A.....	3		3	
A3E.....	8		8	
F1B.....	3		3	
F2B.....	15		15	
F3E or G3E...	40	15	20	5

§ 21.704 [Amended]

8. Section 21.704 is amended by changing "A3" to "A3E", and "F3" to "F3E or (G3E)" in paragraph (b) of this section.

§ 21.804 [Amended]

9. Section 21.804 is amended by changing "A3" to "A3E", and "F3" to "F3E or (G3E)" in the table in paragraph (c) of this section.

§ 21.90 [Amended]

10. Section 21.905 is amended by changing "(A5C)" to "(C3F)" and "(F3)"

to "(F3E) or (G3E)" in paragraph (a) of this section.

PART 22—[AMENDED]

D. Part 22 of Chapter I of Title 47 of the Code Federal Regulations is amended as follows:

11. Section 22.104 is amended by revising paragraph (a)(1) and adding a new paragraph (a)(2) and redesignating existing paragraphs (a)(2) as (a)(3), and (a)(3) as (a)(4).

§ 22.104 Emission types.

(a) * * *
 (1) Emissions authorized to stations in the public land mobile, rural radio, and offshore radio services include but are not limited to F1D, F1E, F2D, F3C, and F3E.

(2) Emissions for tone signals or signaling devices whose sole functions are to establish and to maintain communications are included under the authorized emissions. These emissions must be within the authorized bandwidth and do not have to be listed separately

12. Section 22.507 is revised to read as follows:

§ 22.507 Bandwidth and emission limitations.

The maximum authorized band-width of emission and, for the cases of frequency or phase modulated emissions, the maximum authorized frequency deviation shall be as follows:

Type of emission	25-50 MHz		50-150 MHz		150-932 MHz	
	Authorized band width (kHz)	Frequency deviation (kHz)	Authorized band width (kHz)	Frequency deviation (kHz)	Authorized band width (kHz)	Frequency deviation (kHz)
A2D	3		3		3	
A3E	6				8	
F1D	20		20		20	
F1E	20	5	20	5	20	5
F2D	15		15		15	
F3E	20	5	20	5	20	5

§ 22.508 [Amended]

13. Section 22.508 is amended by changing "A3" to "A3E", and "F3" to "F3E" in paragraph (e), "A3" to "A3E", and "F3" to "F3E" in paragraph (f), and "A3" to "A3E", and "F3" to "F3E" in paragraph (g) of this section.

§ 22.601 [Amended]

14. Section 22.601 is amended by changing "F9Y" to "F1D" in paragraph (f)(4) of this section.

15. Section 22.604 is amended by revising the table in paragraph (a) as follows:

§ 22.604 Emission limitations.

(a) * * *

Type of emission	Authorized bandwidth (kHz)	Frequency deviation (kHz)
A2D	3	
A3C	12	
A3E	8	
F1D	20	5
F1E	20	5
F2D	15	
F3C	20	5
F3E	20	5

§ 22.605 [Amended]

16. Section 22.605 is amended by changing "A3" to "A3E", and "F3" to "F3E", in paragraph (d), and "A3" to

"A3E", and "F3" to "F3E" in paragraph (e), and "A3" to "A3E", and "F3" to "F3E" in paragraph (f) of this section.

§ 22.906 [Amended]

17. Section 22.906 is amended by changing "F3" to "F3E" in paragraph (a) and paragraphs (a)(1), (a)(4) and (a)(5) appears twice: "F9" to "F3D" in paragraph (b); and "F9Y" to "F1D" in paragraph (c) of this section.

§ 22.907 [Amended]

17a. Section 22.907 is amended by changing "F3" to "F3E" in paragraph (a), paragraphs (a)(1) and (a)(2); "F9" to "F3D" (appears twice), and "F9Y" to "F1D" in paragraph (a)(3); "F3" to "F3E" in paragraphs (b), (c) and (c)(3); "F9Y" to "F1D" in paragraph (d); "F9" to "F3D" in paragraphs (g) and (h); "F3" to "F3E" in paragraph (j)(1); "F9Y" to "F1D" and "F9" to "F3D" in paragraph (j)(2) of this section.

§ 22.1003 [Amended]

18. Section 22.1003 is amended by changing, "F3" to "F3E" in paragraphs (a) and (c).

Frequency (MHz)	Authorized bandwidth (kHz)	Maximum frequency deviation ¹ (kHz)	Type of emission ²
25.87 to 26.03	40	10	A3E, F3E, G3E, F8W, G8W.
26.07 to 26.47	20	5	A3E, F3E, G3E, F8W, G8W.
152.87 to 153.35 ⁴	30%	3%	A1A, A2A, A3E, F1B, J3E, F2B, F3E, G3E, F8W, G8W.

§ 22.1004 [Amended]

19. Section 22.1004 is amended by changing "F3" to "F3E" in paragraphs (c) and (d) of this section.

PART 23—[AMENDED]

E. Part 23 of Chapter I of Title 47 of the Code of Federal Regulations is amended as follows:

§ 23.1 [Amended]

20. Section 23.1 is amended by changing the emissions in the definition of radiotelegraph from "A0", A1, A2, A4, F1, F2, and F4" to "N0N, A1A, A2A, A3C, F1B, F2B, and F3C"; and the emissions in the definition of radiotelephone from "(A3), single sideband * * * (A3B) transmission" to "(A3E), single sideband (R3E, H3E, J3E) or independent sideband (B3E) transmission".

21. Section 23.12 is revised as follows:

§ 23.12 Use of radiotelegraph emissions by radiotelephone stations.

The licensee of a point-to-point radiotelephone station may be authorized to use type N0N, A1A, A2A, F1B, or F2B emission for identification, for test purposes or for the exchange of service messages.

22. Section 23.14 is amended by revising paragraph (b) as follows:

§ 23.14 Emission, bandwidth, modulation and transmission characteristics.

(b) *Designation of emissions in authorizations.* The emission designations used in authorizations will indicate only the maximum value of the necessary bandwidth for each type of modulation authorized.

PART 74—[AMENDED]

F. Part 74 of Chapter I of Title 47 of the Code of Federal Regulations is amended as follows:

23. Section 74.462 is amended by revising the table and footnotes 1 and 2 in paragraph (b) as follows:

§ 74.462 Authorized bandwidth and emissions.

(b) * * *

Frequency (MHz)	Authorized bandwidth (kHz)	Maximum frequency deviation ¹ (kHz)	Type of emission ²
160.89 to 161.37	60	10	A1A, A2A, A3E, F1B, J3E, F2B, F3E, G3E, F8W, G8W.
161.64 to 161.76	30	5	A1A, A2A, A3E, F1B, J3E, F2B, F3E, G3E, F8W, G8W.
166.25 to 170.15	25	5	A1A, A2A, A3E, F1B, J3E, F2B, F3E, G3E, F8W, G8W.
450.01 to 455.99 (10 kHz channels)	10	1.5	A1A, A2A, A3E, F1B, J3E, F2B, F3E, G3E, F8W, G8W.
450.0875 to 455.6125 (25 kHz channels)	25	5	A1A, A2A, A3E, F1B, J3E, F2B, F3E, G3E, F8W, G8W.
450.05 to 455.85 (50 kHz channels)	50	10	A1A, A2A, A3E, F1B, J3E, F2B, F3E, G3E, F8W, G8W.
450.925 to 455.925 (100 kHz channels)	100	35	A1A, A2A, A3E, F1B, J3E, F2B, F3E, G3E, F8W, G8W.

¹ Applies where class F1B, F2B, F3E, G3E, F8W, or G8W emission is used.
² Stations operating above 450 MHz shall show a need for employing A1A, A2A, F1B, or F2B emission.

§ 81.132 Authorized classes of emissions.

(a) Unless otherwise specified in the station license or in this part, stations are authorized to employ classes of emission as follows:

Frequency band	Classes of emission
(1) Coast stations using telegraphy:	
(i) 14 to 160 kHz	A1A.
(ii) 160 to 490 kHz	A1A, A2A or H2A for distress, urgency and safety signals or any communications preceded by one of these signals.
(iii) 490 to 535 kHz	A1A and A2A, or H2A.
(iv) 2035 to 27,500 kHz	(A1A on frequencies listed in § 81.204(c); and only as authorized by the Commission on frequencies listed in § 81.206; and F3C or J3C on frequencies referred to in § 81.230.

§ 74.736 [Amended]

24. Section 74.736 is amended by changing "(A5)" to "(A8W)" and "(F3)" to "(F3E) or (G3E)" in paragraph (a) of this section.

§ 74.936 [Amended]

25. Section 74.936 is amended by changing "(A5)" to "(C3F)" and "(F3)" to "(F3E) or (G3E)" in paragraph (a) of this section.

26. Section 74.1236 is amended by revising paragraph (a) as follows:

§ 74.1236 Emission and bandwidth

(a) The licensee of a station authorized under this subpart authorizes the transmission of F3E or other types of frequency modulation upon a showing of need as long as the emission complies with the requirements in paragraphs (b), (c) and (d) of this section.

PART 81—[AMENDED]

G. Part 81 of Chapter I of Title 47 of the Code of Federal Regulations is amended as follows:

27. Section 81.131 is amended by revising paragraphs (b), (d), and (g) as follows:

§ 81.131 Authorized frequency tolerance.

(b) Authorized frequency tolerances for coast stations operating on frequencies below 30 MHz and for marine utility stations:

Frequency ranges	Tolerance—parts in 10 ⁶ unless shown in Hertz (Hz)
(1) From 14 to 525 kHz:	
(i) For H2B emissions	20 Hz
(ii) For all other emission	200
(2) From 1605 to 4000 kHz:	
(i) For R3E, J3E, J3C, and F3C emissions	20 Hz
(ii) For all other emissions	50

Frequency ranges	Tolerance—parts in 10 ⁶ unless shown in Hertz (Hz)
(3) From 4000 to 27,500 kHz:	
(i) For R3E, B3E, J3E, and F3C emissions	15 Hz
(ii) For narrow-band direct printing telegraphy and data transmission systems	20 Hz
(iii) For other than (i) and (ii) above	15 Hz

(d) Authorized frequency tolerances for stations in the maritime fixed services:

Frequency or frequency ranges	Tolerance—parts in 10 ⁶ unless shown in Hertz (Hz)
(1) From 2000 to 2850 kHz: Marine fixed stations and marine receiver-test stations:	
(i) For other than R3E, and J3E emissions	50
(ii) For R3E, and J3E emissions	20 Hz
(2) From 72 to 76 MHz:	
(i) 72.0-73.0 MHz and 75.4-76.0 MHz	5
(ii) 73.00-74.6 MHz	50
(3) From 100-200 MHz: Marine receiver test stations. For stations licensed to operate with a carrier power:	
(i) Below 3 watts	10
(ii) 3 to 100 watts	5
(iii) Above 100 watts	2.5

(g) Authorized frequency tolerances for Alaska-public fixed and Alaska-private station:

Frequency ranges	Tolerance—parts in 10 ⁶ unless shown in Hertz (Hz)
(1) From 50 to 525 kHz	200
(2) From 1605 to 3400 kHz:	
(i) For R3E, H3E, and J3E emissions	20
(ii) For other than R3E, H3E, and J3E emissions	50
(3) From 4000 to 12,000 kHz:	
(i) For R3E, H3E and J3E emissions	20 Hz
(ii) For all other emissions	15

28. Section 81.132 is revised as follows:

(2) Coast stations using radio telephony:	
(i) For frequencies below 23 MHz in § 81.304(a):	J3E as specified in § 81.304(c).
(ii) All other frequencies	A3E, R3E, H3E, or J3E as specified in § 81.304 and § 81.361.
(iii) For frequencies in the band 156 to 162 MHz: 156.850, 161.825, 161.875, 161.925, and 161.975 MHz.	G3E, and when assigned to stations in an automated multistation system, G2B and G3C. The authorized bandwidth for G2B and G3C emissions will be the same as for G3E as specified in § 81.133.
(iv) All other frequencies	G3E.
(3) Marine fixed and Marine receiver-test stations:	
(i) 2000-2350 kHz, except for 2182 kHz.	R3E and J3E.
(ii) 2182 kHz	J3E.
(4) Operational fixed stations:	A1A, A2A, A3E, F1B, F2B, G3E.
(5) Stations using radar transmitters only: Above 2400 MHz.	PON.
(6) Alaska fixed stations:	
(i) For radiotelegraphy: 1605 to 12,000 kHz	A1A.
14 to 160 kHz	F1B.
4000 to 12,000 kHz	
(ii) For telephony	R3E, or J3E as specified in § 81.708.
(7) For IWCS Stations:	
(i) radiotelegraphy	G1B, G3C.
(ii) radiotelephony	G3E.

(b) Authorization to use radiotelephone emission is construed to include use of telegraphy (including keying only the modulating audio frequency), tone signals, and signalling devices for the sole purpose of establishing or maintaining voice communications.

(c) In telegraphic communication A2A emission is permissible only by keying a carrier modulated by an audio frequency.

(d) Authorization to use H3E, R3E, or J3E emission is limited to emitting a carrier, for H3E at a power level between 3 and 6 decibels below peak envelope power, for R3E at a power level of 18 decibels, ±2 decibels, below peak envelope power; and, for J3E at a power level at least 40 decibels below peak envelope power.

(e) Emissions other than those listed in paragraph (a) of this section, and emissions for other frequency bands, may be authorized upon a satisfactory showing of need therefor. An application requesting such special authorization shall fully describe the emission desired and state the purpose for which the emission is proposed.

(f) For the purpose of the part, A3E emission is double sideband telephony; R3E emission is single sideband, reduced carrier; H3E is single sideband, full carrier; and J3E emission is single sideband, suppressed carrier.

Note.—For information regarding the classification of emissions and the calculation of the bandwidth, see Part 2 of this chapter.

Equipment employing phase modulation and shown in the Radio Equipment List with an F3 emission designator may be used where a G3E designator is specified in this part.

(g) For the purpose of this part J3C emission means facsimile transmitted by a suppressed carrier single sideband, carrier modulated with a frequency-shifted audio frequency subcarrier.

29. Section 81.133 is amended by revising the table and footnotes in paragraph (a), and paragraph (c) as follows:

§ 81.133 Authorized bandwidth.

Classes of emission	Emission designator	Authorized bandwidth (kilohertz)
A1A	160HA1A	0.4
A2B	2K66A2B	2.8
A3E	6K00A3E	8.0
F1B	3D0HF1B	15.0
F1B	16K0F1B	20.0
G3E	16K0G3E	20.0
G3C	16K0G3C	20.0
F3C	2K80F3C	3.0
P0N	Variable ¹	Variable
R3E	2K80R3E	3.0
H3E	2K80H3E	3.0
J3E	2K80J3E	3.0
J3C	2K80J3C	3.0

¹ Narrow-band direct-printing telegraph and data transmission systems.
² Radioteletypewriter in the band 216-220 MHz.
³ Applicable when maximum authorized frequency deviation is 5 kHz.
⁴ Facsimile in the band 216-220 MHz.
⁵ Facsimile in the band 2035 to 27,500 kHz.
⁶ Transmitters type accepted prior to December 31, 1969, for emissions A3A, A3H, and A3J and an authorized bandwidth of 3.5 kHz may continue to be operated. These transmitters will not be authorized in new installations.
⁷ The letters "K, L, M, Q, V, W, and X" may also be used in place of the letter "P" for pulsed radars.

(c) For G3E emission the maximum authorized frequency deviation is as follows:

30. Section 81.134 is amended by revising paragraphs (a)(1), (a)(2), (a)(3)(i), (c)(1), (d), (e), (f), (g), (h), and (i) as follows:

§ 81.134 Transmitter power.

- (a) * * *
- (1) For emissions R3E, B3E, H3E, and J3E: Peak envelope power (see § 81.8);
- (2) For G3E emission in the band 156-162 MHz: Carrier Power (see § 81.8);

Note.—For the purposes of this section, one half of the rated plate input power is the rated carrier power of those transmitters in the range 156-162 MHz for which the output power is not shown in the Commission's Radio Equipment List.

- (3) * * *
- (i) Total plate input power to the final radio stage (without modulation present for A3E emission); or

- (c) * * *
- (1) For carrier frequencies other than 2638 kHz and those frequencies specified in § 81.360(e):

Frequency band (kHz)	Class of station	Class of emission	Transmitter power
2000 to 4000 ¹	Any	R3E, J3E	800 watts by day, 400 watts by night.
4000 to 27500.	Class I Class II	R3E, J3E R3E, J3E	50 kilowatts. 1000 watts.

¹ When using 2182 for purposes other than distress calls and distress traffic, and urgency and safety signals and messages, the carrier power of limited coast stations shall not exceed 50 watts for J3E emission.

(d) Transmitter power for coast and marine utility stations using G3E emission on any frequency within the 156-162 MHz band shall be the minimum necessary for the service to be provided and shall not exceed the indicated values:

Frequency band (megahertz)	Carrier power (watts) ²	
	Coast stations ³	Marine utility stations
156.2625 to 157.4375	50	10
161.575 to 162.0125	50	

² Higher power may be authorized where a satisfactory showing of need has been made.
³ Where losses are incurred in the transmission system between transmitter output terminals and input terminals to the antenna, higher power may be used to compensate for the losses in that transmission system. However, power into the input terminals of the antenna shall not exceed 50 W.

(e) For marine fixed and marine receiver-tested stations, transmitter power shall not exceed 150 watts for R3E and J3E emissions and 50 watts for G3E emissions.

(f) For operational fixed stations using frequencies within the band 72 to 76 MHz, and for other classes of stations subject to this part operating on frequencies above 174 MHz, transmitter power shall be as specified in the respective station authorization.

(g) For coast stations in the Alaska area, transmitter power in the bands

below 12,000 kHz shall not exceed the indicated values:

Frequency band (kHz)	Class of emission	Transmitter power (watts)
400-525	A1A and A3E or H3E	265
1605-12,000 ¹	A1A R3E and J3E	150

¹ When using 2182 kHz for purposes other than distress calls and distress traffic, and urgency and safety signals and messages, the carrier power of limited coast stations shall not exceed 50 watts for J3E emission.

(h) For Alaska-private fixed stations, unless otherwise specified in this Part, transmitter power shall not exceed the indicated value:

Frequency band (kHz)	Class of emission	Transmitter power (watts)
10-200	A1A	650
400-525	A1A and A2A, or H2A	265
1605-12,000	A1A, A3E, R3E, H3E, and J3E	150

² Higher power may be authorized where a satisfactory showing of need has been made.

(i) For Alaska-public fixed and coast stations, transmitter power shall not exceed the indicated value:

Frequency band (kHz)	Class of emission	Transmitter power (watts)
400-525	A1A, and A2A, or H2A	1,000
1605-12,000	A3E, R3E, H3E and J3E.	1,000

§ 81.137 [Amended]

31. Section 81.137 is amended by changing "(A3J)" to "(J3E)" and "(A4J emission)" to "(J3C emission)" in paragraph (f).

§ 81.139 [Amended]

32. Section 81.139 is amended by changing "A3" to "A3E", "A3H" to "H3E", and "A3J" to "J3E" in paragraph (b)(5).

§ 81.140 [Amended]

33. Section 81.140 is amended by changing "A3A" to "R3E", "A3H" to "H3E", and "A3J" to "J3E" in paragraphs (a)(1) and (a)(2).

34. Section 81.142 is amended by revising paragraphs (a), (b), (c)(1), (c)(2), (c)(3), and paragraph (f) as follows:

§ 81.142 Modulation requirements.

(a) Transmitters using A3E emission shall be capable of proper technical operation with modulation of 75 percent on peaks but not more than 100 percent on negative peaks. Each such

transmitter shall be so adjusted that the transmission of speech and the international radiotelephone alarm signal, if provision is made for transmission of the signal, normally produce peak modulation percentages within those limits.

(b) Transmitters using G3E emission in the band 156-162 MHz, or emissions G1B, G3E, or G3C in the band 216-220 MHz, shall be capable of proper technical operation with a frequency deviation of ±5 kHz which is defined as 100 percent modulation. In general, transmitters shall be adjusted so that transmission of speech normally produces peak modulation percentages between 75 and 100 percent.

(c) * * *

(1) Suppressed carrier (J3E) mode, with the carrier emitted at a power level at least 40 decibels below peak envelope power;

(2) Full carrier (H3E) mode, with the carrier emitted at a power level between 3 and 6 decibels below peak envelope power; and

(3) Reserved 83-664.

* * * * *

(f) Except as provided in paragraph (g) of this section, each radiotelephone transmitter licensed by the Commission for use of G3E or A3E emission in a station governed by this part shall be provided with a device which automatically prevents modulation in excess of 100 percent.

* * * * *

§ 81.143 [Amended]

35. Section 81.143 is amended by changing "F1" to "F1B or J2B" in paragraph (c)(1).

§ 81.190 [Amended]

36. Section 81.190 is amended by changing "A1, A2, and A2H" to "A1A, A2A, and H2A" in paragraph (a), and "A1" to "A1A" in paragraph (c).

§ 81.304 [Amended]

37. Section 81.304 is amended by changing: "2.8A3J" to "2K80J3E" in paragraphs (b)(7), (b)(8), (b)(13), "2.8A3H and 2.8A3J" to "2K80H3E and 2K80J3E" in paragraph (b)(15), "0.1A1" to "100HA1A" in paragraph (b)(16), "F2 and F4" to "G2B and G3C" two places in paragraph (b)(19), "2.8A3H and 2.8A3J" to "2K80H3E and 2K80J3E", and "2.8A3J" to "2K80J3E" in paragraph (c).

§ 81.360 [Amended]

38. Section 81.360 is amended by changing "A3J" to "J3E" in paragraph (c) and "2.8A3J" to "2K80J3E" in paragraph (e)(5).

PART 83—[AMENDED]

H. Part 83 of Chapter I of Title 47 of the Code of Federal Regulations is amended as follows:

§ 83.105 [Amended]

39. Section 83.105 is amended by changing: "A2 or A2H" to "A2B or H2B", and "A2 and A2H" to "A2A and H2A" in paragraph (a)(1), "A1 and either A2 or A2H" to "A1A and either A2A or H2A" in paragraph (a)(2), "A1, A2 and A2H" to "A1A, A2A, and H2A" in paragraph (a)(3), and "A1" to "A1A" in paragraphs (b), (c) and (d).

§ 83.106 [Amended]

40. Section 83.106 is amended by changing: "A3J" to "J3E", "A3H" to "H3E", "A3A" to "R3E", and "A3" to "A3E" in paragraph (a).

§ 83.131 [Amended]

41. Section 83.131 is amended by changing: "A2H" to "H2A" in paragraphs (b)(1)(i) and (b)(1)(ii), "A3A, A3H, A3J, A4J, and F4" to "R3E, H3E, J3E, J3C, and F3C" in paragraph (b)(4)(i), "A1" to "A1A" in paragraph (b)(7)(i), "A3A, A3H, A3J, A4J, and F4" to "R3E, H3E, J3E, J3C, and F3C", in paragraph (b)(7)(iii), "F1, F3, or F4" to "F1B, G3E, or F3C" in paragraph (8), and "F9" to "F3N" in paragraph (e).

42. Section 83.132 is amended by revising the table in paragraph (a), and the text of paragraphs (c), (d), (f), and (g).

§ 83.132 Authorized classes of emissions.

(a) * * *

Frequency band	Classes of emission
(1) Stations using radiotelegraphy:	
(i) 100 to 160 kHz.....	A1A.
160 to 525 kHz.....	A1A, A2A, or H2A.
2080 to 27,500 kHz.....	A1A, J3C or F3C: Survival Craft stations may in addition use A2A or H2A.
2070 to 2080 kHz.....	J3C or F3C; wideband telegraphy, facsimile and special transmission systems. Manual International Morse code and telegraphy are excluded.
1605 to 2080 kHz in Alaska.	A1A.
(ii) For frequencies designated in §§83.320 and 83.321.	J2B, F1B.
(iii) For the frequency 121.5 MHz.	A3N.
(iv) For the frequency 243 MHz.	A3N.
(2) Stations using radiotelephony:	
(i) For frequencies below 23 MHz designated in §83.251(a):	
2182 kHz.....	J3E. ¹
Other.....	J3E. ²
(ii) For the frequencies 121.5 and 123.1 MHz.	A3A.

Frequency band	Classes of emission
(iii) For frequencies in the band 156 to 162 MHz:	
161.825, 161.825 and 161.975 MHz.	G3E; and when assigned to stations in an automated multistation system, G2B and G3C. The authorized bandwidth for G2B and G3C emissions will be the same as for G3E as specified in §83.133.
All other frequencies.....	G3E.
(iv) For the frequency band 450-470 MHz.	G3E.
(3) Ship radar stations:	
2400-9500 MHz.....	P0N.
14.0-14.05 GHz.....	F3N.
(4) [Reserved]	
(5) Stations not covered by the above:	
(i) For the frequency 121.5 MHz.	A3N.
(ii) For the frequency 243.0 MHz.	A3N.
(iii) For the frequency 156.75 MHz.	F3N Class C EPIRB stations.
(iv) For the frequency 156.8 MHz.	F3N Class C EPIRB stations.
(6) 216 to 220 MHz:	
(i) radiotelegraphy.....	G1B, G3C.
(ii) radiotelephony.....	G3E.

¹ Ship stations are, additionally, authorized to receive and transmit using emission H3E for communication with foreign coast stations and with vessels of foreign registry.
² Ship stations are, additionally, authorized to receive and transmit using emission R3E when communicating with coastal harbor stations employing R3E emission.

All other frequencies A3E, R3E, H3E or J3E as specified in §83.351 (a) and (b).

* * * * *

(c) In telegraphic communication, A3B emission is permissible only by keying a carrier modulated by an audio frequency.

(d) Authorization to use H3E, R3E or J3E emission is limited to emitting a carrier, for H3E at a power level between 3 and 6 decibels below peak envelope power; for R3E at a power level of 18 decibels, ±2 decibels, below peak envelope power; and, for J3E at a power level at least 40 decibels below peak envelope power.

* * * * *

(f) For the purpose of this part, A3E emission means double sideband full carrier, single sideband means R3E, H3E and J3E emissions.

(g) For the purpose of this part, J3C emission means facsimile transmitted by suppressed carrier single sideband, carrier modulated with a frequency-shifted audio frequency subcarrier.

Note.—For information regarding the classification of emissions and the calculation of the bandwidth, see Part 2 of this chapter.

Equipment employing phase modulation and shown in the Radio Equipment list with an F3 emission designator may be used when a G3E designator is specified in this part.

43. Section 83.133 is amended by revising the table and footnotes in paragraph (a) as follows:

§ 83.133 Authorized bandwidth.

(a) * * *

Classes of emission	Emission designator	Authorized bandwidth (kilohertz)
A1A	160HA1A	0.4
A2B	2K66A2B	2.8
A3N	2K66A3X	2.8
A3E	6K00A3E	8.0
A3N	3K20A3X ¹	125.0
F1B	300HF1B ²	*0.5
J2B	300HJ2B ²	*0.5
F1B	16K0F1B ³	*20.0
J2B	16K0J2B ³	*20.0
G3E	16K0G3E ⁴	*20.0
G3C	16K0G3C ⁵	*20.0
F3C	2K80F3C ⁶	*3.0
F3N	14K4F3N ¹	120.0
F3N	20M0F3N ¹	*20,000
P0N	Variable ⁷	*Variable
R3E	2K80R3E	*3.0
H3E	2K80H3E	*3.0
J3E	2K80J3E	*3.0
J3C	2K80J3C	*3.0

¹Applicable only to emergency position-indicating radiobeacon stations.
²Narrow-band direct-printing telegraph and data transmission systems.
³Radioteletypewriter in the band 216-220 MHz.
⁴Applicable when maximum authorized frequency deviation is 5 kHz. See paragraph (c) of this section.
⁵Facsimile in the band 216-220 MHz.
⁶Facsimile within the band 2070 to 27,500 kHz.
⁷Transmitters type accepted prior to December 31, 1969, for emissions A3A, A3H, and A3J and an authorized bandwidth of 3.5 kHz may continue to be operated. These transmitters will not be authorized in new installations.
⁸Applicable to marine hand-held radars.

Area	Frequency band (MHz)	Class of emission	Transmitter power
Great Lakes area and Mississippi River north of Baton Rouge, LA, and connecting inland waters.	2-27.5	Any	150
Other than the above	2-4	Ship to shore: A3E-2182 kHz only H3E, R3E, J3E	1200 150
		Ship to ship: A3E-2182 kHz only H3E, R3E, J3E	150 150
	4-27.5	Any	1500

¹ Except for distress, urgency, and safety purposes, the maximum power which may be used on 2170.5, 2182, and 2191 kHz is 150 W.
² Except for the limitation specified in footnote 1 to this table, for cargo vessels of 300 gross tons and over this value is 500 W.
³ Except for the limitation specified in footnote 1 to this table, passenger vessels of 5000 gross tons and over this value is 1,000 W.
⁴ For passenger vessels of 5,000 gross tons and over this value is 3,000 W.

(f) Ship station transmitters using G3E emission in the band 156-162 MHz shall not exceed a carrier power of 25 watts^{1,2,3,4} and, additionally, shall include the capability to reduce, readily, the carriage power to one watt^{2,4,5} or less.

(g) Ship radar stations using F3N emission shall not exceed 200 milliwatts mean power (see § 83.7).

§ 83.136 [Amended]

45. Section 83.136 is amended by changing "A3A, A3H, and A3J" to "R3E, H3E, and J3E" in paragraphs (a)(1) and (a)(2).

¹The letters "K, L, M, O, V, W, and X" may also be used in place of the letter "P" for pulsed radars.

44. Section 83.134 is amended by revising paragraphs (a)(1), (a)(2), (a)(3)(i), (c), (f), and (g), and the table and footnotes in paragraph (d) as follows:

§ 83.134 Transmitter power.

- (a) * * *
- For emissions R3E, H3E and J3E: Peak envelope power (see § 83.7);
 - For G3E emission in the band 156-162 MHz: carrier power (see § 83.7);

Note.—For the purposes of this section, one half the rated plate input power is the rated carrier power of those transmitters in the range 156-162 MHz for which the output power is not shown in the Commission's Radio Equipment List.

(i) Total plate input power to the final radio stage (without modulation present for A3E emission); or

(c) Transmitter power for telephony below 27.5 MHz shall not be less than 15 watts.

(d) * * *

§ 83.137 [Amended]

46. Section 83.137 is amended by changing "A3" to "A3E" in paragraph (a)(1), "F3" to "F3E" and "F1, F3, F4" to "F1B, G3E, F3C" in paragraph (a)(2), "A3 or F3" to "A3E or G3E" in paragraph (b), "A3J" to "[J3E]" in paragraph (c)(1), and "(A3H)" to "(A3E)" in paragraph (c)(2).

§ 83.139 [Amended]

47. Section 83.139 is amended by changing "(A3J)" to "[J3E]" and "(A4J emission)" to "[J3C emission]" in paragraph (j).

48. Section 83.141 is amended by revising paragraphs (a)(1), (a)(2), (a)(3), (a)(4), and paragraphs (b), and (d) as follows:

§ 83.141 Special requirements for survival craft stations.

- (a) * * *
- The frequency 500 kHz, be able to use class A2A emission;
 - The frequency 2182 kHz, be able to use class A3A or H3E emission;
 - The frequency 8364 kHz, be able to use class A2A emission;
 - The frequency 121.5 MHz, be able to use A3N or A3E emission and where A3E emission is used the equipment must also be capable of transmitting on 123.1 MHz using A3E emission.

(b) Receivers used in survival craft stations shall be capable of receiving the frequency and types of emission which the transmitter is capable of using: Provided, That where the transmitter frequency is 8364 kHz the receiver shall be capable of receiving A1A and A2A emission through the band 8320-8745 kHz.

(d) When an EPIRB station is contained as a part of a survival craft station, the EPIRB portion shall be limited to the frequencies 121.5 and 243 MHz (transmission only) and to A3N emission only.

§ 83.142 [Amended]

49. Section 83.142 is amended by changing "A3 or A3H" to "A3E or H3E" and "A3J" to "J3E" in paragraph (b)(5).

50. Section 83.143 is amended by revising paragraphs (b) and (c) as follows:

§ 83.143 Narrow-band direct-printing radiotelegraphy equipment.

- (b) The modulation rate over the radio path shall not exceed 100 bauds; and
 (c) Class F1B or J2B emission shall be used with a total frequency shift of 170 Hertz.

(1) Class F1B or J2B emission shall be used when the transmission is a single-sideband suppressed carrier.

(2) When frequency shift keying is effected by applying audio signals to the input of a single-sideband transmitter, the suppressed (residual) carrier, when it falls outside the authorized bandwidth, shall be suppressed to the level prescribed by § 83.136. Further, the center audio frequency between the ±85 Hz tones shall be 1700 Hz, ±5 Hz, above the suppressed (residual) carrier.

§ 83.144 [Amended]

51. Section 83.144 is amended by changing "A9" to "A3N" in paragraph (a)(1).

§ 83.146 [Amended]

52. Section 83.146 is amended by changing "F9" to "F3N" in paragraph (a)(1).

§ 83.155 [Amended]

53. Section 83.155 is amended by changing "A3A, A3H and A3J" to "R3E, H3E and J3E" in two places in paragraph (d).

§ 83.156 [Amended]

54. Section 83.156 is amended by changing "A3A, A3H, and A3J" to "R3E, H3E and J3E" in two places in paragraph (b)(3).

55. Section 83.233 is amended by revising the table as follows:

§ 83.233 Frequencies for use in distress.

Frequency band	Emission	Carrier frequency
405-535 kHz.....	A2A.....	500 kHz. ¹
1605-3500 kHz.....	J3E.....	2182 kHz.
118-136 MHz.....	A2B, A3E, A3N.....	121.5 MHz.
156-162 MHz.....	G3E.....	156.8 MHz.
225-399.9 MHz.....	A3N.....	243 MHz.

¹ The maximum transmitter power obtainable shall be used.

§ 83.315 [Amended]

56. Section 83.315 is amended by changing "A1" to "A1A" in paragraphs (b)(2), (b)(4), (d)(4), (d)(6), and (d)(7).

§ 83.317 [Amended]

57. Section 83.317 is amended by changing "A1" to "A1A" in the title, paragraph (b), and paragraph (h).

§ 83.319 [Amended]

58. Section 83.319 is amended by changing "A1" to "A1A" in the title and in paragraph (c).

59. Section 83.322 is amended by revising paragraph (a), (c), and (d) as follows:

§ 83.322 Frequencies for use in distress.

(a) The international distress frequency is 500 kHz; it is used as an assigned frequency for this purpose by ship, survival craft, or aircraft stations using frequencies in the band 405-535 kHz, when requesting assistance from the maritime services. It is used, preferably with A2A emission, for the distress call, distress traffic and for the transmission of urgent and safety messages.

(c) The frequency 121.5 MHz (using class A2A emission) is available for assignment to survival craft stations for radiobeacon purposes. The frequency 121.5 MHz (using class A3N emission) are available for assignment to ship stations for scene of action search and

rescue operations between ship and aircraft. The frequency 121.5 MHz will be assigned to ship stations for search and rescue operations only if the frequency 123.1 MHz is also authorized. Communication in support of search and rescue operations is permitted on frequency 121.5 MHz only when communications on the frequency 123.1 MHz or other VHF frequencies is not practicable. Ships and aircraft engaged in such communications on 121.5 MHz should shift to 123.1 as soon as possible.

(d) The frequency 243 MHz (class A3N emission only) is available to EPIRB stations for facilitating search and rescue operations.

§ 83.328 [Amended]

60. Section 83.328 is amended by changing "A1" to "A1A" in the title.

61. Section 83.351 is amended by revising paragraphs (b)(6), (b)(9), (b)(11), (b)(41), (b)(45), (c)(1), (c)(2), (c)(3), and paragraph (d) as follows:

§ 83.351 Frequencies available.

(b) The frequencies 121.5 MHz and 123.1 MHz (class A3E emission) are available for assignment to ship stations for scene of action search and rescue operations between ships and aircraft.

(9) Use of this frequency is limited to emission 2K80J3E only.

(11) Limited to a maximum output power of 150 watts (PEP) and to emissions 2K80R3E and 2K80J3E.

(41) Limited to emissions 2K80R3E and 2K80J3E, this frequency is available for assignment on a simplex basis in the Mississippi river System.

(45) The frequencies 3023 and 5680 kHz may be used by aircraft and ship stations for search and rescue scene-of-action coordination purposes, including communications between these stations and participating land stations. Ship stations communicating with aircraft stations shall employ 2K80J3E emission.

(c) New installations of transmitters employing A3E emission will not be authorized.

(2) Transmitters, except portable survival craft equipment, employing A3E emission which were authorized (see § 83.139(c)) prior to January 1, 1972, may continue to be used by the same licensee on the frequency 2182 kHz for testing, distress and safety purposes when the ship station is equipped for

use of G3E emission on frequencies in the band 156-162 MHz.

(3) All installations of transmitters employing SSB emissions (2K80R3E, 2K80H3E, and 2K80J3E) on frequencies in the band 2000-2850 kHz will be authorized only when the ship station is equipped for use of G3E emission on frequencies in the band 156-162 MHz.

(d) Ship stations in international waters or waters controlled by foreign countries may communicate with ship and coast stations operating under authority granted by other administrations using H3E emissions in the band 1600-4000 kHz until January 1, 1982.

§ 83.352 [Amended]

62. Section 83.352 is amended by changing "A2" to "A2A", "A9" to "A3N" and "A3" to "A3E" in paragraph (b), and "A9" to "A3X" in paragraph (c).

§ 83.360 [Amended]

63. Section 83.360 is amended by changing "2.8A3J" to "2K80J3E" in paragraph (b)(6).

§ 83.365 [Amended]

64. Section 83.365 is amended by changing "A3J" to "J3E" in paragraph (a)(4).

§ 83.444 [Amended]

65. Section 83.444 is amended by changing "A1 and A2" to "A1A and A2A" in paragraph (c).

§ 83.445 [Amended]

66. Section 83.445 is amended by changing "A3H" to "H3E" in paragraph (a)(2), "A3J" to "J3E" in paragraph (a)(5), "A3 and A3H" to "A3E and H3E" in paragraph (b)(1), and "A3J" to "J3E" in paragraph (b)(3).

§ 83.446 [Amended]

67. Section 83.446 is amended by changing "A1 and A2" to "A1A and A2A" in paragraph (a)(4).

§ 83.459 [Amended]

68. Section 83.459 is amended by changing "A1, A2" to "A1A, A2A" in paragraph (a)(1).

§ 83.464 [Amended]

69. Section 83.464 is amended by changing "A1, A2, A2H, A3 and A3H" to "A1A, A2A, H2A, A3E and H3E" in paragraph (a)(1).

§ 83.483 [Amended]

70. Section 83.483 is amended by removing the footnote in paragraph (c).

71. Section 83.484 is amended by revising paragraph (a) and paragraph (d)(2) as follows:

§ 83.484 Radiotelephone transmitter.

(a) The transmitter shall be capable of effective transmission of H3E and J3E emission on 2182 kHz, and J3E emission on 2638 kHz and at least two other frequencies within the band 1605 to 3500 kHz available for ship-to-shore or ship-to-ship communication.

(d) * * *

(2) The transmitter has been demonstrated, or is of a type which has been demonstrated, to the satisfaction of the Commission as capable with normal operating voltages applied of delivering not less than 60 watts peak envelope power for H3E and J3E emission on the frequency 2182 kHz and for J3E emission on the frequency 2638 kHz into either an artificial antenna consisting of a series network of 10 ohms effective resistance and 200 picofarads capacitance, or an artificial antenna of 50 ohms nominal impedance. An individual demonstration of the power output capability of the transmitter, with the radiotelephone installation normally installed on board ship, may be required whenever in the judgment of the Commission this is deemed necessary.

72. Section 83.488 is amended by revising paragraphs (a) and (b) as follows:

§ 83.488 Radiotelephone receivers.

(a) The receiver required by § 83.483(b) of this part shall be capable of effective reception of H3E and J3E emissions on the radiotelephone distress frequency. The receiver shall be capable of effective reception of J3E emission on 2638 kHz and the receiving frequencies associated with the transmitting frequencies provided pursuant to § 83.484(a).

(b) In addition to the receiver required by paragraph (a) of this section a

radiotelephone distress frequency watch receiver approved by the Commission for maintaining the watch required by §§ 83.202 and 83.203 and complying with the technical standards set out in § 83.559 shall be provided.

73. Section 83.514 is amended by revising paragraphs (a)(1) and (a)(2) as follows:

§ 83.514 Radiotelephone installation.

(a)(1) The radiotelephone installation shall include a transmitter capable of effective transmission of J3E emission and a receiver capable of effective reception of J3E emission within the band 1605 to 2850 kHz; or alternatively, if the vessel is within communication range of a public coast station or U.S. Coast Guard station operating in the band 156 to 162 MHz which maintains an efficient watch for the reception of F3E or G3E emission on 156.8 MHz at all times while the vessel is navigated in waters specified in § 83.511, and the vessel while so navigated is never more than 20 nautical miles from a 156.800 MHz receiving location of such station, the radiotelephone installation may, in lieu of medium frequency equipment, include a transmitter and receiver capable of effective transmission and reception of F3E or G3E emission within the band 156 to 162 MHz.

(2) An exemption from the band 1605 to 2850 kHz installation requirements may be granted for a vessel that is navigated within the communication range of a VHF public coast or Coast Guard station, but beyond the 20-nautical-mile limitation specified in paragraph (a)(1) of this section: *Provided*, The vessel is equipped with a transmitter and receiver capable of effective transmission and reception of F3E or G3E emission within the band 156 to 162 MHz. An application for exemption must include a chart showing

the route of the voyage or the area of operation of the vessel, and the receiving service area of the VHF public coast or Coast Guard station. The coverage area of the Coast Guard station shall be based on written information from the District Commander, U.S. Coast Guard, a copy of which must be furnished with the application. The coverage area of a public coast station shall be computed by the method specified in Subpart R of Part 81 of this chapter.

§ 83.517 [Amended]

74. Section 83.517 is amended by removing the footnote in paragraph (a), and changing "A3J" to "J3E" in paragraph (a) and paragraph (c)(2).

§ 83.518 [Amended]

75. Section 83.518 is amended by changing "F3" to "G3E" in paragraph (a).

§ 83.519 [Amended]

75a. Section 83.519 is amended by changing "A3J" to "J3E" in paragraph (a) and "F3" to "J3E" in paragraph (b).

§ 83.539 [Amended]

76. Section 83.539 is amended by changing "F3" to "G3E" in paragraph (c).

§ 83.542 [Amended]

77. Section 83.542 is amended by changing "F3" to "G3E" in paragraph (a).

§ 83.543 [Amended]

78. Section 83.543 is amended by changing "F3" to "G3E" in paragraph (a).

79. Section 83.552 is amended by revising the table in paragraph (b) as follows:

§ 83.552 Requirements for main transmitter.

(b) * * *

Operating carrier frequency	Frequency tolerance (parts in 10 ⁴)	Class of emission	Percentage modulation (for amplitude modulation)	Modulation frequency (for amplitude modulation)	Antenna power
500 kHz	1,000	A2A or H2A	Not less than 70, not more than 100.	At least 1 frequency between 300 and 1250 Hertz; except for transmitters installed after 07-01-51, at frequency between 450 and 1250 Hertz.	Not less than 200 watts into an average ship station antenna.
500 kHz	1,000	A1A			Not less than 160 watts into an average ship station antenna.
410 kHz and 2 authorized working frequencies in the band 415 to 525 kHz.	1,000	A2A or H2A	Not less than 70, not more than 100.	At least 1 frequency between 300 and 1250 Hertz; except for transmitters installed after 07-01-51, at frequency between 450 and 1250 Hertz.	Not less than 200 watts into an average ship station antenna.
410 kHz and 2 authorized working frequencies in the band 415 to 525 kHz.	1,000	A1A			Not less than 160 watts into an average ship station antenna.

80. Section 83.553 is amended by revising the table in paragraph (b) as follows:

§ 83.553 Requirements for reserve transmitter.

(b) * * *

Operating carrier frequency	Frequency tolerance (parts in 10 ⁶)	Class of emission	Percentage modulation (for amplitude modulation)	Modulation frequency (for amplitude modulation)	Antenna power
500 kHz	1,000 except for reserve transmitters whose use is confined solely to safety communications as defined in § 83.6(a). Such transmitters shall maintain a frequency tolerance of 3000 parts in 10 ⁶ .	A2A or H2A	Not less 70; not more than 100.	At least 1 frequency between 300 and 1250 Hertz except for transmitters installed after 07-01-81, at least 1 frequency between 450 and 1250 Hertz.	Not less than 25 watts into an average ship station antenna.
410 kHz and 1 automated working frequency in the band 415 to 525 kHz.	...do	A2A or H2A	...do	...do	Do.

§ 83.555 [Amended]

81. Section 83.555 is amended by changing "A1" to "A1A" in paragraph (b)(1), "A2" to "A2A" in paragraph (b)(2), and "A2H" to "H2A" in paragraph (b)(3).

§ 83.556 [Amended]

82. Section 83.556 is amended by changing "A1, A2 and A2H" to "A1A, A2A and H2A" in paragraph (a)(1).

§ 83.713 [Amended]

83. Section 83.713 is amended by changing "F3" to "G3E" in paragraph (a).

§ 83.715 [Amended]

84. Section 83.715 is amended by changing "F3" to "G3E" in paragraph (a).

85. Section 83.835 is amended by revising paragraph (d) as follows:

§ 83.835 Remote control for maneuvering or navigation.

(d) The emission employed shall be G2D. The provisions in this part applicable to the use of G3E emission are also applicable to the use of G2D emission. The transmitter must be adjusted and operated so that the instantaneous frequency deviation for G2D emission does not exceed the maximum value allowed for G3E emission.

§ 83.853 [Amended]

86. Section 83.853 is amended by changing "F3" to "G3E" in paragraph (a).

§ 83.854 [Amended]

87. Section 83.854 is amended by changing "F3" to "G3E" in paragraph (a).

PART 87—[AMENDED]

I. Part 87 of Chapter I of Title 47 of the Code of Federal Regulations is amended as follows:

88. Section 87.67 is amended by revising paragraph (c) and the table and footnotes in paragraph (b) as follows:

§ 87.67 Types of emission.

(b) * * *

Class of emission	Emission designator	Authorized bandwidth (kilohertz)		
		Below 50 MHz	Above 50 MHz	Frequency deviation
A1A ¹⁰	100HA1A	0.25		
A2A	2K10A2A	2.74	50	
H2B ^{9, 11}	2K80H2B	3.0		
A3E ¹²	6K00A3E		50	
R3E ^{9, 11}	2K80R3E ⁹	3.0		
H3E ^{9, 11}	2K80H3E ⁹	3.0		
J3E ^{9, 11}	2K80J3E ¹¹	3.0		
J7B ¹¹	2K80J7B ¹¹	3.0		
A9W	13K0A9W ⁶		25	
A3N	3K20A3N ⁷		25	
XXA	1K12XXA ¹³	2.74		
J9W	2K80J9W ¹¹	3.0		
F1B ¹⁰	1K70F1B	1.7		
F1B ¹⁰	2K40F1B	2.5		
F3E ⁹	36K0F3E		40	15
F3E ⁹	16K0F3E		20	5
G3E ⁴	16K0F3E		20	5
F7D ⁸	(¹)		(¹)	
PON ¹⁴	(¹)	(¹)		

¹ To be specified on authorization.
² Each aeronautical enroute station authorized to use R3E and/or J3E emission shall render service to those aircraft stations which are equipped for single sideband (SSB). Aircraft equipped for SSB operation shall use full carrier except when it is known that the receiving station is capable of receiving reduced or suppressed carrier emission and shall use full carrier upon receipt of request of any station using the same frequency. R3E, H3E, and J3E emissions will be authorized only below 25000 kHz. After February 1, 1983, only the classes of emission H2B, J3E, J7B, and J9W will be authorized. Except that after February 1, 1982, the emissions A3E and H3E are to be used only on 3023 and 5680 kHz for Search and Rescue operations.
³ The emission designator H2B shall be used by stations employing selective calling (SELCAL).
¹⁰ A1A and F1B emissions are permitted provided they do not cause harmful interference to classes of emission H2B, J3E, J7B and J9W. The assigned frequency shall be at a value of 1400 Hz above the carrier frequency.
¹¹ For single sideband emissions, except the class of emission H2B, the assigned frequency shall be at a value of 1400 Hz above the carrier frequency.
¹² For use with an authorized bandwidth of 8.0 kilohertz at radiobeacon stations. The A3E emission will not be authorized.
¹³ Authorized for use at radiobeacon stations.
¹⁴ The letters "K, L, M, Q, V, W, and X" may also be used in place of the letter "P" for pulsed radars.

authorization. The authorization of 50 kHz bandwidth for A3E emission on frequencies above 50 MHz is temporary and this fact should be considered in the design of VHF radio equipment for future use.

§ 87.71 [Amended]

89. Section 87.71 is amended by changing "(A3A, A3H, A3J)" to "(R3E, H3E, J3E)" in paragraph (a), "A2H, A3H, A3J, A7J or A9J" to "H2B, H3E, J3E, J7B or J9W" in paragraph (c).

90. Section 87.73 is amended by revising paragraphs (e) and (h) and the table in paragraph (d) as follows:

§ 87.73 Modulation requirements.

(d) * * *

Carrier mode	Level N(dB) of the carrier with respect to peak envelope power
Full carrier (for example H2B).	0 > N > -6.
Suppressed carrier (for example J3E).	Aircraft stations N < -20; Aeronautical Stations N < -40.

(e) For single sideband emissions, except for H2B emission, the assigned frequency should be at a value 1400 Hz above the carrier (reference) frequency.

(h) The sweeping signal applied to the carrier shall be in accordance with that specified in the Radio Technical Commission for Aeronautics (RTCA) Document No. DO-183 (available from RTCA, One McPherson Square, 1425 K Street, NW., Suite 500, Washington, D.C. 20005).

§ 87.136 [Amended]

91. Section 87.136 is amended by changing "(emission A3J)" to "(emission A3E)", and "(emission A3A, A3H, A3J)" to "(emission R3E, H3E, J3E)" in paragraph (a).

(c) For other emissions, the emission designator may be determined from Part 2 of this chapter and the authorized bandwidth may be specified on the

92. Section 87.183 is amended by revising the introductory text of paragraph (f), paragraph (f)(5), paragraph (g)(3), and paragraph (l).

§ 87.183 Frequencies available.

(f) 121.5 Megahertz: This is a universal simplex clear channel frequency for use by aircraft in distress or condition of emergency. Except for transmissions of signals by an aircraft station operated with only an emergency locator transmitter using A3X emission, it will not be assigned to aircraft unless other frequencies are assigned and available for normal communications. The channel is available, as follows:

(5) To provide a common frequency for survival communications and for survival radio beacons (Emission A2A).

(g) * * *

(3) [Reserved]

(l) 243 MHz: This is an emergency and distress frequency available for use by survival craft stations, emergency locator transmitters and equipment used for survival purposes which are also equipped to transmit on the frequency 121.5 MHz. Use of 243 MHz shall be limited to transmission of signals and communications for survival purposes. Types A2A, A3E, or A3N emissions may be employed, except in the case of emergency locator transmitters where only A3N is permitted.

§ 87.271 [Amended]

93. Section 87.271 is amended by changing "6A3" to "6K00A3E" in paragraph (a).

§ 87.331 [Amended]

94. Section 87.331 is amended by changing "A3A, A3H or A3J" to "R3E, H3E or J3E" in footnote 1 in paragraph (b), and "A2H, A3J, A7 and A9J" to "H2B, J3E, J7B and J9W" and "A3H" to "H3E" in paragraph (c).

§ 87.411 [Amended]

95. Section 87.411 is amended by changing "A3" to "A3E" in paragraph (a).

96. Section 87.441 is amended by revising paragraph (d) as follows:

§ 87.441 Frequencies available.

(d) The frequencies 3023 kHz and 5680 kHz may be used by aircraft and ship stations for search and rescue scene-of-action coordination purposes, including communication between these stations

and participating land stations. Ship stations communicating with aircraft stations shall employ 2K80J3E emission.

97. Section 87.513 is revised as follows:

§ 87.513 Frequencies available.

The following frequencies are available for assignment to Civil Air Patrol land and mobile stations within the United States, its territories and possessions, except as otherwise provided in this section:

- (a)(1) 2374 kHz, A1A, A2A, A3E emission, 400 watts maximum power.
 (2) 2375.5 kHz (2374.0 kHz carrier frequency), R3E, H3E, J3E emission 1,600 watts maximum power.
 (3) 2372.5 kHz, (2371 kHz carrier frequency), R3E, J3E emission 1,600 watts maximum power.
 (4) 2372.5 kHz, 1K70F1B emission,¹ 400 watts maximum power.
 (b)(1) 4467.5 kHz, A1A, A2A, A3E emission, 400 watts maximum power.
 (2) 4469 kHz, (4467.5 kHz carrier frequency), A3E, H3E, J3E emission 1,600 watts maximum power.
 (3) 4469 kHz, 1K70F1B emission,¹ 400 watts maximum power.
 (4) 4466 kHz, (4467.5 kHz carrier frequency), R3E, J3E emission 1,600 watts maximum power.
 (5) 4466 kHz, 1K70F1B emission,¹ 400 watts maximum power.
 (6) Assignment of the frequencies 4467.5 kHz, 4469 kHz, and 4466 kHz is limited to stations in the District of Columbia, Puerto Rico, and the following states:

Alabama, Connecticut, Delaware, Florida, Georgia, Maine, Maryland, Massachusetts, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia.

- (c)(1) 4507.5 kHz, A1A, A2A, A3E emission, 400 watts maximum power.
 (2) 4509 kHz, (4507.5 kHz carrier frequency), R3E, H3E, J3E emission, 1,600 watts maximum power.
 (3) 4509 kHz, 1K70F1B emission,¹ 400 watts maximum power.
 (4) 4506 kHz, (4504.5 kHz carrier frequency), R3E, J3E emission 1,600 watts maximum power.
 (5) 4506 kHz, 1K70F1B emission,¹ 400 watts maximum power.
 (6) Assignment of the frequencies 4507.5 kHz, 4509 kHz, and 4506 kHz is limited to stations in the following states:

Arizona, Arkansas, California, Colorado, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky Louisiana, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New

Mexico, North Dakota, Ohio, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, Wisconsin, Wyoming.

- (d)(1) 4585 kHz, A1A, A2A, A3E emission 400 watts maximum power.
 (2) 4586.5 kHz, (4585 kHz carrier frequency), R3E, H3E, J3E emission 1,600 watts maximum power.
 (3) 4586.5 kHz, 1K70F1B emission,¹ 400 watts maximum power.
 (4) 4583.5 kHz, (4582 kHz carrier frequency), R3E J3E emission, 1,600 watts maximum power.
 (5) 4583.5 kHz, 1K70F1B emission,¹ 400 watts maximum power.
 (e)(1) 4602.5 kHz, A1A, A3E emission 400 watts maximum power.
 (2) 4604 kHz, (4602.5 kHz carrier frequency), R3E, H3E, J3E emission, 1,600 watts maximum power.
 (3) 4604 kHz, 1K70F1B emission,¹ 400 watts maximum power.
 (4) 4601 kHz, (4599.5 kHz carrier frequency), R3E, J3E emission, 1,600 watts maximum power.
 (5) 4601 kHz, 1K70F1B emission,¹ 400 watts maximum power.
 (6) Assignment of the frequencies 4602.5 kHz, 4604.0 kHz, and 4601.0 kHz, is limited to stations in the following States: Colorado, Idaho, Illinois, Indiana, Kentucky, Michigan, Montana, Ohio Utah, Wisconsin, Wyoming.
 (f)(1) 4630 kHz, A1A, A3E emission, 400 watts maximum power.
 (2) 4631.5 kHz, (4630 kHz carrier frequency) R3E, H3E, J3E emission, 1,600 watts maximum power.
 (3) 4631.5 kHz, 1K70F1B emission,¹ 400 watts maximum power.
 (4) 4628.5 kHz, (4627 kHz carrier frequency) R3E, J3E emission, 1,600 watts maximum power.
 (5) 4628.5 kHz, 1K70F1B emission,¹ 400 watts maximum power.
 (6) Assignment of the frequencies 4630 kHz, 4631.5 kHz, and 4628.5 kHz is limited to stations in the following States: Arizona, Arkansas, Louisiana, New Mexico, Oklahoma and Texas.
 (g) 26.62 MHz, A3E emission, 5 watts maximum power. In the State of Hawaii, A1A, A2A, A3E emission and 250 watts maximum power is permissible.
 (h) 143.9 MHz, A1A, A2A, A3E, F2B, F3E, G3E emission, 30 watts maximum power.
 (i) 148.15 MHz, A2B, A3E, F2B, F3E, G3E emission, 50 watts maximum power.

¹ When using a direct-printing telegraph system other than 60 words per minute, 5 unit (Start-stop) code, station identification shall be made by means of A1A, R3E, or J3E emission.

PART 90—[AMENDED]

J. Part 90 of Chapter I of Title 47 of the Code of Federal Regulations is amended as follows:

§ 90.17 [Amended]

98. Section 90.17 is amended by changing "A1, A2, A9, F1, F2, or F9" to "A1A, A1D, A2B, A2D, F1B, F1D, F2D, G1B, G1D, G2B, or G2D" in paragraph (c)(7).

§ 90.19 [Amended]

99. Section 90.19 is amended by changing "A3" to "A3E" in paragraphs (e)(5), and (e)(8).

100. Section 90.53 is amended by revising paragraph (b)(19), (b)(20), (b)(27), (b)(28), and (b)(29) as follows:

§ 90.53 Frequencies available.

* * * *

(b) * * *

(19) This frequency is primarily authorized for use under § 90.35(a) for operations in bio-medical telemetry stations. F1B, F1D, F2B, F2D, F3E, G1B, G1D, G2B, G2D, and G3E emissions may be authorized. On a secondary basis, this frequency may be utilized for any other permissible communications consistent with § 90.35.

(20) This frequency is primarily authorized for use under § 90.35(a), for communications between medical facilities vehicles and personnel related to medical supervision and instruction for treatment and transport of patients in the rendition or delivery of medical services. F1B, F1D, F2B, F2D, G1B, G1D, G2B, G2D, F3E, and G3E emissions are authorized. On a secondary basis, this frequency may be utilized for any other permissible communications consistent with § 90.35, including bio-medical telemetry transmissions.

* * * *

(27) This frequency is available in this service only to persons eligible under the provisions of § 90.38(a) for operation of transmitters having a maximum power output of three watts using A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, or G2D emission. This frequency is also available in the Business Radio Service on a co-equal basis with the Special Emergency Radio Service users.

(28) No new licenses will be granted for one-way paging under § 90.487 for use on this frequency after August 1, 1980. This frequency is available to persons eligible for station licenses under the provisions of § 90.38(a) on a co-equal basis with one-way paging users under § 90.487 prior to August 1, 1985, and on a primary basis after August 1, 1985. Only A1A, A1D, A2B,

A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, G2D emissions and power not exceeding 10 watts will be authorized. Antennas having gain greater than 0 dBd will not be authorized. Transmissions shall not exceed two seconds duration.

(29) In addition to other authorized uses, the use of F1B, F1D, F2B, or F2D emission is permitted on this frequency for the operation of bio-medical telemetry systems subject to the following limitations:

* * * *

§ 90.63 [Amended]

101. Section 90.63 is amended by changing "A1, A2, A9, F1, F2, or F9" to "A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, or G2D" in paragraph (d)(6) and (d)(11).

§ 90.65 [Amended]

102. Section 90.65 is amended by changing "A1, A2, A9, F1, F2, or F9" to "A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, or G2D" in paragraph (c)(35).

§ 90.67 [Amended]

103. Section 90.67 is amended by changing "A2 or F2" to "A2B, A2D, F2B or F2D" and "A3 or F3" to "A3E, F3E or G3E" in paragraph (c)(9), and "A1, A2, A9, F1, F2, or F9" to "A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, or G2D" in paragraph (c)(24).

§ 90.73 [Amended]

104. Section 90.73 is amended by changing "A1, A2, A9, F1, F2, or F9" to "A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, or G2D" in paragraph (d)(27).

105. Section 90.75 is amended by revising paragraphs (c)(10), (13), (14), (35), (38), and (39)(viii) as follows:

§ 90.75 Business radio service.

* * * *

(c) * * *

(10) This frequency is assigned only for one-way paging communications to mobile receivers. Only A1D, A2D, A3E, F1D, F2D, F3E, or G3E emissions may be authorized.

* * * *

(13) This frequency may be used for mobile operation for radio remote control and telemetering functions. A1D, A2D, F1D, or F2D emission may be authorized and mobile stations used to control remote objects or devices may be operated on the continuous carrier transmit mode.

(14) This frequency may be used for mobile operation for remote control and telemetering functions. A1D, A2D, F1D, or F2D emission may be authorized. The use of the continuous carrier transmit

mode for these purposes is permitted only for stations authorized and continuously licensed since before May 21, 1971.

* * * *

(35) The maximum output power of the transmitter may not exceed 1 watt. A1D, A2D, F1D, or F2D emission may be authorized.

* * * *

(38) This frequency may be used, with the transmitter carrier centered on the designated frequency or 5 kHz above or below the designated frequency, with P0N, F2B, or F2D emission, using a bandwidth of 5 kHz and a power not to exceed 1 watt peak power output.

(39) * * *

(viii) A1D, A2D, F1D, or F2D emission may be authorized.

* * * *

§ 90.79 [Amended]

106. Section 90.79 is amended by changing "A1, A2, F1, or F2" to "A1B, A2D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B or G2D" in paragraph (d)(7).

§ 90.103 [Amended]

107. Section 90.103 is amended by changing "A0" to "N0N" in paragraph (c)(20).

108. Section 90.205 is amended by revising the table and footnotes 1 and 10 in paragraph (b) as follows:

§ 90.205 Power.

* * * *

(b) * * *

Frequency range (megahertz)	Maximum output power	Maximum effective radiated power (watts)
1.3 to 3.....	1 ⁹ 1,500	
3 to 25.....	1 ^{2,9} 750	
25 to 100.....	300	
100 to 216.....	3 ³ 350	
216 to 220.....	(⁴)	(⁴)
220 to 470.....	5 ⁵ 350	
470 to 512.....		1,000
806 to 821.....	(⁶)	(⁶)
851 to 866.....	(⁷)	(⁶)
929 to 930.....	(⁷)	(¹⁰)
1427 to 1435.....	(⁷)	
2450 to 2500.....	5	
2500 to 10,550.....	(⁴)	(⁴)
10,550 to 10,680.....	3	
Above 10,680.....	(⁴)	(⁴)

¹ For single sideband operations (.3E emission) below 10 MHz, the authorized power shall be stated in terms of peak envelope power, which is the average power supplied to the antenna transmission line by a transmitter during 1 radio frequency cycle at the highest crest of the modulation envelope taken under conditions of normal operation. The maximum peak envelope power permitted is 1kW.

¹⁰ As specified in § 90.494(f).

* * * *

109. Section 90.207 is revised as follows:

§ 90.207 Types of emissions.

Normally operations authorized in the services governed by this part are intended to provide voice communications between stations. Accordingly, except as otherwise provided for in the following paragraphs, stations in these services will be authorized to use only A3E, F3E, or G3E emission.

(a) Authorizations to use A3E, F3E, or G3E emission also include the use of emissions for tone signals or signaling devices whose sole functions are to establish and to maintain communications, to provide automatic station identification, and for operations in the Public Safety and Special Emergency Radio Services, to activate emergency warning devices used solely for the purpose of advising the general public or emergency personnel of an impending emergency situation.

(b) The use of F3E or G3E emission in these services will be authorized only on frequencies above 25 MHz.

(c) Except for Travelers' Information Stations in the Local Government Radio Service authorized in accordance with § 90.242, only J3E emission will be authorized for telephony systems on frequencies below 25 MHz.

(d) For non-voice paging operations, only A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, or G2D emissions will be authorized.

(e) For radioteletype operations that may be authorized in accordance with § 90.237, only F1B, F2B, G1B or G2B emissions will be authorized above 25 MHz, and A1B or A2B emissions below 25 MHz.

(f) For radiofacsimile operations that may be authorized in accordance with § 90.237, only F3C or G3C emissions will be authorized above 25 MHz, and A3C emissions below 25 MHz.

(g) For AVM systems that may be authorized in accordance with § 90.239, only F1D, F2D, F3E, G3E, or P0N emissions will be authorized. For pulsed radars, the letters "K, L, M, Q, V, W, and X" may be used in place of the letter "p".

(h) For telemetry operations, when specifically authorized under this part, only A1D, A2D, F1D, or F2D emissions will be authorized.

(i) For call box operations that may be authorized in accordance with § 90.241, only A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, G2D, F3E or G3E emissions will be authorized.

(j) For radiolocation operations as may be authorized in accordance with Subpart F, unless otherwise provided for any type of emission may be authorized upon a satisfactory showing of need.

(k) F1E or G1E emissions may be employed on any frequency which is subject to coordination requirements set forth in § 90.175. The use of F1E or G1E emission must be specifically requested and approved by the Commission. Authorization to use F1E or G1E shall include authorization to use F1D, F2D, G1D or G2D emission.

110. Section 90.209 is amended by revising paragraph (a), paragraphs (b)(1), (b)(2), (b)(3), (b)(4), and the introductory text of paragraph (d) as follows:

§ 90.209 Bandwidth limitations.

(a) Each authorization issued to a station licensed under this part will show an emission designator representing the class of emission authorized. The designator shall be prefixed by the specified necessary bandwidth. This figure does not necessarily indicate the bandwidth occupied by the emission at any instant. In those cases where Part 2 of this chapter does not provide a formula for the computation of necessary bandwidth, the occupied bandwidth as defined in Part 2 may be used in lieu of the necessary bandwidth. The maximum authorized bandwidth contains those frequencies upon which 99 percent of the radiated power appears, extended to include any discrete frequency upon which the power is at least 0.25 percent of the total radiated power.

(b) * * *

(1) For A1A or A1B emissions, the maximum authorized bandwidth shall be 0.25 kHz.

(2) Except as noted in subparagraph 3, the maximum authorized bandwidth for type A3E emission shall be 8 kHz.

(3) For type J3E operations below 10 MHz, the bandwidth occupied by the emission shall not exceed 3000 Hz for equipment manufactured after November 1, 1983, and 3500 Hz for equipment manufactured before November 1, 1983. The assigned frequency will be specified in the authorization. The authorized carrier frequency shall be 1400 Hz lower in frequency than the assigned frequency. Only upper sideband emission shall be used. In the case of regularly available double sideband radiotelephone channels, an assigned frequency for J3E emissions is available either 1600 Hz below or 1400 Hz above the double sideband radiotelephone assigned frequency. The 3000 Hz occupied bandwidth is applicable to all types of transmitters for J3E operation below 10 MHz that are first accepted after November 1, 1982.

(4) For all F3E or G3E emissions, on frequencies below 947 MHz, the

maximum authorized bandwidth shall be 20 kHz and the maximum authorized frequency deviation shall be 5 kHz. However, stations authorized for operation on or before December 1, 1961, in the frequency band 73.0-74.6 MHz may continue to operate with a bandwidth of 40 kHz and a deviation of 15 kHz. For stations operating on frequencies above 947 MHz, except as provided in subparagraph (5) of this section, the maximum authorized bandwidth and frequency deviation will be specified in the station authorization.

* * *

(d) For single sideband operations (J3E) below 10 MHz, the carrier frequency power shall be at least 40 dB below the peak envelope power and the mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the following schedule:

* * *

111. Section 90.212 is amended by revising paragraphs (a), (b), and (c) as follows:

§ 90.212 Provisions relating to the use of scrambling devices and digital voice modulation.

(a) Analog scrambling techniques may be employed at any station authorized the use of A3E, F3E, or G3E emission, subject to the provision of paragraph (d) of this section.

(b) The use of digital scrambling techniques or digital voice modulation requires the specific authorization of F1E or G1E emission, and these emissions will only be authorized subject to the provisions of paragraph (d) of this section.

(c) The transmission of any non-voice information or data under the authorization of F1E or G1E emission is prohibited. However, stations authorized the use of F1E or G1E emission may also be authorized F1D, F2D, G1D or G2D emission for non-voice communication purposes, pursuant to paragraph (k) of § 90.207.

* * *

§ 90.233 [Amended]

112. Section 90.233 is amended by changing "A2, A9, F2, F9, or F9Y" to "A1D, A2D, F1D, F2D, G1D, or G2D" in the first paragraph.

§ 90.235 [Amended]

113. Section 90.235 is amended by changing "A1, A2, A9, F1, F2, and F9" to "A1A, A2B, F1B, F2B, G1B, and G2B" and "A3, F3 or F3Y" to "A3E, F1E, F2E, F3E, G1E, G2E, or G3E" in paragraph (c)(3).

114. Section 90.237 is amended by revising paragraphs (a), (c), (d), (e) and (g) as follows:

§ 90.237 Interim provisions for operations of radioteleprinter and radiofacsimile devices.

(a) Information must be submitted with an application to establish that the minimum separation between a proposed radioteleprinter or radiofacsimile base station and the nearest co-channel base station of another licensee operating a voice system is 120 km. (75 mi.) for a single frequency mode of operation, or 56 km. (35 mi.) two frequency mode of operation. Where this minimum mileage separation cannot be achieved, either agreement to the use of F1B, F2B, F3C, G1B, G2B or G3C emission must be received from all existing co-channel licensees using voice emission within the applicable mileage limits, or if agreement was not received, the licensee of the radioteleprinter or radiofacsimile system is responsible for eliminating any interference with preexisting voice operations. New licenses of voice operations will be expected to share equally any frequency occupied by established radioteleprinter or radiofacsimile operations.

(c) Transmitters type-accepted under this part for use of G3E or F3E emission may also be used for F1B, F2B, F3C, G1B, G2B or G3C emission for radioteleprinter or radiofacsimile, provided the keying signal is passed through the low pass audio frequency filter required for G3E or F3E emission. The transmitter must be so adjusted and operated that the instantaneous frequency deviation does not exceed the maximum value allowed for G3E or F3E.

(d) Frequencies will not be assigned exclusively for F1B, F2B, F3C, G1B, G2B or G3C emission for radioteleprinter or radiofacsimile (except where specifically provided for in the frequency limitations).

(e) The requirements in this part applicable to the use of G3E or F3E emission are also applicable to the use of F1B, F2B, F3C, G1B, G2B or G3C emission for radioteleprinter and radiofacsimile transmissions.

(g) For single sideband operations in accordance with § 90.266, transmitters type-accepted under this part for use of J3E emissions may also be used for A2B and F2B emission for radioteleprinter transmissions. Transmitters type-accepted under this part for use of J3E emissions in accordance with

§§ 90.63(d)(1), 90.65(c)(1), 90.73(d)(1) and

90.81(d)(13) may also be used for A1B, A2B, F1B, F2B, J2B, and A3C emissions to provide standby backup circuits for operational telecommunications circuits which have been disrupted, where so authorized in other sections of this part.

§ 90.239 [Amended]

115. Section 90.239 is amended by changing "F1, F2, F3, F9, or P9" to "F1D, F2D, F3E, G1D, G2D, G3E, or P0N" in paragraph (b), and "F1, F2, F9, or P9" to "F1D, F2D, G1D, G2D or P0N" in paragraph (c)(3)(iii).

116. Section 90.241 is amended by revising paragraphs (a)(5), (c)(4), and (c)(12) as follows:

§ 90.241 Radio call box operations.

(a) * * *

(5) Only A1D, A2D, F1D, F2D, G1D, or G2D emission shall be authorized.

(c) * * *

(4) Only F1D, F2D, F3E, G1D, G2D, or G3E, emission may be authorized for nonvoice signaling, radiotelephony, and multiplexed voice and nonvoice use. The provisions in this part applicable to the use of F3E or G3E emission are also applicable to the use of F1D, F2D, G1D or G2D emission for call box transmitters.

(12) Transmitters type accepted under this part for use of F3E or G3E emission may be used for F1D, F2B, G2B or G2D emission provided that the audio tones or digital data bits are passed through the low pass audio filter required to be provided in the transmitter for F3E or G3E emission. The transmitter must be adjusted and operated so that the instantaneous frequency deviation does not exceed the maximum value allowed for F3E or G3E emission.

§ 90.242 [Amended]

117. Section 90.242 is amended by changing "6A3" to "6K00A3E" and "A0" to "N0N" in paragraph (b)(1).

§ 90.250 [Amended]

118. Section 90.250 is amended by changing "F9Y" to "F1E, F7W, G1E or G7W" in paragraphs (e) and (f).

§ 90.264 [Amended]

119. Section 90.264 is amended by changing "2.8A3J, 0.1A1" to "2K80J3E, 100HA1A" in paragraph (f).

§ 90.266 [Amended]

120. Section 90.266 is amended by changing "2.8A3J, 0.1A1" to "2K80J3E, 100HA1A, 100HA1B" in paragraph (f).

§ 90.267 [Amended]

121. Section 90.267 is amended by changing "A1, A2, A3, A9, F1, F2, F3, and F9" to "A1A, A1D, A2B, A2D, A3E, F1B, F1D, F2B, F2D, F3E, G1B, G1D, G2B, G2D, and G3E" in paragraph (a)(1).

§ 90.315 [Amended]

122. Section 90.315 is amended by changing "F2, F3, F4, F9, and A2, A3, A4, and A9" to "A2B, A2D, A3C, A3E, F2B, F2D, F3C, F3E, G2B, G2D, G3C, and G3E" in paragraph (c).

§ 90.425 [Amended]

123. Section 90.425 is amended by changing "A3 or F3" "A3E, F3E or G3E" in paragraph (a), and "F3Y" to "F1E or G1E" in paragraph (d)(2).

PART 95—[AMENDED]

K. Part 95 of Chapter I of Title 47 of the Code of Federal Regulations is amended as follows:

§ 95.211 [Amended]

124. Section 95.211 is amended by changing "A9" to "A1D" in paragraphs (c)(1) and (c)(2), and "(F9)" to "(F1D)" in paragraph (c)(3).

125. Section 95.617 is amended by revising the introductory text of paragraph (b) as follows:

§ 95.617 Emission limitations.

(a) * * *

(b) The authorized bandwidth of the emission of any transmitter employing amplitude modulation shall be 8 kHz for double sideband and 4 kHz for single sideband. The authorized bandwidth of the emission of any transmitter employing frequency or phase modulation (Classes F2B and F3E or G2B and G3E) shall be 20 kHz. The use of F2B, F3E, G2B, and G3E emissions in the frequency band 26.96 MHz–27.41 MHz is not authorized.

PART 97—[AMENDED]

L. Part 97 of Chapter I of Title 47 of the Code of Federal Regulations is amended as follows:

§ 97.7 [Amended]

126. Section 97.7 is amended by changing "A1" to "A1A" in paragraph (e).

§ 97.69 [Amended]

127. Section 97.69 is amended by changing "F1" to "F1B" in the introductory text of paragraph (a), and "A2, F1, or F2" to "A2B, F1B, F2B" in paragraph (a)(2).

128. Section 97.61 is amended by revising the table in paragraph (a), and

revising paragraph (b)(11), and adding new paragraphs (b) (14) and (15) to read as follows:

§ 97.61 Authorized frequencies and emissions.

(a) * * *

Frequency band	Emissions	Limitations (see para. (b))
Kilohertz		
1800 to 2000	A1A, A3E	15
3500 to 4000	A1A	
3500 to 3750	F1B	
3750 to 4000	A3E, F3E, G3E, A3C, A3F, F3C, F3F, P0N.	4, 15
5167.5	R3E, J3E	13
7000 to 7300	A1A	3, 4
7000 to 7150	F1B	3, 4
7075 to 7100	A3E, F3E, G3E	11, 15
7150 to 7300	A3E, F3E, G3E, A3C, F3C, A3F, F3F.	3, 4, 15
14,000 to 14,350	A1A	
14,000 to 14,150	F1B	
14,150 to 14,350	A3E, F3E, A3C, F3C, A3F, F3F.	15
21,000 to 21,450	A1A	
21,000 to 21,200	F1B	
21,200 to 21,450	A3E, F3E, A3C, F3C, A3F, F3F.	15
28,000 to 29,700	A1A	
28,000 to 28,300	F1B	
28,300 to 29,700	A3E, F3E, G3E, A3C, F3C, A3F, F3F.	15
Megahertz		
50.0 to 54.0	A1A	
50.1 to 54.0	A2A, A2B, A3E, A3C, A3F, F1B, F2B, F3E, G3E, F3C, F3F.	15
51.0 to 54.0	NON	
144.0 to 148.0	A1A	
144.1 to 148.0	NON, A2A, A2B, A3E, A3C, A3F, F1B, F2B, F3E, G3E, F3C, F3F.	15
220 to 225	NON, A1A, A2A, A2B, A3E, A3C, A3F, F1B, F2B, F3E, G3E, F3C, F3F.	5, 15
420 to 450	NON, A1A, A2A, A2B, A3E, A3C, A3F, F1B, F2B, F3E, G3E, F3C, F3F.	5, 7, 15
1215 to 1300	NON, A1A, A2A, A2B, A3E, A3C, A3F, F1B, F2B, F3E, G3E, F3C, F3F.	5, 15
2300 to 2310	NON, A1A, A2A, A2B, A3E, A3C, A3F, F1B, F2B, F3E, G3E, F3C, F3F, P0N.	5, 8, 14, 15
2390 to 2450	NON, A1A, A2A, A2B, A3E, A3C, A3F, F1B, F2B, F3E, G3E, F3C, F3F, P0N.	5, 8, 14, 15
Gigahertz		
3.300 to 3.500	NON, A1A, A2A, A2B, A3E, A3C, A3F, F1B, F2B, F3E, G3E, F3C, F3F, P0N.	5, 12, 14, 15
5.650 to 5.925	NON, A1A, A2A, A2B, A3E, A3C, A3F, F1B, F2B, F3E, G3E, F3C, F3F, P0N.	5, 9, 14, 15
10.000 to 10.500	NON, A1A, A2A, A2B, A3E, A3C, A3F, F1B, F2B, F3E, G3E, F3C, F3F.	5, 15
24.000 to 24.250	NON, A1A, A2A, A2B, A3E, A3C, A3F, F1B, F2B, G3E, F3C, F3F, P0N.	5, 10, 14, 15

—Continued

Frequency band	Emissions	Limitations (see para. (b))
48,000 to 50,000	NON, A1A, A2A, A2B, A3E, A3C, A3F, F1B, F2B, F3E, G3E, F3C, F3F, P0N.	14, 15
71,000 to 76,000	NON, A1A, A2A, A2B, A3E, A3C, A3F, F1B, F2B, F3E, G3E, F3C, F3F, P0N.	14, 15
165,000 to 170,000	NON, A1A, A2A, A2B, A3E, A3C, A3F, F1B, F2B, F3E, G3E, F3C, F3F, P0N.	14, 15
240,000 to 250,000	NON, A1A, A2A, A2B, A3E, A3C, A3F, F1B, F2B, F3E, G3E, F3C, F3F, P0N.	14, 15
Above 300,000	NON, A1A, A2A, A2B, A3E, A3C, A3F, F1B, F2B, F3E, G3E, F3C, F3F, P0N.	14, 15

(b) * * *

(11) The use of A3E, F3E, and G3E in this band is limited to amateur radio stations located outside Region 2.

(14) The letters "K, L, M, Q, V, W and X" may also be used in place of the letter "P" for pulsed radars.

(15) The use of J3E, R3E, and H3E may also be used.

129. Section 97.65 is revised to read as follows:

§ 97.65 Emission limitations.

(a) Type N0N emission, where not specifically designated in the bands listed in § 97.61 may be used for short periods of time when required for authorized remote control purposes or for experimental purposes. However, these limitations do not apply where type N0N emission is specifically designated.

(b) Whenever code practice, in accordance with § 97.91(d), is conducted in bands authorized for A3E emission, tone modulation of the radiotelephone transmitter may be utilized when interspersed with appropriate voice instructions.

(c) On frequencies below 29.0 MHz, the bandwidth of an F3E or G3E emission (frequency or phase modulation) shall not exceed that of an A3E emission having the same audio characteristics.

(d) On frequencies below 50 MHz, the bandwidth of A3C, A3F, F3C, and F3F emissions shall not exceed that of J3E single sideband emission.

(e) On frequencies between 50 MHz and 225 MHz;

(1) The bandwidth of A3C and A3F single sideband emissions shall not exceed the bandwidth of an J3E single sideband emission.

(2) The bandwidth of A3C and A3F double sideband emissions shall not exceed the bandwidth of an A3E double sideband emission.

(3) F3C and F3F emissions shall utilize a peak carrier deviation no greater than 5 kHz and a maximum modulating frequency no greater than 3 kHz or, alternatively, shall occupy a bandwidth no greater than 20 kHz. (For this purpose, the bandwidth is defined as the width of the frequency band, outside of which the mean power of any emission is attenuated by at least 26 decibels below the mean power level of the total emission. A 3 kHz sampling bandwidth is used by FCC in making this determination.)

(f) Below 225 MHz, an A3C or A3F emission may be used simultaneously with an A3E emission on the same carrier frequency, provided that the total bandwidth does not exceed that of an A3E double sideband emission.

130. Appendix 3 in Part 97 is revised as follows:

Appendix 3—Classification of Emissions

For convenient reference, the tabulation below is extracted from the classification of typical emissions in Part 2 of the Commission's Rules and Regulations. It includes only those general classifications which appear most applicable to the Amateur Radio Service.

Type of modulation	Type of transmission	Symbol
Amplitude	With no modulation	N0N, A1A.
	Telegraphy without the use of a modulating audio frequency (by on-off keying).	A2A, A2B.
	Telegraphy by the on-off keying of an amplitude modulating audio frequency or audio frequencies or by the on-off keying of the modulated emission (special case: an unkeyed emission amplitude modulated).	A3E.
	Telephony	
	Double Sideband	A3E.
	Single Sideband	
	Suppressed Carrier	J3E, R3E.
	Reduced Carrier	H3E.
	Full Carrier	A3C, A3F.
	Facsimile	A3C, A3F.
Frequency (or phase)	Television	F1B (G1B).
	Telegraphy by frequency shift keying without the use of a modulating audio frequency.	F2B (G2B).
	Telegraphy by the on-off keying of a frequency modulating audio frequency or by the on-off keying of frequency modulated emission (special case: an unkeyed emission frequency modulated).	
	Telephony	F3E (G3E), F3C (G3C), F3F (G3F).

Type of modulation	Type of transmission	Symbol
Pulse		PON. ¹

¹ The letters "K, L, M, Q, V, W and X" may also be used in place of the letter "P" for pulse radar.

PART 99—[AMENDED]

M. Part 99 of Chapter I of Title 47 of the Code of Federal Regulations is amended as follows:

§ 99.37 [AMENDED]

131. Section 99.37 is amended by changing "Type A1 or Type A3 emission" to "Type A1A, J2A, J3E, R3E, H3E, or A3E emission" in paragraph (d).

[FR Doc. 84-31752 Filed 12-13-84; 8:45 am]

BILLING CODE 6712-01-M

47 CFR Part 68

[CC Docket No. 81-216; RM Nos. 2845, 3195, et al.; FCC 84-522]

Connection of Telephone Equipment, Systems and Protective Apparatus to the Telephone Network; and Inquiry into Standards for Inclusion of One and Two-Line Business and Residential Service

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: As part of CC Docket No. 81-216 the Commission has amended Part 68 of its rules to create technical interconnection standards for connection of network channel terminating equipment to digital services. The rules are designed to ensure that terminal equipment attached to digital services will not cause harm to the telephone network.

DATES: The rule changes become effective January 14, 1985.

FOR FURTHER INFORMATION CONTACT: Patrick Donovan, Common Carrier Bureau, Federal Communications Commission, Washington, D.C., 20554, (202) 634-1832.

SUPPLEMENTARY INFORMATION:

List of Subjects in 47 CFR Part 68

Communications equipment,
Communications common carriers.

Second Report and Order

In the matter of petitions seeking amendment of Part 68 of the Commission's Rules concerning connection of telephone equipment, systems and protective apparatus to the telephone network and notice of inquiry into standards for inclusion of one and two-line business and residential service in Part 68 of the Commission's Rules [CC Docket No. 81-216; RM-2845, RM-3195, RM-

3206, RM-3227, RM-3283, RM-3316, RM-3329, RM-3348, RM-3501, RM-3526, RM-3530, RM-4054, RM-4087].

Adopted: November 8, 1984.

Released: November 26, 1984.

By the Commission: Commissioner Quello dissenting in part and issuing a statement.

1. In *Amendment of Part 68 of the Commission's Rules Concerning Connection of Equipment, Systems and Protective Apparatus to the Telephone Network (Interconnection Order)* CC Docket No. 81-216, 94 F.C.C. 2d 5 (1983), *stay denied, Order*, Mimeo No. 1503, (Common Carrier Bureau), released December 23, 1983, *recon. denied*, FCC 84-145, released April 27, 1984, the Commission issued a notice of proposed rulemaking to amend Part 68 of the Rules, 47 CFR Part 68, to adopt interconnection standards for terminal equipment used in connection with digital transmission services. This terminal equipment is referred to generically as network channel terminating equipment or "NCTE".¹ In response to this notice the Bell System Operating Companies (BOCs) submitted comprehensive proposed amendments to Part 68.² Other comments and/or responsive comments were filed by the Independent Data Communications Manufacturers Association (IDCMA), GTE Service Corporation (GTE), the Department of Defense (DOD), Northern Telecom, Inc. (Northern Telecom), the North American Telephone Association (NATA), Utilities Telecommunications Council (UTC), International Business Machines Corporation (IBM), ROLM Corporation, Kentrox Corporation (Kentrox) and Verilink Corporation (Verilink). In this decision we review the proposed rules and comments submitted in response to the notice of proposed rulemaking and adopt final rules under Part 68 to establish equipment

¹ Part 68 of the rules, 47 CFR Part 68, provides the technical and procedural standards under which direct electrical connection of customer provided telephone equipment, systems and protective apparatus may be made to the nationwide network without causing harm and without a requirement for the interposition of telephone company provided protective circuit arrangements (PCAs). Potential network harms recognized in Part 68 are, *inter alia*, hazardous voltages, excessive signal power, longitudinal imbalance, improper on-hook impedances, and interference with telephone company billing systems and equipment.

² The BOCs' comments were filed jointly by the Mountain States Telephone and Telegraph Company, Pacific Telephone and Telegraph Company, Bell Telephone Company of Nevada, Southwestern Bell Telephone Company, New York Telephone Company, New England Telephone and Telegraph Company, Bell Telephone Company of Pennsylvania, Diamond State Telephone Company, the Chesapeake and Potomac Telephone Companies, New Jersey Bell Telephone Company, Southern Bell Telephone and Telegraph Company, and South Central Bell Telephone Company.

registration standards for certain digital services.

Background

2. In the *Interconnection Order* the Commission determined that the American Telephone and Telegraph Co. (AT&T)³ had failed to justify restrictive tariffs prohibiting customer provision of NCTE, and that this equipment would be treated as customer premises equipment for purposes of the structural separation requirements of *Computer II*.⁴ As indicated, the Commission issued a notice of proposed rulemaking to amend Part 68 of the rules to adopt technical standards for this equipment to ensure that complying terminal equipment would not cause harm to the network. See § 68.3(g) of the rules, 47 CFR 68.3(g). In order to implement its decision immediately, the Commission directed AT&T to file tariff revisions containing adequate technical standards to permit customer provision of NCTE. These revisions constituted an interim interconnection program pending the Commission's resolution of final interconnection standards issues under Part 68. AT&T's tariff establishing the interim program became effective November 18, 1983. Pursuant to the interim program, manufacturers may certify that their equipment complies with the technical standards referenced in the tariff and customers of digital services specified in the tariff may provide and interconnect NCTE. The technical standards that are referenced as part of the interim program are essentially identical to the technical proposals now before the Commission filed by the BOCs for incorporation into Part 68.

3. At the present time the primary digital services offered by telephone common carriers—and the services which are the subject of this proceeding—are Dataphone Digital Service (DDS) and Terrestrial Digital Circuits (TDC). DDS is offered at rates (speeds) of 2.4, 4.8, 9.6, and 56 thousand bits per second (kbps). TDC operates at a speed of 1.544 million bits per second (Mbps). This latter service is also

³ The BOC/AT&T relationship was dissolved in Modification of Final Judgment (MFJ) entered on August 24, 1982 in *United States v. American Telephone and Telegraph Co.*, 552 F. Supp. 131 (D.D.C. 1982), *aff'd sub nom. Maryland v. United States*, 103 S.Ct. 1210 (1983). NCTE will be connected to BOC facilities.

⁴ Amendment of § 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry), 77 F.C.C. 2d 384, 439 (1980) (Final Decision), *reconsideration*, 84 FCC 2d 50 (1980), *further reconsideration*, 88 F.C.C. 2d 512 (1981), *aff'd sub nom. CCLA v. FCC*, 693 F.2d 198 (D.C. Cir. 1982), *cert. denied* 103 S. Ct. 2109 (1983).