lished for the purpose of adding to § 30.71, Schedule A, three classes of devices which may be possessed and used under the general license contained in § 30.21 (a) (1) when such devices are manufactured, tested and labeled in accordance with the specifications contained in a specific license issued to the manufacturer under these regulations; and to add small quantities of beta and/or gamma emitting byproduct material to the list of byproduct materials generally licensed pursuant to §§ 30.21 (a) (2) and 30.72. Inasmuch as this amendment is intended to relieve from, rather than to impose, restrictions, the Atomic Energy Commission has found that general notice of proposed rule-making and public procedure are unnecessary and that good cause exists why the regulations should be made effective without the customary period of notice.

Part 30, *Title 10, CFR*, Licensing of Byproduct Material, is hereby amended in the following respects:

1. Section 30.71 *Schedule A* is amended to read as follows:

§ 30.71 *Schedule A.* The following devices and equipment incorporating byproduct material, when manufactured, tested and labeled by the manufacturer in accordance with the specifications contained in a specific license issued to him pursuant to the regulations in this part, are placed under a general license pursuant to § 30.21 (a) (1).

(a) *Static elimination device.* Devices designed for use as static eliminators which contain, as a sealed source or sources, byproduct material consisting of a total of not more than 500 microcuries of Polonium 210 per device.

(b) *Spark gap and electronic tubes.* Spark gap tubes and electronic tubes which contain byproduct material consisting of not more than 5 microcuries per tube of Cesium 137, or Nickel 63, or Krypton 85 gas, or not more than one microcurie per tube of Cobalt 60.

(c) *Light meter.* Devices designed for use in measuring or determining light intensity which contain, as a sealed source or sources, byproduct material consisting of a total of not more than 200 microcuries of Strontium 90 per device.

(d) *Ion generating tube.* Devices designed for ionization of air which contain, as a sealed source or sources, byproduct material consisting of a total of not more than 500 microcuries of Polonium 210 per device.

2. Section 30.72 *Schedule B* is amended as follows:

a. The abbreviation for Cesium-Barium 137 is corrected to read "(CsBa 137)."

b. The following is inserted at the end of the presently scheduled byproduct materials, immediately under Zinc 65:

	Column No. I	Column No. II
Beta and/or Gamma emitting byproduct material not listed above	Not as a sealed source (microcuries)	As a sealed source (microcuries)
	1	10

(Sec. 161, 68 Stat. 948; 42 U. S. C. 2201)

Dated at Washington, D. C., this 27th day of September 1956.

For the Atomic Energy Commission.

K. E. Fields,
General Manager.

[F. R. Doc. 56-7972; Filed, Oct. 2, 1956; 8:53 a. m.]

TITLE 16—COMMERCIAL PRACTICES

Chapter I—Federal Trade Commission

[Docket 6527]

Part 13—Digest of Cease and Desist Orders

SCOVILL MANUFACTURING CO.

Subpart—*Acquiring stock, or assets, etc., of competitor:* § 13.5 *Acquiring stock, or assets, etc., of competitor.*

(Sec. 6, 38 Stat. 721; 15 U. S. C. 46. Interpret or apply sec. 7, 38 Stat. 731; 15 U. S. C. 18) [Cease and desist order, Scovill Manufacturing Company, Waterbury, Conn., Docket 6527, September 15, 1956.]

This proceeding was heard by a hearing examiner on the complaint of the Commission—charging the nation's largest manufacturer of safety and common pins with acquiring all the outstanding capital stock and the assets and the business of a principal competitor, in violation of the anti-merger law—and agreement between counsel providing for entry of a consent order.

On this basis, the hearing examiner made his initial decision and order to cease and desist which by order of September 14, 1956, became, on September 15, the decision of the Commission.

Said order to cease and desist is as follows:

It is ordered, That respondent, Scovill Manufacturing Company, a corporation, its officers, agents, representatives, and employees, directly or through any corporate or other device, in connection with the offering for sale, sale, or distribution in commerce, as "commerce" is defined in the Clayton Act, as amended, of safety pins and of common pins, do cease and desist from: Manufacturing, producing, or assembling safety pins or common pins on the premises or in the factory or plant of the DeLong Hook & Eye Company Division of the Scovill Manufacturing Company, located at 21st and Clearfield Streets, Philadelphia, Pennsylvania, said division of Scovill Manufacturing Company being located on the premises and in the buildings formerly occupied by the DeLong Hook & Eye Company prior to its acquisition by the Scovill Manufacturing Company on April 1, 1955.

It is further ordered, That respondent, Scovill Manufacturing Company, shall divest itself absolutely, in good faith, within 90 days after service upon it of a copy of this order, of all safety pin and common pin machines, equipment and related attachments now located in and at the said DeLong Hook & Eye Company Division at 21st and Clearfield Streets, Philadelphia, Pennsylvania, which were acquired from the former DeLong Hook & Eye Company of that address, together with, and as a unit, and to the same purchaser, all trade names, trade-mark registrations, patents, and goodwill acquired by Scovill Manufacturing Company, as a result of the aforementioned acquisition, which relate to or have been used in connection with or in the sale of safety pins or common pins.

It is provided, however, That if the aforesaid property is not sold or disposed of entirely for cash, nothing in this order shall be deemed to prohibit respondent from retaining, accepting and enforcing in good faith any security interest in the aforesaid property for the purpose of securing to respondent full payment of the price, with interest, at which the aforesaid property is disposed of or sold; *And provided further:* that if, after a good faith divestiture of the aforesaid property, the buyer fails to perform his obligation and respondent regains ownership of or control over the aforesaid property, respondent shall redivest itself of the property within one hundred and fifty days in the same manner as ordered originally.

The terms "safety pins" and "common pins" as used herein refer to identical terms as used and understood by the members of the Pin, Clip and Fastener Association when reporting their shipments of said items to the safety pin and common pin divisions of said association.

It is further ordered, That respondent, Scovill Manufacturing Company, shall, within one hundred days after service upon it of this order, file with the Commission a report in writing setting forth in detail the manner and form in which it has complied with the order contained herein.

By "Decision of the Commission", etc., report of compliance was required as follows:

It is ordered, That the respondent herein shall, on or before November 23, 1956, file with the Commission a report in writing setting forth in detail the manner and form in which it has complied with the order contained in the initial decision.

Issued: September 14, 1956.

By the Commission.

[SEAL] Robert M. Parrish,
Secretary.

[F. R. Doc. 56-7947; Filed, Oct. 2, 1956; 8:47 a. m.]

[Docket 6565]

Part 13—Digest of Cease and Desist Orders

P. W. MINOR & SON, INC., ET AL.

Subpart—*Advertising falsely or misleadingly:* § 13.130 *Manufacture or preparation;* § 13.170 *Qualities or properties of product or service.* Subpart—*Misrepresenting oneself and goods*—Goods: § 13.1680 *Manufacture or preparation;* § 13.1710 *Qualities or properties.* Subpart—*Using misleading name*—Goods: § 13.2310 *Manufacture or preparation;* § 13.2325 *Qualities or properties.*

(Sec. 6, 38 Stat. 721; 15 U. S. C. 46. Interpret or apply sec. 5, 38 Stat. 719, as amended; 15

U. S. C. 45) [Cease and desist order, P. W. Minor & Son, Inc., et al., Batavia, N. Y., Docket 6565, September 15, 1956]

In the Matter of P. W. Minor & Son, Inc., a Corporation, and Henry H. Minor, Jr., Leo J. Hart and Charles B. Taft, Individually and as Officers of P. W. Minor & Son, Inc.

This proceeding was heard by a hearing examiner on the complaint of the Commission—charging a Batavia, N. Y., manufacturer of its "Treadeasy" women's shoes with using the words "orthopedics" and "Corrector" in connection with certain of their stock shoes, and with representing falsely in statements printed on cartons in which the shoes were packed, in folders and circulars, and in advertisments in magazines and catalogs sent to customers, that their several lines of shoes provided a variety of corrective and supporting features for foot ailments—and an agreement between the parties providing for the entry of a consent order.

On this basis, the hearing examiner made his initial decision, including order to cease and desist, which by order of September 14 became on September 15 the decision of the Commission.

The order to cease and desist is as follows:

It is ordered, That the respondents P. W. Minor & Son, Inc., a corporation, and its officers, and Henry H. Minor, Jr., Leo J. Hart, and Charles B. Taft and their representatives, agents, and employees, directly or through any corporate or other device in connection with the offering for sale, sale, or distribution in commerce, as "commerce" is defined in the Federal Trade Commission Act, or respondents' shoes designated as "Treadeasy Shoes" or any other shoe of similar construction or performing similar functions irrespective of the designation applied thereto, do forthwith cease and desist from:

1. Representing, directly or by implication, that their said shoes are orthopedic or corrective, or will cure, correct, or improve abnormalities, diseases, or disorders of the feet.

2. Representing, directly or by implication, that one purchasing and wearing respondents' said shoes can be assured of proper fit, or comfort.

3. Representing, directly or by implication, that respondents' shoe called Floridian, would be beneficial to all feet with rotating heels, or that any aid thus afforded to a particular foot would be adequate in cases of feet having rotating heels, or that any such aid thus afforded would be permanent or would extend beyond the time the shoe is on the foot.

4. Representing, directly or by implication, that respondents' shoe called the Stroller is anatomically correct for feet generally.

5. Representing, directly or by implication, that respondents' shoe known as the Easejoint can be depended upon to relieve pressure on any part of the foot, will afford help to anyone suffering from bursitis, that said shoe provides a bunion pocket, or will afford benefit to all enlarged or painful joints in any area of the foot.

By "Decision of the Commission," etc., report of compliance was required as follows:

It is ordered, That the respondents herein shall, within sixty (60) days after service upon them of this order, file with the Commission a report in writing setting forth in detail the manner and form in which they have complied with the order to cease and desist.

Issued: September 14, 1956.

By the Commission.

[SEAL] ROBERT M. PARRISH, *Secretary.*

[F. R. Doc. 56-7948; Filed, Oct. 2, 1956; 8:47 a. m.]

TITLE 17—COMMODITY AND SECURITIES EXCHANGES

Chapter II—Securities and Exchange Commission

PART 230—GENERAL RULES AND REGULATIONS, SECURITIES ACT OF 1933

MISCELLANEOUS AMENDMENTS

On July 11, 1956, the Securities and Exchange Commission invited views and comments on certain proposed changes in its general rules and regulations under the Securities Act of 1933. The Commission has now reviewed and considered all of the comments and suggestions received in regard to the proposed changes and hereby takes the following action:

I. *Rescission of §§ 230.132, 230.151, 230.414 (Rules 132, 151 and 414).* Section 230.132 (Rule 132) provided for the use of identifying statements in connection with securities registered or in the process of registration under the act. It has been rescinded because it has now been superseded by § 230.134 (Rule 134) which provides for the use of substantially the same type of advertisements pursuant to section 2 (10) (b) of the act.

Section 230.151 (Rule 151) defined, for certain transactions, the term "issuance" as used in the former section 4 (3) of the act as in effect prior to July 1, 1934. Since the rule applied only to offerings commenced prior to that date, it is no longer necessary and has been rescinded.

Section 230.414 (Rule 414) required the filing with certain registration statements of identifying statements proposed to be used pursuant to § 230.132 (Rule 132). With the rescission of that rule, § 230.414 (Rule 414) is no longer necessary and has been rescinded.

II. *Amendment of § 230.100 (Rule 100).* Paragraph (a) of § 230.100 (Rule 100) is amended by deleting therefrom the definition of the term "section". Since the Commission's rules are included in the Code of Federal Regulations as "sections," this definition is deleted to avoid possible confusion between sections of the act and sections of the Code. Paragraph (a) as so amended, and with other minor verbal changes, reads as follows:

§ 230.100 *Definition of terms used in the rules and regulations.* (a) As used in the rules and regulations prescribed in this part by the Securities and Exchange Commission pursuant to the Securities Act of 1933, unless the context otherwise requires:

(1) The term "Commission" means the Securities and Exchange Commission.

(2) The term "act" means the Securities Act of 1933.

(3) The term "rules and regulations" refers to all rules and regulations adopted by the Commission pursuant to the act, including the forms and accompanying instructions thereto.

(4) The term "registrant" means the issuer of securities for which a registration statement is filed.

(5) The term "agent for service" means the person authorized in the registration statement to receive notices and communications from the Commission.

III. *Amendment of § 230.170 (Rule 170).* Rule 170 prohibits the use of financial statements which give effect to the receipt and application of any part of the proceeds from the sale of the securities being offered unless the issue is underwritten and the underwriters are committed to take the entire issue.

This rule is amended to make clear that the rule is intended to permit the use of such financial statements not only in cases where there is a firm commitment to take the issue but also in cases where there is no such commitment, provided the underwriters agree to take all of the securities if any are taken or to refund to public investors all subscription payments made, if the underwriters elect not to take the issue. The rule as amended reads as follows:

§ 230.170 *Production of use of certain financial statements.* Financial statements which purport to give effect to the receipt and application of any part of the proceeds from the sale of securities for cash shall not be used unless such securities are to be offered through underwriters and the underwriting arrangements are such that the underwriters are or will be committed to take and pay for all of the securities, if any are taken, prior to or within a reasonable time after the commencement of the public offering, or if the securities are not so taken to refund to all subscribers the full amount of all subscription payments made for the securities. The caption of any such financial statement shall clearly set forth the assumptions upon which such statement is based. The caption shall be in type at least as large as that used generally in the body of the statement.

IV. *Amendment of § 230.426 (Rule 426).* This rule requires the inclusion in a prospectus for registered securities of certain statements and information in regard to stabilizing. The amendment requires, in the case of a rights offering to existing security holders, that the prospectus used in connection with any reoffering of the unsubscribed securities to the general public shall contain information in regard to transactions effected by the issuer or the underwriters during the rights offering period. The amendment adds a new paragraph (c) to the rule reading as follows:

§ 230.426 *Statement as to stabilizing.* * * *

(c) If the securities being registered are to be offered to existing security holders pursuant to warrants or rights and any securities not taken by security holders are to be reoffered to the public after the expiration of the rights offering period, there shall be set forth by supplement or otherwise, in the prospectus used in connection with such reoffering (1) the amount of securities bought in stabilization activities during the rights offering period and the price or range of prices at which such securities were bought, (2) the amount of the offered securities subscribed for during such period, (3) the amount of the offered securities subscribed for by the underwriters during such period, (4) the amount of the offered securities sold during such period by the underwriters and the price, or range of prices, at which such securities were sold and (5) the amount of the offered securities to be reoffered to the public and the public offering price.

The foregoing action is taken pursuant to the Securities Act of 1933, particularly sections 6, 7, 10 and 19 (a) thereof, and shall become effective October 20, 1956.

(Sec. 19, 48 Stat. 85, as amended; 15 U. S. C. 77s. Interpret or apply secs. 6, 7, 10, 48 Stat. 78, 81, as amended; 15 U. S. C. 77f, 77g, 77j)

By the Commission.

[SEAL] ORVAL L. DUBOIS, *Secretary.*

[F. R. Doc. 56-7937; Filed, Oct. 2, 1956; 8:45 a. m.]

TITLE 21—FOOD AND DRUGS

Chapter I—Food and Drug Administration, Department of Health, Education, and Welfare

PART 141c—CHLORTETRACYCLINE (OR TETRACYCLINE AND CHLORTETRACYCLINE- (OR TETRACYCLINE-) CONTAINING DRUGS; TESTS AND METHODS OF ASSAY

CAPSULES TETRACYCLINE AND OLEANDOMYCIN

Correction

In F. R. Document 56-7809, appearing in the issue for Friday, September 28, 1956, make the following change: In § 141c.231 (c) (1) (vi), line 2, the word "millimeters" should read "milliliters".

TITLE 38—PENSIONS, BONUSES, AND VETERANS' RELIEF

Chapter I—Veterans Administration

PART 4—DEPENDENTS AND BENEFICIARIES CLAIMS

BASIC REQUIREMENTS OF SERVICE AND DEATH

In § 4.300, subparagraph (2) of paragraph (a) is amended to read as follows:

§ 4.300 *Basic requirements of service and death.* (a) * * *

(2) Members of the Reserve Officers Training Corps (Army ROTC), contract Naval Reserve Officers' Training Corps (NROTC), and Air Force Reserve Officers' Training Corps (AFROTC) when called or ordered to active training duty for 14 days or more, where death occurs on or after June 27, 1950, and prior to August 1, 1956, while on such active training duty. (Coverage of these categories is limited to deaths which occur while on such active training duty, and does not extend for 120 days after separation or release from duty even though the person may have been called or ordered to such duty for a period exceeding 30 days. They are not covered while undergoing scholastic training or inactive training duty. They are covered during a period of travel en route to or from active training duty only if such travel is performed under competent orders; for example, travel to or from the port of embarkation or training station for the annual practice cruise or annual training period.) There is no coverage of categories in this subparagraph where death occurs on or after August 1, 1956 (Public Law 879, 84th Congress).

* * * * *

(Sec. 2, 65 Stat. 33, as amended, sec. 5, 70 Stat. 806; 38 U. S. C. 851)

(Sec. 5, 43 Stat. 608, as amended, sec. 2, 46 Stat. 1016, sec. 7, 48 Stat. 9; 38 U. S. C. 11a, 426, 707)

This regulation is effective October 3, 1956.

[SEAL] JOHN S. PATTERSON, *Deputy Administrator.*

[F. R. Doc. 56-7954; Filed, Oct. 2, 1956; 8:49 a. m.]

PART 14—LEGAL SERVICES, GENERAL COUNSEL

POWERS OF ATTORNEY

In § 14.628, paragraph (c) is amended and new paragraphs (d) and (e) are added as follows:

§ 14.628 *Powers of attorney.* * * *

(c) Where a veteran is temporarily incapacitated through illness or injury and unable to execute a power of attorney, his wife or other next friend (if her or his interests are not adverse to that of the veteran) may execute a power of attorney, VA Form 2-22, appointing a service organization to act for him in the prosecution of his claim before the Veterans Administration. Such power of attorney shall remain effective during the period of the veteran's temporary incapacity. Upon regaining his capacity he should either execute a new power of attorney himself in the event he still desires the same service organization or another to represent him or, if not, he should notify the Veterans Administration in writing of the revocation of the power of attorney executed by his wife or other next friend during his temporary incapacity. In the event that a guardian is appointed by a court of competent jurisdiction, the foregoing power of attorney shall terminate and it will be necessary for the guardian to execute a new power of attorney, VA Form 2-22, reappointing the service organization to act for the veteran. This paragraph applies only to cases in which there has been no rating or other determination of mental incapacity on the part of the veteran.

(d) A parent and natural guardian of a minor child of a veteran or other person having custody of said minor, provided there is no legally appointed guardian, may execute a power of attorney, VA Form 2-22, appointing a service organization to act for said minor in the prosecution of his or her claim before the Veterans Administration. Such power of attorney shall remain in effect until the minor attains his or her 18th birthday or such later date as the minor may be eligible for benefits from the Veterans Administration or until he or she attains his majority under the law of the State of domicile, whichever is the earlier. In the event that a guardian is appointed by a court of competent jurisdiction the foregoing power of attorney shall terminate and it will be necessary for the guardian to execute a new power of attorney, VA Form 2-22, reappointing the service organization to act for the veteran.

(e) In certifying a case to the Board of Veterans Appeals wherein a power of attorney has been executed by the claimant in favor of an attorney, agent, or accredited representative of a recognized organization, the certifying officer will include a statement showing that such attorney or attorney-in-fact is on the accredited list.

(Sec. 5, 43 Stat. 608, as amended, sec. 2, 46 Stat. 1016, sec. 7, 48 Stat. 9, 38 U. S. C. 11a, 426, 707. Interpret or apply secs. 200-203, 49 Stat. 2031, as amended, 2032; 38 U. S. C. 101-104)

This regulation is effective October 3, 1956.

[SEAL] JOHN S. PATTERSON, *Deputy Administrator.*

[F. R. Doc. 56-7953; Filed, Oct. 2, 1956; 8:48 a. m.]

TITLE 42—PUBLIC HEALTH

Chapter I—Public Health Service, Department of Health, Education, and Welfare

Subchapter D—Grants

PART 57—GRANTS FOR CONSTRUCTION OF RESEARCH FACILITIES

Notice of proposed rule making, public participation and postponement of the effective date have been omitted in prescribing the following regulations since they relate solely to grants or benefits.

1. Subchapter D of Chapter I is hereby amended by adding thereto the following new part:

Sec.

57.1 Definitions.
57.2 Eligible institutions.
57.3 Applications for construction grants.
57.4 Required assurances.
57.5 Approval of grants.
57.6 Amount of grant; limitation.
57.7 Necessary costs of construction.
57.8 Conditions to grant.
57.9 Payments.
57.10 Good cause for other use of completed facility.

AUTHORITY: §§ 57.1 to 57.10 issued under sec. 709, 70 Stat. 720. Interpret or apply secs. 701-708, 70 Stat. 717-720.

§ 57.1 *Definitions.* When used in this part:

(a) All terms which are defined in sections 2 and 702 of the Public Health Service Act, as amended, shall have the same meaning as given them in such sections.

(b) "Act" means the Public Health Service Act, as amended.

(c) "Construction grant" means a grant of funds for the construction of health research facilities as authorized by title VII of the act.

(d) "Equipment" means those items that are considered depreciable and as having an estimated life of not less than five years. Not included are such items as glassware, chemicals, storage batteries, and books.

§ 57.2 *Eligible institutions.* A public or nonprofit institution shall be eligible to apply for a construction grant upon a determination by the Surgeon General:

(a) That such institution is either controlled and operated by one or more State, county, municipal or other non-Federal, governmental agencies or is owned and operated by one or more nonprofit corporations or associations.

(b) That such institution is authorized to conduct research in the sciences related to health; and

(c) Upon a further determination, after consultation with the Council, that the institution is competent to engage in the type of research for which the facility is to be constructed, taking into consideration among other pertinent factors:

(1) The scientific or professional standing or reputation of the institution and of its existing or proposed officers and research staff;

(2) The availability, by affiliation or other association, of other scientific or health personnel and facilities to the extent necessary to provide effective opportunities for the type of research proposed.

§ 57.3 *Applications for construction grants.* No construction grant shall be made unless an application is filed therefor in the form and manner prescribed by the Surgeon General and is executed by an official or officials legally authorized by the applying agencies, corporations or associations to make on their behalf such application and to provide the required assurances. In addition to any other pertinent information which the Surgeon General may require, each applicant shall:

(a) Furnish in sufficient detail plans and specifications of the facility to be constructed so as to indicate the nature and purpose of all portions of the facility and the type and quality of any features bearing on the costs of construction;

(b) Set forth the estimated total costs of construction of the facility and the basis on which such estimate was made, stating separately the estimated cost of excavation, structures, equipment, and architectural or other special services; and

(c) Furnish information on the extent and manner in which the proposed construction will expand the applicant's capacity for research in the sciences related to health or is necessary to improve or maintain the quality of such research by the applicant.

§ 57.4 *Required assurances.* No construction grant shall be made unless the application therefor contains or is supported by assurances, found by the Surgeon General to be reasonable:

(a) That for not less than 10 years after completion of construction, the facility will be used for the purposes of research in the sciences related to health for which it is to be constructed. Such an assurance shall be supported by evidence indicating that applicant's ownership of, or right otherwise to occupy, the site and to control the use of the facility for such 10-year period;

(b) That sufficient funds will be available to meet the non-Federal share of the cost of constructing the facility. Such assurance shall be supported by evidence of the amount of funds in escrow or firmly pledged or of funds or fund sources specifically earmarked for such purpose, or other such evidence indicating that funds for the non-Federal share are available: *Provided, however,* That if the applicant is unable to give the assurances as required by this paragraph, the grant may be made notwithstanding on such terms and conditions as prescribed by the Surgeon General after consultation with the Council and on the specific condition that such assurances, together with supporting evidence, will be furnished by the applicant within six months after such conditional grant or within such other period as determined by the Surgeon General after such consultation; and

(c) That sufficient funds will be available when construction is completed for effective use of the facility for the research for which it is being constructed. Such an assurance shall be supported as to new facilities by a proposed operating budget indicating the amount and source of operating funds for a 2-year period immediately following completion of construction or, as to existing facilities, by a statement of the amount and source of funds that are or will be available for such 2-year period to meet any difference between proposed expenditures and anticipated income.

§ 57.5 *Approval of grants.* The Council shall recommend, and the Surgeon General approve, construction grants only for those proposed facilities which in their judgment will be the more effective in expanding capacity for research in the sciences related to health, in improving the quality of such research, and in promoting an equitable geographical distribution of such research. In so recommending or approving, particular consideration shall be given to facilities that: (a) Will be used for research in disciplines or diseases which have the most urgent need; (b) are adaptable to various methods by which research is organized or advanced; (c) will be in institutions or localities with broad research programs and potentials; (d) will promote a better geographic distribution of research through assistance to established or promising new facilities in various areas of the Nation having at present relatively few such research facilities.

§ 57.6 *Amount of grant; limitation.* (a) The amount of any grant shall be that recommended by the Council or such lesser amount as the Surgeon General deems to be appropriate. Such an amount shall be reserved from any available appropriation, but the amount so reserved may be amended from time to time either upon a revision by the Surgeon General of his estimate of the necessary cost of construction or upon the Surgeon General's approval of an amendment to the application upon recommendation by the Council.

(b) In no event shall the amount payable under a construction grant exceed whichever is the least of the following:

(1) The amount reserved for such grant as determined or redetermined under paragraph (a) of this section;

(2) Fifty percent of the necessary cost of construction as determined by the Surgeon General; or,

(3) Such other percentage of such cost so determined as may be recommended by the Council and approved by the Surgeon General upon making the grant.

§ 57.7 *Necessary costs of construction.* In determining the necessary costs of construction of any facility, the Surgeon General, in addition to other relevant considerations, shall exclude:

(a) The cost of any necessary services, materials or equipment in excess of the lowest, responsible, competitive bid or, where there has been no such bidding, in excess of reasonable costs as the Surgeon General may determine;

(b) The value of any donation of gifts or services, materials, or equipment;

(c) The cost of any services, materials, or equipment not reasonably required by the plans and specifications furnished under § 57.3, or approved amendments thereto, and any costs occasioned by special architectural or designed features or the use of special materials not necessary for the conduct of the proposed research program;

(d) The cost of any portion of the facility that is not completed to a sufficient extent that it can be used for the proposed research program, and any architectural or other services specifically related thereto;

(e) The cost of any space or equipment to the extent it is related to purposes other than research in the sciences related to health;

(f) Costs for legal services, for damages whether or not arising out of construction, and for any bonus or any other extra payments not related to furnishing additional services, materials or equipment;

(g) Any costs incurred prior to July 31, 1956.

(h) Any other costs with respect to services performed (except architectural services) or materials or equipment delivered, at any time, pursuant to a contract or agreement entered into by the applicant prior to the filing of application for a construction grant unless (1) such contract or agreement as initially entered into is expressly contingent upon the making of the grant, and (2) Federal

participation in all or part of the costs under such a contingent contract or agreement, whether incurred before or after the date of application, is specifically approved in the making of the grant.

§ 57.8 *Conditions to grant.* In addition to any other conditions imposed by law or determined by the Surgeon General to be reasonably necessary to fulfill the purpose of the grant, each construction grant shall be subject to the condition that the grantee institution shall:

(a) Use grant funds solely for the purposes of the construction for which the grant was made.

(b) Use no part of the grant funds for any cost with respect to services performed or material or equipment delivered, at any time, pursuant to a contract or agreement entered into by the applicant prior to the effective date of the construction grant unless such contract or agreement as initially entered into is expressly contingent upon such grant being made.

(c) Secure through performance bonds, insurance, or other equivalent undertakings, protection against contingencies or hazards that reasonably may prevent completion of the construction;

(d) Maintain such fiscal or other records and furnish such progress or other reports relating to the construction as may be directed by the Surgeon General, and permit audit of records and inspection of the site and of the construction in progress at any reasonable time by representatives of the Surgeon General;

(e) Repay to the United States the amount of any grant funds found by the Surgeon General to have been used contrary to law, to these regulations or to the conditions to the grant, and any amount paid in excess of the maximum prescribed in paragraph (b) of § 57.6.

§ 57.9 *Payments.* Upon approval of any grant, the Surgeon General shall reserve from any appropriation available therefor, the amount of the grant, and in the absence of special circumstances shall pay such amount in installments consistent with construction progress as he determines. Such payments shall be governed by the following procedures:

(a) At least 60 days prior to the time a payment is needed by the grantee, he shall submit to the Surgeon General a request for an amount to cover the Federal portion of his necessary expenditures at such time.

(b) Each such request for payment shall be supported by a certification by the grantee institution that the construction with respect to which the payment is requested has substantially complied with the plans and specifications submitted with the grant application, or with amendments thereto approved by the Surgeon General.

§ 57.10 *Good cause for other use of completed facility.* If within 10 years after completion of any construction for which a construction grant has been made the facility shall cease to be used for the research purposes for which it was constructed, the Surgeon General in determining whether there is good cause for releasing the applicant or other public or nonprofit owner from the obligation so to use the facility, shall take into consideration, among other factors, the extent to which:

(a) The facility will be devoted by the applicant or other public or nonprofit owner to other research in the sciences related to health or to other health purposes;

(b) The circumstances calling for a change in the use of the facility were not known, or with reasonable diligence could not have been known to the applicant, at the time of the application, and are circumstances reasonably beyond the control of the applicant or other owner; and

(c) There are reasonable assurances that for the remainder of the 10-year period other facilities not previously utilized for such research will be so utilized and are substantially the equivalent in nature and extent for such purposes.

2. These regulations shall become effective upon publication in the FEDERAL REGISTER.

Dated: September 26, 1956.

[SEAL] L. E. BURNEY,
Surgeon General.

Approved: September 28, 1956.

M. B. FOLSOM,
Secretary.

[F. R. Doc. 56-7944; Filed, Oct. 2, 1956; 8:46 a. m.]

TITLE 47—TELECOMMUNICATION

Chapter I—Federal Communications Commission

[FCC 56-901]

[Docket No. 11253; Rules Amdts. 2-24, 7-15, 8-20, 10-11, 11-2, 16-9, 21-2]

PART 2—FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

PART 7—STATIONS ON LAND IN THE MARITIME SERVICES

PART 8—STATIONS ON SHIPBOARD IN THE MARITIME SERVICES

PART 10—PUBLIC SAFETY RADIO SERVICES

PART 11—INDUSTRIAL RADIO SERVICES

PART 16—LAND TRANSPORTATION RADIO SERVICES

PART 21—DOMESTIC PUBLIC RADIO SERVICES (OTHER THAN MARITIME MOBILE)

REDUCTION OF SEPARATION BETWEEN ASSIGNABLE FREQUENCIES; INTERNATIONAL INTERFERENCE; ESTABLISHMENT OF NARROW BAND TECHNICAL STANDARDS

In the matter of amendment of Parts 2, 6, 10, 11 and 16 of the Commission's rules to reduce separation between assignable frequencies in the 25–50 Mc and 152–162 Mc bands; amendment of Parts 2, 6, 7, 8, 10, 11 and 16 of the Commission's rules to reflect conditions concerning international interference in the band 25–50 Mc; amendment of Parts 6, 10, 11 and 16 of the Commission's rules to provide for the establishment of narrow band technical standards; Docket No. 11253.

A. *Background.* 1. This proceeding was instituted by the Commission's notice of proposed rule making in Docket No. 11253, adopted January 12, 1955. The comment period ending March 28, 1955, was extended by Order of the Commission to May 27, 1955. As explained in the notice of proposed rule making, the Commission recognizes that the number of usable channels available to the Common Carrier, Industrial, Land Transportation and Public Safety radio services for rendition of land mobile service is generally inadequate to accommodate the increasing numbers of licensees and potential licensees in these vital services. Solutions to this problem can be sought in various ways, such as allocating additional spectrum space to these services, increased use of geographical sharing between services and sub-services, and taking advantage of developments in the state of the art which make narrower channel spacing possible. Although the Commission believes that much remains to be done before the first two of these three possibilities have been exploited fully, the present proceeding addresses itself only to the last one, namely, reduced channel spacing, which is generally referred to as channel splitting. The frequencies concerned are those available to Commission licensees for land mobile service in the bands 25–50 Mc and 152–162 Mc. No proposals with regard to modified channel spacing were made in the present proceeding with respect to the band 72–76 Mc, 162–174 Mc or 450–460 Mc.

2. The Commission's proposal in the present proceeding consisted, in effect, of three parts. First, it set forth specific proposals for reduction in the spacing between assignable frequencies in the subject bands. Second, it proposed to set forth explicitly in the rules governing each service involved the hitherto assumed requirement that licensees of stations operating in the 25–50 Mc band must expect and accept harmful interference at times from stations of this and other countries operating in this band. Third, as a corollary of the proposed reduction in channel spacing and to accomplish that objective, it proposed new technical standards to govern equipment operating and to be operated in the subject bands, these standards to be incorporated into Parts 6, 10, 11 and 16 of the Commission's rules.

B. *Summary of comments filed.* 1. The Commission has studied all comments received and, insofar as they are germane, has summarized and discussed them herein. There were no requests for an evidentiary hearing. Only one affirmative request for oral argument was made in the event the Commission was to decide against the recommendations of the party filing comments. The National Association of Manufacturers stated, "We therefore request that the Commission abandon or postpone indefinitely its proposal in this Docket as it affects the 152–162 Mc band. If the Commission should deny this request, we ask leave to present oral argument". The National Committee for Utilities Ra-

dio stated, " . . . NCUR is of the opinion that these matters can best be resolved by an informal conference at which time all the conflicting comments should be discussed for the purpose of clarification and to find a uniform opinion that can result in a docket which can be finalized without formal hearing".

2. Of the approximately 130 comments received, about 40 percent objected generally to the Commission's proposal. A few of the objectors indicated that they were basing their objections solely upon the proposed "channel splitting" in the frequency bands allocated to their services and did not necessarily object to the proposal as it affected other services and bands of frequencies. Approximately 60 percent of these objectors were associated with police agencies or municipalities. These objectors, for the most part, related their comments to the proposed technical standards and their belief that the adoption of such standards would degrade mobile system communications. These factors will be discussed further under later paragraphs relating to Technical Standards.

3. Approximately 60 percent of those commenting upon the proposal favored "channel splitting" but very few made definite recommendations as to what spacing between assignable frequencies should be adopted. Those who did make recommendations were predominantly in favor of 20 kc spacing in the 25–50 Mc band and 30/15 kc spacing in the 152 Mc band. The only comments received which made specific recommendations for channel separations other than those already contained in the rules or those which were proposed were from representatives of "Paging Systems", who recommended greater separations than now exist; from the American Telephone and Telegraph Company, which recommended 20 kc spacing below 50 Mc and indicated that, in the 152 Mc band, 40 kc spacing was now feasible and that 30 kc spacing should await further development; and from Motorola, which recommended closer spacing in the 25–50 Mc band than in the 152 Mc band.

4. Several comments were received which recommended that the Commission should consider reallocation of the presently available frequencies prior to "channel splitting" or in connection therewith. Although the proposed Rule amendments did not include Part 4, comments were received from NBC, NARTB and CBS, since Remote Pickup Broadcast stations are indirectly affected by virtue of their shared use of the frequencies in question. Those three comments pointed out that remote pickup stations were not able to make adequate use of the available 9 frequencies in the 152 Mc band due to the requirement that interference protection must be afforded the Industrial Service. In each instance the request was made that "exclusive" or "mutually protected" frquencies should be made available.

5. An analysis of general comments, broken down into service categories, is summarized briefly as follows:

(a) *Highway maintenance.* Of the approximately 50 comments received, 41 agreed in general with the Commission's proposal.

(b) *Police and fire.* Of the approximately 40 comments received, 30 objected to the Commission's proposal. Associated Police Communications Officers, Inc., supported the Commission's proposal but requested that some of the frequencies be set aside for the fixed service.

(c) *Forestry conservation.* Comments were received from the Forestry Conservation Communications Association which were in favor of the Commission's proposal provided the additional frequencies obtained by "splitting" were to be made available to Forestry.

(d) *Fixed public service.* Comments from American Cable and Radio, Inc., requested that Puerto Rico be excluded from the proposal in order to permit expanded fixed service in Puerto Rico in the 152 Mc band.

(e) *Forest products.* Comments from Forest Industries Radio Communications,, an organized group of licensees in the Forest Products (Industrial) service, were in favor generally of the Commission's proposal.

(f) *Domestic public land mobile.* Of seven comments received, three objected to the proposal. Generally, the comment from the remaining four, favored or did not object to the proposal. One commenter, an association of Domestic Public licensees, recommended a developmental period for experimenting and determining the results of split channel operation prior to rule finalization. Several were in favor of a general reallocation proceeding.

(g) *Motor carriers.* The American Trucking Associations, Inc. concurred in the 25–50 Mc band proposal, but objected to the proposal in regard to the 152 Mc band, even though no frequencies are allocated to the Motor Carrier Radio service in that band. The American Transit Association was not "for" or "against" the proposal. However, this organization questioned what service would receive the new frequencies provided by the splits. They wished to retain block allocations and have the benefit of an amortization period consistent with Treasury Department regulations.

(h) *Taxicabs.* The American Taxicab Association objected to the 152 Mc band proposal. The Southern California Radio Taxicab Association concurred in splitting the 152 Mc band into 15 kc channels and the only comment from an individual company supported the proposal provided the "split channels" were to be allocated to taxicabs.

(i) *Petroleum.* The Central Committee on Radio Facilities of the American Petroleum Institute concurred generally in the proposal.

(j) *Power.* The National Committee for Utilities Radio objected to the proposal insofar as most technical standards were concerned but gave support to the substantive result of obtaining additional channels by this method.

(k) *Special industrial.* The Special Industrial Service Association approved the proposal generally. However, the National Association of Manufacturers objected to the proposal and requested oral argument in the event the Commission went ahead with its proposal to split channels in the 152-Mc band.

(l) *Railroads.* The Association of American Railroads objected to the 152 Mc band proposal, but did not comment on the 25–50 Mc proposal since the Railroad Radio Service is not presently allocated any frequencies in that band.

(m) *Radio manufacturers and radio engineering groups.* Of the approximately 20 comments received, nearly all generally supported the Commission's proposal. However, many different sets of technical standards were proposed.

C. *Discussion of reduction in channel separation.* 1. In the light of the comments filed, and of the Joint Technical Advisory Committee (JTAC) reports which have been made a part of this record, the Commission concludes that the state of the radio art is such as to permit a reduction in channel spacing without significant degradation of service, and that it is in the public interest to go forward with this matter at this time.

2. The splitting of existing channels creates new assignable frequencies. Who shall use these new frequencies? In considering this question, the Commission notes that some of the existing services are much more heavily congested than others, and also recalls past decisions in which it has been recognized that some services, by virtue of their more direct relation to safety of life and property, are entitled to employ frequencies on a peak demand rather than average demand basis, I. e., lighter average channel loading in any particular geographical area. The frequencies in the bands under consideration currently are allocated, in most cases, on a block basis, that is, several assignable frequencies which are immediately adjacent to one another are allocated to a single service such as Public Safety, or Forest Products. Such a method of allocation has many advantages at least in any local geographic area, and should not be abandoned without reason. However, the present block allocations were made in the period 1946–1949, and the estimates of future requirements which were made at that time, have not been realized to an equal extent by all services. Therefore, as a means of reaching a proper frequency balance, commensurate with the established needs of the several services, the Commission intends to initiate, in the near future, a series of proceedings to determine, among other things, to which services the split channels will be allocated. For some services the need is obvious and the Commission will propose in such instances to make additional frequencies available at a very early date. Some adjustments in block allocations will be proposed to meet several critical areas of frequency shortages in the several services. However, the Commission does not intend to initiate an overall reallocation of frequencies now allocated to the land mobile service since it is believed that the public interest will best be served by a series of minor adjustments in frequency availability to meet the immediate needs of the several services.

3. *The 152–162 Mc band.* In the notice of proposed rule making in this proceeding, as it concerned the 152–162 Mc band, the Commission requested comments concerning the relative merits of 40 kc same area operation (with 20 kc adjacent area operation) versus 30 kc same area operation (with 15 kc adjacent area operation). The comments were mixed, although a preponderance favored the 30/15 kc plan. There also were comments directed to offset operation, where in a particular case a careful engineering study indicates that some frequency closer to one adjacent channel than to the other would give maximum freedom from interference for all concerned. The Commission has considered carefully the comparative advantages and disadvantages of the channeling plans proposed, and has decided that in the 152–162 Mc band the basic separation between assignable frequencies in the same geographical area should be 30 kc. Once having determined which services will get the "new" channels resulting from this proceeding it is proposed that assignments offset from the 30 kc channels by 15 kc will be made upon request wherever it appears that the available 30 kc channels already are in use in the area involved and that the proposed new radio station or system is sufficiently removed in distance from existing installations to result in a net gain in freedom from interference for the persons involved. In general, it is expected that for the near future it will be possible to make such 15 kc assignments only at distances greater than one half the normal co-channel separation between stations in the service concerned. Additionally, assignments will be made on frequencies offset from the 30 kc channels by a frequency other than 15 kc when field tests supervised by a competent engineer and conducted with the knowledge of all licensees concerned indicate that such an assignment is to the net advantage of all of the parties. As a distant future goal, the Commission hopes that further advances in equipment development ultimately may make it possible to utilize 15 kc frequency separation for land mobile radiotelephone operation in the same area on a basis which is both economically and technically feasible.

4. *The 25–50 Mc band.* The notice of proposed rule making in this proceeding specified 20 kc separations between assignable frequencies and the adoption of technical standards appropriate for such separations. The Notice also proposed the inclusion of a "warning" paragraph in the pertinent parts of the Rules with respect to the skywave interference problems in this band. The comments received in the proceeding, in the main, were not addressed to questions of long distance of skywave interference. No objections were received to the inclusion of the "warning" paragraph proposed although some suggestions were made with regard to the possibility of further international sharing patterns.

In disposing of these two matters, i. e., the adoption of 20 kc separation between assignable frequencies and the related technical standards, the Commission is taking into account a considerable amount of information available to it with respect to the plans and operations of other Administrations. Such plans and operations involve stations, circuits and networks not under the jurisdiction of the Commission. Their nature is such, however, as to have a definite and significant effect on and inter-relationship to the future use of the band 25–50 Mc by stations in the mobile service licensed by the Commission.

First, as to the proposition of adopting 20 kc separations between assignable frequencies, the Commission has given consideration to various facets of this question. These may be broadly grouped into the following three categories:

1. Low power intermittent telephone use of frequencies in this band by neighboring countries.

2. Conventional skywave interference to U. S. non-Government mobile systems such as that detailed in the notice of proposed rule making.

3. The present status and future plans for ionospheric scatter circuits using frequencies between the approximate limits of 25 and 60 Mc.

As to the first of these three matters, it has become increasingly apparent since the issuance of the notice of proposed rule making in this proceeding that other American countries, particularly those to the south of the U. S., are experiencing great difficulty in selecting frequencies for assignment in this band in such a way as to avoid interference from the preponderance of U. S. non-Government mobile assignments on the present assignable frequencies spaced at intervals of 40 kc. It is apparent that this problem would be aggravated if the Commission made the 20 kc assignments also available to its licensees. It is also apparent that, to the extent other countries (but not licensees of the FCC) used the 20 kc assignments together with equipment meeting technical specifications such as those proposed in this proceeding, the problems of mutual interference between Commission licensees and stations in other countries employing this band for purposes similar to that authorized by the Commission would be greatly reduced.

As to the present operations and future plans of Administrations other than the FCC for use of frequencies in this band by fixed stations employing ionospheric scatter techniques, a considerable amount of information has become available to the Commission since the institution of this proceeding. The Commission is not releasing or publishing this information in this category but invites interested persons to acquaint themselves with such information on this subject as has been published in such periodicals as the Telecommunications Journal of the International Telecommunication Union and the Proceedings of the Institute of Radio Engineers. The Commission's information on this subject is not limited, however, to that contained in such publications. Of even greater significance than the aforementioned operations and future plans is the extent of actual harmful interference which has been encountered by Commission licensees in the non-Government mobile service in this band, since the institution of this proceeding, where the sources of such harmful interference have been fixed stations employing ionospheric scatter techniques. When the wide extent of such interference is evaluated in the light of the ever increasing use of this band by the fixed services employing ionospheric scatter techniques, it is apparent that a serious and progressive degradation of the mobile service use of this band will occur. Furthermore, while it is outside the scope of this proceeding, it is apparent that the world need for medium distance fixed service assignments is such as to continue to create ever increasing requirements for use of frequencies in this band for fixed circuits employing ionospheric scatter techniques. Even a casual inspection of the Radio Frequency Record (RFR) of the International Telecommunication Union (ITU) indicates a very large number of HF fixed circuits whose path lengths are suitable for communications by means of ionospheric scatter.

The Commission considers that each of these three factors alone justifies its decision not to make available additional assignable frequencies in this band for the mobile service. The Commission again urges mobile service licensees now employing frequencies in this band to consider the feasibility of transferring their operations to higher frequency bands where the long distance interference characteristics of this band are not present.

Second, as to the adoption of technical standards for mobile equipments which are geared to the availability of assignable frequencies at intervals of 20 kc, the Commission considers that the future probabilities of interference received by its mobile licensees will be decreased somewhat if such technical standards were to be adopted. Furthermore, to the extent that mobile systems continue to operate in this band, it is apparent that increased geographical sharing and more efficient and effective use of the 40 kc assignable frequencies will result if all such mobile systems employ so-called "narrow band" equipment meeting standards similar to those proposed in this proceeding. However, such narrow band standards will not be adopted as rules in order to avoid any situations which might result whereby existing mobile service licensees who replace their existing equipment with new narrow band equipment find later that the aforementioned interference situations are such as to result in a transfer of their operations to higher frequency bands where their 25–50 Mc band mobile equipment could not be used or easily modified to operate in such higher bands. It is, nevertheless, urged that mobile service licensees who desire to continue to operate in this band give serious consideration to the desirability of voluntarily employing equipment meeting technical standards such as those proposed in this proceeding.

E. *Technical standards.* 1. Actual utilization of reduced channel spacing is dependent on the availability of transmitting equipment which meets the necessary tighter specifications for frequency stability, bandwidth and frequency deviation, and of receiving equip-

ment having the requisite stability and selectivity. The comparative performance of narrow band systems versus the existing systems must also be taken into account. The numerical value to be selected for the channel spacing depends upon these factors; accordingly, they have been considered in determining whether reduced channel spacing is practicable in the present state of the art.

2. The notice of proposed rule making proposed a tolerance of 0.002 percent in the 25–50 Mc band and 0.0005 percent in the 50–1000 Mc band, except that 0.005 percent would be required for transmitters with 3 watts or less power input in the 50–1000 Mc band. From consideration of the comments, it appears that new equipment can meet 0.002 percent in the 25–50 Mc band. With regard to the proposed 0.0005 percent tolerance in the 50–1000 Mc band some objections were raised, particularly as to the maintenance of this tolerance in mobile units under adverse conditions of ambient temperature and operation. These comments indicate the advisability of a larger tolerance for mobile stations. Nevertheless, it must be borne in mind that the benefits offered by narrow bandwidth operation cannot be achieved if an excessive amount of spectrum is wasted by unduly large tolerances. Certainly, any large frequency space lost due to tolerance would represent an excessive proportion of the channel spacing, assuming the existing channels are split. Consequently, the following tolerances are believed to be both reasonable and desirable:

Band (Mc)	Base stations	Mobile stations	
		Over 3 watts	3 watts or less
	Percent	*Percent*	*Percent*
25–50	0.002	0.002	0.005
50–1000	0.0005	0.0005	0.005

3. The proposed frequency deviation of 5 kc was generally acceptable to those commenting on the matter of FM Standards, except those comments relating to remote pickup broadcast stations which advocated 7 kc deviation for those stations. Accordingly, the deviation for the classes of stations directly affected by these proceedings (this does not include remote pickup broadcast stations) is being adopted as 5 kc in the bands below 400 Mc. In the range 450–470 Mc, 15 kc deviation will be retained.

4. The proposed specification for an audio low pass filter with a cutoff frequency of 2500 cps has been reviewed in the light of comments which indicated that little improvement would be obtained by reducing the cutoff frequency from 3000 cps to 2500 cps. Consideration has also been given to the need for a quantitative specification of the frequency response characteristic of the low pass filter. The principal functions of the filter are to remove distortion products produced by the modulation limiter, to attenuate the audio components above the cutoff frequency, and to attenuate noise components occurring in the audio stages of the transmitter. Thus, the filter serves to reduce unwanted sideband energy and thereby to reduce emission capable of causing interference to adjacent channel stations. The proposed specification of a 12 db per octave attenuation above the cutoff frequency appears satisfactory; however, it is an incomplete specification of the necessary filter characteristics. Accordingly, the Commission is adopting a specification which includes additional provisions to define the minimum attenuation characteristic of the filter as follows: "A low pass filter shall be installed after the modulation limiter. At frequencies between 3 kc and 15 kc, the low pass filter shall have an attenuation greater than the attenuation at 1 kc by at least $40 \log_{10} (f/3)$ decibels, where f is the frequency in kc. At frequencies above 15 kc, the attenuation shall be at least 28 decibels greater than the attenuation at 1 kc". In transmitters without limiters, the attenuation characteristics of the modulation circuit shall comply with the foregoing specification for low pass filters.

5. Bandwidth is dependent on the deviation and the modulating frequency. The necessary bandwidth, as defined in Part 2 of the rules is 16 kc for FM and 6 kc for AM emission, assuming a nominal maximum modulating frequency of 3 kc and, for FM, a deviation of 5 kc. It is recognized, however, that the occupied bandwidth, as defined in § 2.524 of the rules, may exceed the necessary bandwidth and may also exceed the frequency separation between channels. The occupied bandwidth measurement required for type acceptance (§ 2.524) specifies 2500 cps input signal. The authorized bandwidth, based on the test conditions for type acceptance, is being adopted as 20 kc for FM with 5 kc deviation.

6. With regard to system performance, a number of comments indicated concern or opinion that narrow band systems would be inferior to the existing systems, particularly as to signal-to-noise ratio and service range. It is possible that some complaints as to inferior performance of narrow band systems result from the use of wide band receivers with narrow band transmissions; under these conditions, of course, appreciably degraded performance is expected. The quantitative data furnished by those commenting, together with the reports of the Joint Technical Advisory Committee (JTAC) dated May 28, 1953, and December 10, 1954, however, indicate that narrow band systems designed pursuant to the foregoing standards can give service range performance approximately equivalent to that of existing systems. the JTAC reported 3 db average degradation in receiver output signal-to-noise ratio in the narrow band system relative to the wide band system, and that the co-channel interference ratios are the same for the two systems. In view of these data the Commission has reached the general conclusion that adequate performance can be obtained in narrow band systems.

7. In adopting the 152–162 Mc technical standards set forth herein as rules, it is necessary to establish effective dates. Two dates are necessary with respect to a particular frequency: (a) A date after which at least the majority of equipment manufacturers will be in a position to supply, in production quantities, equipment which conforms to the new technical standards; and (b) a date by which all equipment operating on the frequency shall be brought into conformity with the new technical standards. In establishing these dates, the following factors, among many, have been taken into account:

(a) This Docket proceeding has been outstanding since January 12, 1955, and was widely anticipated prior to that date, in consequence of which manufacturers of land mobile equipment have had considerable opportunity to prepare themselves for early delivery of new equipment.

(b) In order to maintain uniformity of equipment for all of the land mobile services, it is desirable that no distinctions be drawn between the several radio services involved.

(c) In general, tax-supported activities require more time to finance technical changes than commercial licensees. Therefore, the selected "across-the-board" dates for compliance of existing equipment should be reasonable as applied to tax-supported licensees—primarily licensees in the Public Safety Radio Services. This is without prejudice to individual licensees and/or services proceeding more rapidly on a voluntary basis.

(d) Some degree of forced obsolescence for existing equipment (receivers only, in many cases) is justified, even for tax supported licensees, due to the present degree of congestion being experienced by many Commission licensees in the band 152–174 Mc, the heavy anticipated demand for frequencies from additional applicants is the land mobile service, and the accelerated pressure for assignments in the 152–162 Mc range due to the nature of the Commission's decision herein with respect to the 25–50 Mc band.

(e) If a reasonable change-over period is provided, the cost of the change-over on a per annum basis will not be excessive.

After considering those factors and those of the comments filed which addressed themselves to this point, the Commission believes that the public interest would best be served by adhering to the dates contained in its notice of proposed rule making in this proceeding. Accordingly, the following schedule will be followed in the 152–162 Mc band:

(a) For authorizations issued beginning two years from the effective date of this decision, equipment must meet the new technical standards when it will be used in a radio system not operationally integrated with an existing radio system.

(b) For authorizations, including renewals, issued beginning seven years from the effective date of this decision, all equipment must meet the new technical standards.

NOTE: Existing systems may be expanded or modified under the presently existing ("old") technical standards at the request of the licensee, but such authorizations shall not be construed as extending the deadline dates set forth herein.

F. *Disposition of procedural comments.* 1. With respect to the NAM request for oral argument, the Commission understands that this request is based upon two main considerations, i. e., (a) that the NAM has before the Commission a petition to reallocate a portion of the FM broadcasting band for manufacturer's uses, and (b) that the cost of going to higher technical standards may be prohibitive to NAM members. The Commission will consider the subject FM broadcasting band petition in a separate proceeding, and, if its decision with respect to that petition results in oral argument or hearing, the NAM can present its arguments at that time, insofar as they relate to all matters concerned with frequencies in the band 88–108 Mc, which are considered to be outside the scope of the present proceeding.

With respect to arguments regarding costs of meeting improved technical standards, the Commission is specifying changeover dates which are considered to be generous when viewed in the light of the pressing demands for spectrum space.

With regard to the general desire of the NAM for more frequency space for manufacturer's use, the Commission proposes to initiate proceedings designed among other things, to determine the extent of manufacturers' additional requirements and to determine possible means of satisfying these requirements.

In view of the above factors, the NAM request for oral argument in this proceeding is being denied.

2. The National Committee for Utilities Radio was of the opinion that an informal conference should be held, at which time conflicting comments could be discussed for purposes of clarification and for delineation of an area of uniform opinion which would simplify the problems of reaching a final decision in the proceeding without the necessity for a formal hearing. To a degree such a conference would serve a useful purpose. However, it is believed that such meetings would be most productive in connection with the further proceedings which are necessary to determine who shall use the split channels and how the implementation program best can proceed in each service. Accordingly, a conference of the interested parties has not been convened prior to the action the Commission is taking herein.

G. *Summary of decisions made in this proceeding.* In summary, the Commission has decided that it is in the public interest to:

(1) Adopt new technical standards to govern operation of FCC-licensed equipment operating in the 152–162 Mc bands. For new radio systems, the effective date of these standards is two years hence. For present licensees, all equipment, including existing equipment, must be brought into compliance 7 years hence. The new standards are based on 30 kc separations.

(2) Make no assignments at this time in the band 25–50 Mc on frequencies other than those already listed in its rules, i. e., retain 40 kc channeling. However, this decision is subject to review at a later date.

(3) Amend Parts 2, 7, 8, 10, 11, 16 and 21 to indicate clearly that frequencies in the 25–50 Mc range are subject to long-range skywave interference, and that persons requiring radio systems with a high degree of reliability and freedom from such interference should consider use of frequencies higher in the spectrum where skywave interference is not normally a serious problem.

(4) Institute new rule making proceedings to determine the service-allocations of the new assignable frequencies to become available in the 152–162 Mc band as the result of the decisions taken herein. Such proceedings also may consider the shared land mobile/maritime mobile allocations now existing in the 152–162 Mc band. Until these new proceedings have been instituted and carried to final decision, no regular or developmental assignments will be made on the additional or "split" channels in any of the Commission's radio services, except for assignments which may be required in connection with research and development necessary to produce equipment capable of meeting the new technical standards. The existing channeling will remain in Part 2 until the proceedings referred to in this paragraph have been completed.

(5) Deny the request of the National Association of Manufacturers for oral argument in the present proceeding.

On June 13, 1956, Commission action in Docket No. 10821 finalized Part 21 Domestic Public Radio Services (Other Than Maritime Mobile), to become effective September 4, 1956. Since that portion of Part 6 of the rules affected by this proceeding will be governed by Part 21, as of September 4, 1956, amendments to Part 21 rather than Part 6 are set forth below.

In view of the foregoing: *It is ordered,* Pursuant to the authority contained in sections 4 (i) and 303 of the Communications Act of 1934, as amended, that, effective, November 1, 1956, Parts 2, 7, 8, 10, 11, 16 and 21 of the Commission's rules are amended as set forth below:

And it is further ordered, That no new regular or developmental authorization for the use of any frequency obtained by "channel splitting" shall be granted to any station in any service until such frequencies are made available specifically for assignment to such stations by the Rules governing the service involved, except as may be required in connection with equipment development to meet the new technical standards ordered herein;

And it is further ordered, That the request of the National Association of Manufacturers for oral argument in the present proceeding is denied.

(Sec. 4, 48 Stat. 1066, as amended; 47 U. S. C. 154. Interpret or apply sec. 303, 48 Stat. 1082, as amended; 47 U. S. C. 303.)

Adopted: September 19, 1956.

Released: September 24, 1956.

FEDERAL COMMUNICATIONS COMMISSION,
[SEAL] MARY JANE MORRIS,
Secretary.

I. Part 2 is amended as follows:

Section 2.103 is amended by adding the following new paragraph (e).

(e) Non-Government services operating on frequencies in the band 25–50 Mc must recognize that it is shared with various services of other countries; that harmful interference may be caused by skywave signals received from distant stations of all services of the United States and other countries radiating power on frequencies in this band; and that no protection from such harmful interference generally can be expected. Persons desiring to avoid such harmful interference should consider operation on available frequencies higher in the radio spectrum not generally subject to this type of difficulty.

II. Part 7 is amended as follows:

1. In § 7.304 (c), add a new subparagraph (4) to read as follows:

(4) Persons authorized pursuant to this part to operate radio stations on frequencies in the band 35–36 Mc must recognize that the band is shared with various services in other countries; that harmful interference may be caused by tropospheric and ionospheric propagation of signals from distant stations of all services of the United States and other countries operating on frequencies in this band; and that no protection from such harmful interference generally can be expected. Persons desiring to avoid such harmful interference should consider operation on available frequencies higher in the radio spectrum not generally subject to this type of difficulty.

2. In § 7.356, a new paragraph (d) is added to read as follows:

(d) Persons authorized pursuant to this part to operate radio stations on frequencies in the band 35–36 Mc must recognize that the band is shared with various services in other countries; that harmful interference may be caused by tropospheric and ionospheric propagation of signals from distant stations of all services of the United States and other countries operating on frequencies in this band; and that no protection from such harmful interference generally can be expected. Persons desiring to avoid such harmful interference should consider operation on available frequencies higher in the radio spectrum not generally subject to this type of difficulty.

III. Part 8 is amended as follows:

Section 8.351 (b) is amended by adding a new subparagraph (1) thereto. New subparagraph (1) reads as follows:

(1) Persons authorized pursuant to this part to operate radio stations on frequencies in the band 35–45 Mc must recognize that the band is shared with various services in other countries; that harmful interference may be caused by tropospheric and ionospheric propagation of signals from distant stations of all services of the United States and other countries operating on frequencies in this band; and that no protection from such harmful interference generally can be expected. Persons desiring to avoid such harmful interference

should consider operation on available frequencies higher in the radio spectrum not generally subject to this type of difficulty.

IV. Part 10 is amended as follows:

1. Section 10.101 is amended by adding new paragraphs (e), (f) and (g) to read as follows:

(e) [Reserved.]

(f) [Reserved.]

(g) Persons authorized pursuant to this part to operate radio stations on frequencies in the band 25–50 Mc must recognize that the band is shared with various services in other countries; that harmful interference may be caused by tropospheric and ionospheric propagation of signals from distant stations of all services of the United States and other countries operating on frequencies in this band; and that no protection from such harmful interference generally can be expected. Persons desiring to avoid such harmful interference should consider operation on available frequencies higher in the radio spectrum not generally subject to this type of difficulty.

2. Section 10.102 is amended to read as follows:

§ 10.102 *Frequency stability.* (a) Except as provided in paragraphs (b) and (c) of this section, a permittee or licensee in these services shall maintain the carrier frequency of each authorized transmitter within the following percentage of the assigned frequency:

Frequency range	All fixed and base stations	All mobile stations	
		Over 3 watts	3 watts or less
	Percent	*Percent*	*Percent*
Below 25 Mc	0.01	0.01	0.02
25 to 50 Mc	0.002	0.002	0.005
50 to 1000 Mc	0.0005	0.0005	0.005
Above 1000 Mc	[1]	[1]	[1]

[1] To be specified in the station authorization.

(b) Transmitters authorized for operation on frequencies in the range 25 to 50 Mc may conform, as a minimum requirement, to the following frequency tolerance in lieu of meeting the requirements of paragraph (a) of this section until further notice by the Commission; however, compliance with the more strict frequency tolerance is recommended as a means of avoiding some causes of harmful interference:

Transmitter power:	*Frequency tolerance (percent)*
Over 3 watts	0.01
3 watts or less	0.02

(c) Transmitters authorized prior to November 1, 1958, for operation on frequencies in the range 50 to 1000 Mc, and transmitters which are operationally integrated with existing radio systems authorized prior to November 1, 1958, for operation on frequencies in that range, may conform, as a minimum requirement, to the following frequency tolerances in lieu of meeting the requirements of paragraph (a) of this section, until not later than October 31, 1963:

Frequency range	Transmitter power	
	Over 3 watts	3 watts or less
	Percent	*Percent*
50 to 220 Mc	0.005	0.01
220 to 1000 Mc	[1]	[1]

[1] To be specified in the authorization.

(d) For the purpose of determining the frequency tolerance applicable to a particular transmitter in accordance with the foregoing provisions of this section, the power of a transmitter shall be the maximum rated plate power input to its final radio frequency stage, as specified by the manufacturer.

3. Section 10.104 (b) is amended to read as follows:

(b) The maximum authorized bandwidth of emission corresponding to the types of emission specified in § 10.103 (a) and (c), and the maximum authorized frequency deviation in the case of frequency or phase modulated emission, shall be as follows:

(1) For all type A3 emissions, the maximum authorized bandwidth shall be 8 kc.

(2) Except as provided in subparagraphs (3) and (4) of this paragraph, for all F3 emission, the maximum authorized bandwidth and maximum authorized frequency deviation shall be as follows:

Frequency band (Mc)	Authorized bandwidth (kc)	Frequency deviation (kc)
25 to 50 Mc	20	5
50 to 150 Mc	40	15
150 to 450 Mc	20	5
450 to 1,000 Mc	40	15

(3) Transmitters authorized to utilize type F3 emission and to be operated on frequencies in the range 25 to 50 Mc may be operated with a maximum authorized bandwidth of 40 kc and a maximum frequency deviation of 15 kc, in lieu of meeting the requirements of subparagraph (2) of this paragraph, until further notice by the Commission; however, compliance with the narrower bandwidth limits is recommended as a means of avoiding some causes of harmful interference.

(4) Transmitters authorized prior to November 1, 1958, to utilize type F3 emission and to be operated on frequencies in the range 150 to 450 Mc, and transmitters which are operationally integrated with existing radio systems authorized prior to November 1, 1958, for operation on frequencies in that range, may be operated with a maximum authorized bandwidth of 40 kc and a maximum frequency deviation of 15 kc, in lieu of meeting the requirements of subparagraph (2) of this paragraph until not later than October 31, 1963.

(5) For all type F1 emissions, the maximum authorized band width shall be 0.25 kc.

4. Section 10.105 is amended to read as follows:

§ 10.105 *Modulation requirements.* (a) The maximum audio frequency required for satisfactory radiotelephone intelligibility in these services is considered to be 3000 cycles per second; in any transmitter not subject to the provisions of paragraph (d) or (c) of this section the overall frequency response of the audio and modulating circuits shall nevertheless approximately correspond with that required thereby.

(b) When amplitude modulation is used for telephony, the modulation percentage shall be sufficient to provide efficient communication and shall be normally maintained above 70 percent on peaks, but shall not exceed 100 percent on negative peaks.

(c) Each transmitter first authorized or installed after July 1, 1950, shall be provided with a device which will automatically prevent modulation in excess of that specified in this subpart which may be caused by greater than normal audio level: *Provided, however,* That this requirement shall not be applicable to transmitters authorized to operate as mobile stations with a maximum plate power input to the final radio frequency stage of 3 watts or less.

(d) Each transmitter first authorized or installed on or after July 1, 1960, for operation on frequencies in the range 25 to 50 Mc which is provided with a modulation limiter in accordance with the provisions of paragraph (c) of this section, shall also be provided with an audio low-pass filter which shall be installed between the modulation limiter and the modulated stage and which shall meet the specifications contained in paragraph (f) of this section.

(e) Each transmitter first authorized or installed on or after November 1, 1958, for operation on frequencies in the range 152 to 162 Mc, other than transmitters operationally integrated with an existing radio system authorized prior to November 1, 1958, for operation on frequencies in that range, and each transmitter operating on a frequency in the range 152 to 162 Mc after October 31, 1963, which is provided with a modulation limiter in accordance with the provisions of paragraph (c) of this section, shall also be provided with an audio low-pass filter which shall be installed between the modulation limiter and the modulated stage and which shall meet the specifications contained in paragraph (f) of this section.

(f) At audio frequencies between 3 kc and 15 kc, the low-pass filter required under the provisions of paragraph (d) or (c) of this section shall have an attenuation greater than the attenuation at 1 kc by at least:

$$40 \log_{10} (f/3) \text{ decibels}$$

where "f" is the audio frequency in kilocycles. At audio frequencies above 15 kc, the attenuation shall be at least 28 decibels greater than the attenuation at 1 kc.

V. Part 11 is amended as follows:

1. Amend § 11.8 by the addition of the following new paragraph (h):

(h) Persons authorized pursuant to this part to operate radio stations on

frequencies in the band 25-50 Mc must recognize that the band is shared with various services in other countries; that harmful interference may be caused by tropospheric and ionospheric propagation of signals from distant stations of all services of the United States and other countries operating on frequencies in this band; and that no protection from such harmful interference generally can be expected. Persons desiring to avoid such harmful interference should consider operation on available frequencies higher in the radio spectrum not generally subject to this type of difficulty.

2. Amend § 11.102 to read as follows:

§ 11.102 *Frequency stability.* (a) Except as provided in paragraphs (b) and (c) of this section, a permittee or licensee in these services shall maintain the carrier frequency of each authorized transmitter within the following percentage of the assigned frequency:

Frequency range	All fixed and base stations	All mobile stations	
		Over 3 units	3 watts or less
	Percent	*Percent*	*Percent*
Below 25 Mc	0.01	0.01	0.02
25 to 50 Mc	0.002	0.002	0.005
50 to 1,000 Mc	0.0005	0.0005	0.005
Above 1,000 Mc	(1)	(1)	(1)

[1] To be specified in the station authorization.

(b) Transmitters authorized for operation on frequencies in the range 25 to 50 Mc may conform, as a minimum requirement, to the following frequency tolerance in lieu of meeting the requirements of paragraph (a) of this section until further notice by the Commission; however, compliance with the more strict frequency tolerance is recommended as a means of avoiding some causes of harmful interference:

Transmitter power:	*Frequency tolerance (percent)*
Over 3 watts	0.01
3 watts or less	0.02

(c) Transmitters authorized prior to November 1, 1958, for operation on frequencies in the range 50 to 1000 Mc, and transmitters which are operationally integrated with existing radio systems authorized prior to November 1, 1958, for operation on frequencies in that range, may conform, as a minimum requirement, to the following frequency tolerances in lieu of meeting the requirements of paragraph (a) of this section, until not later than October 31, 1963:

Frequency range	Transmitter power	
	Over 3 watts	3 watts or less
	Percent	*Percent*
50 to 220 Mc	0.005	0.01
220 to 1000 Mc	(1)	(1)

[1] To be specified in the authorization.

(d) For the purpose of determining the frequency tolerance applicable to a particular transmitter in accordance with the foregoing provisions of this section, the power of a transmitter shall be the maximum rated plate power input to its final radio frequency stage, as specified by the manufacturer.

3. Amend paragraph (b) of § 11.104 to read as follows:

(b) The maximum authorized bandwidth of emission corresponding to the types of emission specified in § 16.103 (a) of this chapter, and the maximum authorized frequency deviation in the case of frequency or phase modulated emission, shall be as follows:

(1) For all type A3 emission, the maximum authorized bandwidth shall be 8 kc.

(2) Except as provided in subparagraphs (3) and (4) of this paragraph, for all F3 emission, the maximum authorized frequency deviation shall be as follows:

Frequency band (Mc)	Authorized bandwidth (kc)	Frequency deviation (kc)
25 to 50 Mc	20	5
50 to 150 Mc	40	15
150 to 450 Mc	20	5
450 to 1000 Mc	40	15

(3) Transmitters authorized to utilize type F3 emission and to be operated on frequencies in the range 25 to 50 Mc may be operated with a maximum authorized bandwidth of 40 kc and a maximum frequency deviation of 15 kc, in lieu of meeting the requirements of subparagraph (2) of this paragraph, until further notice by the Commission; however, compliance with the narrower bandwidth limits is recommended as a means of avoiding some causes of harmful interference.

(4) Transmitters authorized prior to November 1, 1958, to utilize type F3 emission and to be operated on frequencies in the range 150 to 450 Mc, and transmitters which are operationally integrated with existing radio systems authorized prior to November 1, 1958, for operation on frequencies in that range, may be operated with a maximum authorized bandwidth of 40 kc and a maximum frequency deviation of 15 kc, in lieu of meeting the requirements of subparagraph (2) of this paragraph, until not later than October 31, 1963.

4. Amend § 11.105 to read as follows:

§ 11.105 *Modulation requirements.* (a) The maximum radio frequency required for satisfactory radiotelephone intelligibility in these services is considered to be 3000 cycles per second; in any transmitter not subject to the provisions of paragraph (d) or (e) of this section the overall frequency response of the audio and modulating circuits shall nevertheless approximately correspond with that required thereby.

(b) When amplitude modulation is used for telephony, the modulation percentage shall be sufficient to provide efficient communication and shall be normally maintained above 70 percent on peaks, but shall not exceed 100 percent on negative peaks.

(c) Each transmitter authorized or installed after July 1, 1950, shall be provided with a device which will automatically prevent modulation in excess of that specified in this subpart, which may be caused by greater than normal audio level: *Provided, however,* That this requirement shall not be applicable to transmitters authorized to operate with a maximum plate power input to the final radio frequency stage of 3 watts or less.

(d) Each transmitter first authorized or installed on or after July 1, 1960, for operation on a frequency in the range 25 to 50 Mc, which is provided with a modulation limiter in accordance with the provisions of paragraph (c) of this section, shall also be provided with an audio low-pass filter which shall be installed between the modulation limiter and the modulated stage and which shall meet the specifications contained in paragraph (f) of this section.

(e) Each transmitter first authorized or installed on or after November 1, 1958, for operation on frequencies in the range 152 to 162 Mc, other than transmitters operationally integrated with an existing radio system authorized prior to November 1, 1958, for operation on frequencies in that range, and each transmitter operating on a frequency in the range 152 to 162 Mc after October 31, 1963, which is provided with a modulation limiter in accordance with the provisions of paragraph (c) of this section, shall also be provided with an audio low-pass filter which shall be installed between the modulation limiter and the modulated stage and which shall meet the specifications contained in paragraph (f) of this section.

(f) At audio frequencies between 3 kc and 15 kc, the low-pass filter required under the provisions of paragraph (d) or (e) of this section shall have an attenuation greater than the attenuation at 1 kc by at least:

$$40 \log_{10} (f/3) \text{ decibels}$$

where "f" is the audio frequency in kilocycles. At audio frequencies above 15 kc, the attenuation shall be at least 28 decibels greater than the attenuation at 1 kc.

VI. Part 16 is amended as follows:

1. Amend § 16.8 by the addition of the following new paragraph (e):

(e) Persons authorized pursuant to this part to operate radio stations on frequencies in the band 25–50 Mc must recognize that the band is shared with various services in other countries; that harmful interference may be caused by tropospheric and ionospheric propagation of signals from distant stations of all services of the United States and other countries operating on frequencies in this band; and that no protection from such harmful interference generally can be expected. Persons desiring to avoid such harmful interference should consider operation on available frequencies higher in the radio spectrum not generally subject to this type of difficulty.

2. Amend § 16.102 to read as follows:

§ 16.102 *Frequency stability.* (a) Except as provided in paragraphs (b) and (c) of this section, a permittee or licensee in these services shall maintain the car-

rier frequency of each authorized transmitter within the following percentage of the assigned frequency:

Frequency range	All fixed and base stations	All mobile stations	
		Over 3 watts	3 watts or less
	Percent	*Percent*	*Percent*
Below 25 Mc	0.01	0.01	0.02
25 to 50 Mc	0.002	0.002	0.005
50 to 1000 Mc	0.0005	0.0005	0.005
Above 1000 Mc	(1)	(1)	(1)

[1] To be specified in the station authorization.

(b) Transmitters authorized for operation on frequencies in the range 25 to 50 Mc may conform, as a minimum requirement, to the following frequency tolerance in lieu of meeting the requirements of paragraph (a) of this section until further notice by the Commission; however, compliance with the more strict frequency tolerance is recommended as a means of avoiding some causes of harmful interference:

Transmitter power:	*Frequency tolerance (percent)*
Over 3 watts	0.01
3 watts or less	0.02

(c) Transmitters authorized prior to November 1, 1958, for operation on frequencies in the range 50 to 1000 Mc, and transmitters which are operationally integrated with existing radio systems authorized prior to November 1, 1958, for operation on frequencies in that range, may conform, as a minimum requirement, to the following frequency tolerances in lieu of meeting the requirements of paragraph (a) of this section, until not later than October 31, 1963:

Frequency range	Transmitter power	
	Over 3 watts	3 watts or less
	Percent	*Percent*
50 to 220 Mc	0.005	0.01
220 to 1000 Mc	(1)	(1)

[1] To be specified in the authorization.

(d) For the purpose of determining the frequency tolerance applicable to a particular transmitter in accordance with the foregoing provisions of this section, the power of a transmitter shall be the maximum rated plate power input to its final radio frequency stage, as specified by the manufacturer.

3. Amend paragraph (b) of § 16.104 to read as follows:

(b) The maximum authorized bandwidth of emission corresponding to the types of emission specified in § 16.103 (a), and the maximum authorized frequency deviation in the case of frequency or phase modulated emission, shall be as follows:

(1) For all type A3 emission, the maximum authorized bandwidth shall be 8 kc.

(2) Except as provided in subparagraphs (3) and (4) of this paragraph, for all F3 emission, the maximum authorized bandwidth and maximum authorized frequency deviation shall be as follows:

Frequency band (Mc)	Authorized bandwidth (kc)	Frequency deviation (kc)
25 to 50 Mc	20	5
50 to 150 Mc	40	15
150 to 450 Mc	20	5
450 to 1000 Mc	40	15

(3) Transmitters authorized to utilize type F3 emission and to be operated on frequencies in the range 25 to 50 Mc may be operated with a maximum authorized bandwidth of 40 kc and a maximum frequency deviation of 15 kc, in lieu of meeting the requirements of subparagraph (2) of this paragraph, until further notice by the Commission; however, compliance with the narrower bandwidth limits is recommended as a means of avoiding some causes of harmful inteference.

(4) Transmitters authorized prior to November 1, 1958, to utilize type F3 emission and to be operated on frequencies in the range 150 to 450 Mc, and transmitters which are operationally integrated with existing radio systems authorized prior to November 1, 1958, for operation on frequencies in that range, may be operated with a maximum authorized bandwidth of 40 kc and a maximum frequency deviation of 15 kc, in lieu of meeting the requirements of subparagraph (2) of this paragraph, until not later than October 31, 1963.

4. Amend 16.105 to read as follows:

§ 16.105 *Modulation requirements.* (a) The maximum audio frequency required for satisfactory radiotelephone intelligibility in these services is considered to be 3000 cycles per second; in any transmitter not subject to the provisions of paragraph (d) or (e) of this section, the overall frequency response of the audio and modulating circuits shall nevertheless approximately correspond with that required thereby.

(b) When amplitude modulation is used for telephony, the modulation percentage shall be sufficient to provide efficient communication and shall be normally maintained above 70 percent on peaks, but shall not exceed 100 percent on negative peaks.

(c) Each transmitter authorized or installed after July 1, 1950, shall be provided with a device which will automatically prevent modulation in excess of that specified in this subpart, which may be caused by greater than normal audio level: *Provided, however,* That this requirement shall not be applicable to transmitters authorized to operate with a maximum plate power input to the final radio frequency stage of 3 watts or less.

(d) Each transmitter first authorized or installed on or after July 1, 1960, for operation on frequencies in the range 25 to 50 Mc, which is provided with a modulation limiter in accordance with the provisions of paragraph (c) of this section, shall also be provided with an audio low-pass filter which shall be installed between the modulation limiter and the modulated stage and which shall meet the specifications contained in paragraph (f) of this section.

(e) Each transmitter first authorized or installed on or after November 1, 1958, for operation on frequencies in the range 152 to 162 Mc, other than transmitters operationally integrated with an existing radio system authorized prior to November 1, 1958, for operation on frequencies in that range, and each transmitter operating on a frequency in the range 152 to 162 Mc after October 31, 1963, which is provided with a modulation limiter in accordance with the provisions of paragraph (c) of this section, shall also be provided with an audio low-pass filter which shall be installed between the modulation limiter and the modulated stage and which shall meet the specifications contained in paragraph (f) of this section.

(f) At audio frequencies between 3 kc and 15 kc, the low-pass filter required under the provisions of paragraph (d) or (e) of this section shall have an attenuation greater than the attenuation at 1 kc by at least:

$$40 \log_{10} (f/3) \text{ decibels}$$

where "f" is the audio frequency in kilocycles. At audio frequencies above 15 kc, the attenuation shall be at least 28 decibels greater than the attenuation at 1 kc.

VII. Part 21 is amended as follows:

1. Amend § 21.100 by designating the existing paragraph as (a) and by the addition of the following new paragraph (b):

(b) Persons authorized pursuant to this part to operate radio stations on frequencies in the band 25–50 Mc must recognize that the band is shared with various services in other countries; that harmful interference may be caused by tropospheric and ionospheric propagation of signals from distant stations of all services of the United States and other countries operating on frequencies in this band; and that no protection from such harmful interference generally can be expected. Persons desiring to avoid such harmful interference should consider operation on available frequencies higher in the radio spectrum not generally subject to this type of difficulty.

2. Amend § 21.101 to read as follows:

§ 21.101 *Frequency stability.* (a) Except as provided in paragraphs (b) and (c) of this section, a permittee or licensee in these services shall maintain the carrier frequency of each authorized transmitter within the following percentage of the reference frequency:

Frequency range	All fixed and base stations	All mobile stations	
		Over 3 watts	3 watts or less
	Percent	*Percent*	*Percent*
25 to 50 Mc [1]	0.002	0.002	0.005
50 to 1000 Mc	0.0005	0.0005	0.005
Above 1000 Mc	(2)	(2)	(2)

[1] Transmitters authorized for operation on frequencies in the range 25 to 50 Mc may conform, as a minimum requirement, to the tolerances shown in paragraph (b) of this section in lieu of meeting the requirements of this paragraph until further notice by the Commission; however, compliance with the more strict frequency tolerance is recommended as a means of avoiding some causes of harmful interference. Equipment authorized to be operated on frequencies between 890 and 940 Mc as of October 15, 1956, shall be required to maintain a frequency tolerance within 0.03 percent subject to the condition that no harmful interference is caused by any other radio station.

[2] To be specified in the station authorization but not less than 0.05 percent between 1000 and 10,000 Mc and not less than 0.75 percent above 10,000 Mc.

(b) Transmitters authorized for operation on frequencies in the range 25 to 50 Mc may conform, as a minimum requirement, to the following frequency tolerance in lieu of meeting the requirements of paragraph (a) of this section until further notice by the Commission; however, compliance with the more strict frequency tolerance is recommended as a means of avoiding some causes of harmful interference:

Transmitter power:	*Frequency tolerance (percent)*
Over 3 watts	0.01
3 watts or less	0.02

(c) Except as provided in footnote 1 of paragraph (a) of this section, transmitters which are operationally integrated with existing radio systems authorized prior to November 1, 1958, for operation on frequencies in that range, shall conform, as a minimum requirement, to the following frequency tolerances in lieu of meeting the requirements of paragraph (a) of this section, until not later than October 31, 1963:

Frequency range	Transmitter power	
	Over 3 watts	3 watts or less
	Percent	*Percent*
30 to 1,000 Mc	0.005	0.01

(d) For the purpose of determining the frequency tolerance applicable to a particular transmitter in accordance with the foregoing provisions of this section, the power of a transmitter shall be the maximum rated plate power input to its final radio frequency stage, as specified by the Commission's Radio Equipment List, Part C.

(e) The reference frequency of a station shall be deemed to be the assigned frequency, unless otherwise specified.

3. Amend § 21.507 (b) to read as follows:

(b) The maximum authorized bandwidth of emission and the maximum authorized frequency deviation in the case of frequency or phase modulated emission, shall be as follows (except as provided in subparagraphs (1) and (2) of this paragraph):

Type of emission	25-450 Mc		450-500 Mc	
	Authorized bandwidth (kc)	Frequency deviation (kc)	Authorized bandwidth (kc)	Frequency deviation (kc)
A1	1	----------	1	----------
A2	3	----------	3	----------
A3	8	----------	8	----------
A4	12	----------	12	----------
F1	3	----------	3	----------
F2	3	----------	3	----------
F3	20	5	40	15
F4	20	5	40	15

(1) Transmitters authorized to utilize type F3 emission and to be operated on frequencies in the range 25 to 50 Mc may be operated with a maximum authorized bandwidth of 40 kc and a maximum frequency deviation of 15 kc, in lieu of meeting the foregoing requirements of this section, until further notice by the Commission, however, compliance with the narrower bandwidth limits is recommended as a means of avoiding some causes of harmful interference.

(2) Transmitters authorized and installed prior to November 1, 1958, to utilize type F3 emission and to be operated on frequencies in the range 150 to 450 Mc, and transmitters which are operationally integrated with existing radio systems authorized prior to January 1, 1959, for operation on frequencies in that range, may be operated with a maximum authorized bandwidth of 40 kc and a maximum frequency deviation of 15 kc, in lieu of meeting the requirements set forth in the above table of this section, until not later than October 31, 1963.

4. Amend § 21.508 (d) to read as follows:

(d) When phase or frequency modulation is used for single channel operation on frequencies below 500 Mc, the deviation arising from modulation shall not exceed the limits specified in § 21.507 (b).

5. Amend § 21.508 (e) to read as follows:

(e) Each single channel radiotelephone transmitter having more than 3 watts plate power input to the final radio frequency stage, which is initially authorized or installed at the station in this service after July 1, 1950, shall be provided with a device which will automatically prevent modulation in excess of that specified in paragraphs (c) and (d) of this section which may be caused by greater than normal audio level. At audio frequencies between 3 kc and 15 kc, the low-pass filter required by § 21.118 (b) shall have an attenuation greater than the attenuation at 1 kc by at least:

$$40 \log_{10} (f/3) \text{ decibels}$$

where "f" is the audio frequency in kilocycles. At audio frequencies above 15 kc, the attenuation shall be at least 28 decibels greater than the attenuation at 1 kc.

6. Amend § 21.604 (a) to read as follows:

§ 21.604 *Emmission limitations.* (a) The maximum bandwidths which will normally be authorized for single channel operation in this service are set forth below:

Type of emission	25-450 Mc		450-500 Mc	
	Authorized bandwidth (kc)	Frequency deviation (kc)	Authorized bandwidth (kc)	Frequency deviation (kc)
A1	1	----------	1	----------
A2	3	----------	3	----------
A3	8	----------	8	----------
A4	12	----------	12	----------
F1	3	----------	3	----------
F2	3	----------	3	----------
F3	20	5	40	15
F4	20	5	40	15

7. Amend § 21.605 (c) to read as follows:

(c) When phase or frequency modulation is used for single channel operation on frequencies below 500 Mc, the deviation arising from modulation shall not exceed the limits specified in § 21.604 (a).

8. Amend § 21.605 (d) to read as follows:

(d) Each single channel radiotelephone transmitter having more than 3 watts plate power input to the final radio frequency stage and initially installed at a station in this service after the effective date of these rules shall be provided with a device which will automatically prevent modulation in excess of that specified in paragraphs (b) and (c) of this section which may be caused by greater than normal audio level. At audio frequencies between 3 kc and 15 kc, the low-pass filter required by § 21.118 (b) shall have an attenuation greater than the attenuation at 1 kc by at least:

$$40 \log_{10} (f/3) \text{ decibels}$$

where "f" is the audio frequency in kilocycles. At audio frequencies above 15 kc, the attenuation shall be at least 28 decibels greater than the attenuation at 1 kc.

[F. R. Doc. 56-7956; Filed, Oct. 2, 1956; 8:49 a. m.]

[Docket No. 11783; FCC 56-925]

[Rules Amdt. 3-27]

PART 3—RADIO BROADCAST SERVICES

TELEVISION BROADCAST STATIONS; TABLE OF ASSIGNMENTS (PIERRE-RELIANCE, SOUTH DAKOTA)

In the matter of amendment of § 3.606 *Table of assignments*, Television Broadcast Stations (Pierre-Reliance, South Dakota).

1. The Commission has before it for consideration its notice of proposed rule making issued in this proceeding on July 16, 1956 (FCC 56-681) and published in the FEDERAL REGISTER on July 20, 1956 (20 F. R. 5451), proposing to delete Channel 6 from Pierre, South Dakota and assign it to Reliance, South Dakota in response to a petition from the Midcontinent Broadcasting Company.

2. No comments were filed opposing the proposed amendment. In support of the requested amendment, Midcontinent urged that there are no applications for the Pierre assignments; that there is a need and demand for the assignment in Reliance; that a station on this channel in Reliance would serve a greater population and area presently without service; that the assignment of Channel 6 to Reliance would conform to all the Rules; and that an application would be filed by petitioner for the construction of a new television station in the event the amendment is adopted. The Commission is of the view that the proposed amendment would serve the public interest.

3. Authority for the adoption of the amendment is contained in sections 4 (i), 301, 303 (c), (d), (f) and (r) and 307 (b) of the Communications Act of 1934, as amended.

4. In view of the foregoing: *It is ordered*, That effective November 1, 1956, the Table of Assignments contained in § 3.606 of the Commission's rules and regulations is amended, insofar as the