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CODE OF FEDERAL REGULATIONS

Title 47
Telecommunication

Parts 20 to 39

Revised as of October 1, 2015

Containing a codification of documents
of general applicability and future effect

As of October 1, 2015

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Cite this Code: CFR

To cite the regulations in this volume use title, part and section number. Thus, 47 CFR 20.1 *refers to title 47, part 20, section 1.*

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Title 1 through Title 16.....as of January 1
Title 17 through Title 27.....as of April 1
Title 28 through Title 41.....as of July 1
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OLIVER A. POTTS,
Director,
Office of the Federal Register.
October 1, 2015.

THIS TITLE

Title 47—TELECOMMUNICATION is composed of five volumes. The parts in these volumes are arranged in the following order: Parts 0–19, parts 20–39, parts 40–69, parts 70–79, and part 80 to end, chapter I—Federal Communications Commission. The last volume, part 80 to end, also includes chapter II—Office of Science and Technology Policy and National Security Council, and chapter III—National Telecommunications and Information Administration, Department of Commerce. The contents of these volumes represent all current regulations codified under this title of the CFR as of October 1, 2015.

Part 73 contains a numerical designation of FM broadcast channels (§ 73.201) and a table of FM allotments designated for use in communities in the United States, its territories, and possessions (§ 73.202). Part 73 also contains a numerical designation of television channels (§ 73.603) and a table of allotments which contain channels designated for the listed communities in the United States, its territories, and possessions (§ 73.606).

The OMB control numbers for the Federal Communications Commission, appear in § 0.408 of chapter I. For the convenience of the user § 0.408 is reprinted in the Finding Aids section of the second through fifth volumes.

For this volume, Ann Worley was Chief Editor. The Code of Federal Regulations publication program is under the direction of John Hyrum Martinez, assisted by Stephen J. Frattini.

Title 47—Telecommunication

(This book contains parts 20 to 39)

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CHAPTER I—FEDERAL COMMUNICATIONS COMMISSION (CONTINUED)

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SUPPLEMENTARY PUBLICATIONS: *Annual Reports of the Federal Communications Commission to Congress.*

Federal Communications Commission Reports of Orders and Decisions.

Communications Act of 1934 (with amendments and index thereto), Recap. Version, January 1974, Packets No. 1 through 6.

Study Guide and Reference Material for Commercial Radio Operator Examinations, May 1979 edition.

SUBCHAPTER B—COMMON CARRIER SERVICES

PART 20—COMMERCIAL MOBILE SERVICES

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20.21 Signal boosters.
20.22 Rules governing mobile spectrum holdings.

AUTHORITY: 47 U.S.C. 151, 152(a), 154(i), 157, 160, 201, 214, 222, 251(e), 301, 302, 303, 303(b), 303(r), 307, 307(a), 309, 309(j)(3), 316, 316(a), 332, 615, 615a, 615b, 615c.

SOURCE: 59 FR 18495, Apr. 19, 1994, unless otherwise noted.

§ 20.1 Purpose.

The purpose of these rules is to set forth the requirements and conditions applicable to commercial mobile radio service providers.

§ 20.2 Other applicable rule parts.

Other FCC rule parts applicable to licensees in the commercial mobile radio services include the following:

(a) *Part 1.* This part includes rules of practice and procedure for license applications, adjudicatory proceedings, procedures for reconsideration and review of the Commission's actions; provisions concerning violation notices and forfeiture proceedings; competitive bidding procedures; and the environmental requirements that, together with the procedures specified in § 17.4(c) of this chapter, if applicable, must be complied with prior to the initiation of construction. Subpart F includes the rules for the Wireless Telecommunications Services and the procedures for filing electronically via the ULS.

(b) *Part 2.* This part contains the Table of Frequency Allocations and special requirements in international regulations, recommendations, agreements, and treaties. This part also contains standards and procedures concerning the marketing and importation of radio frequency devices, and for obtaining equipment authorization.

[78 FR 21559, Apr. 11, 2013]

§ 20.3 Definitions.

Appropriate local emergency authority. An emergency answering point that has not been officially designated as a Public Safety Answering Point (PSAP), but has the capability of receiving 911 calls and either dispatching emergency services personnel or, if necessary, relaying the call to another emergency service provider. An appropriate local emergency authority may include, but is not limited, to an existing local law enforcement authority, such as the police, county sheriff, local emergency medical services provider, or fire department.

Automatic Number Identification (ANI). A system that identifies the billing account for a call. For 911 systems, the ANI identifies the calling party and may be used as a call back number.

Automatic Roaming. With automatic roaming, under a pre-existing contractual agreement between a subscriber's home carrier and a host carrier, a roaming subscriber is able to originate or terminate a call in the host carrier's service area without taking any special actions.

Commercial mobile data service. (1) Any mobile data service that is not interconnected with the public switched network and is:

(i) Provided for profit; and

(ii) Available to the public or to such classes of eligible users as to be effectively available to the public.

(2) Commercial mobile data service includes services provided by Mobile

Satellite Services and Ancillary Terrestrial Component providers to the extent the services provided meet this definition.

Commercial mobile radio service. A mobile service that is:

(a)(1) provided for profit, *i.e.*, with the intent of receiving compensation or monetary gain;

(2) An interconnected service; and

(3) Available to the public, or to such classes of eligible users as to be effectively available to a substantial portion of the public; or

(b) The functional equivalent of such a mobile service described in paragraph (a) of this section, including a mobile broadband Internet access service as defined in §8.2 of this chapter.

Consumer Signal Booster: A bi-directional signal booster that is marketed and sold to the general public for use without modification.

Designated PSAP. The Public Safety Answering Point (PSAP) designated by the local or state entity that has the authority and responsibility to designate the PSAP to receive wireless 911 calls.

Fixed Consumer Signal Booster. A Consumer Signal Booster designed to be operated in a fixed location in a building.

Handset-based location technology. A method of providing the location of wireless 911 callers that requires the use of special location-determining hardware and/or software in a portable or mobile phone. Handset-based location technology may also employ additional location-determining hardware and/or software in the CMRS network and/or another fixed infrastructure.

Host Carrier. For automatic roaming, the host carrier is a facilities-based CMRS carrier on whose system another carrier's subscriber roams. A facilities-based CMRS carrier may, on behalf of its subscribers, request automatic roaming service from a host carrier.

Incumbent Wide Area SMR Licensees. Licensees who have obtained extended implementation authorizations in the 800 MHz or 900 MHz service, either by waiver or under Section 90.629 of these rules, and who offer real-time, two-way voice service that is interconnected with the public switched network.

Industrial Signal Booster: All signal boosters other than Consumer Signal Boosters.

Interconnection or Interconnected. Direct or indirect connection through automatic or manual means (by wire, microwave, or other technologies such as store and forward) to permit the transmission or reception of messages or signals to or from points in the public switched network.

Interconnected Service. A service:

(a) That is interconnected with the public switched network, or interconnected with the public switched network through an interconnected service provider, that gives subscribers the capability to communicate to or receive communication from other users on the public switched network; or

(b) For which a request for such interconnection is pending pursuant to section 332(c)(1)(B) of the Communications Act, 47 U.S.C. 332(c)(1)(B). A mobile service offers interconnected service even if the service allows subscribers to access the public switched network only during specified hours of the day, or if the service provides general access to points on the public switched network but also restricts access in certain limited ways. Interconnected service does not include any interface between a licensee's facilities and the public switched network exclusively for a licensee's internal control purposes.

Location-capable handsets. Portable or mobile phones that contain special location-determining hardware and/or software, which is used by a licensee to locate 911 calls.

Manual Roaming. With manual roaming, a subscriber must establish a relationship with the host carrier on whose system he or she wants to roam in order to make a call. Typically, the roaming subscriber accomplishes this in the course of attempting to originate a call by giving a valid credit card number to the carrier providing the roaming service.

Mobile Consumer Signal Booster. A Consumer Signal Booster designed to operate in a moving vehicle where both uplink and downlink transmitting antennas are at least 20 cm from the user or any other person.

Mobile Service. A radio communication service carried on between mobile stations or receivers and land stations, and by mobile stations communicating among themselves, and includes:

(a) Both one-way and two-way radio communications services;

(b) A mobile service which provides a regularly interacting group of base, mobile, portable, and associated control and relay stations (whether licensed on an individual, cooperative, or multiple basis) for private one-way or two-way land mobile radio communications by eligible users over designated areas of operation; and

(c) Any service for which a license is required in a personal communications service under part 24 of this chapter.

Network-based Location Technology. A method of providing the location of wireless 911 callers that employs hardware and/or software in the CMRS network and/or another fixed infrastructure, and does not require the use of special location-determining hardware and/or software in the caller's portable or mobile phone.

Non-individual. A non-individual is a partnership and each partner is eighteen years of age or older; a corporation; an association; a state, territorial, or local government unit; or a legal entity.

Private Mobile Radio Service. A mobile service that is neither a commercial mobile radio service nor the functional equivalent of a service that meets the definition of commercial mobile radio service. Private mobile radio service includes the following:

(a) Not-for-profit land mobile radio and paging services that serve the licensee's internal communications needs as defined in part 90 of this chapter. Shared-use, cost-sharing, or cooperative arrangements, multiple licensed systems that use third party managers or users combining resources to meet compatible needs for specialized internal communications facilities in compliance with the safeguards of § 90.179 of this chapter are presumptively private mobile radio services;

(b) Mobile radio service offered to restricted classes of eligible users. This includes entities eligible in the Public Safety Radio Pool and Radiolocation service.

(c) 220–222 MHz land mobile service and Automatic Vehicle Monitoring systems (part 90 of this chapter) that do not offer interconnected service or that are not-for-profit; and

(d) Personal Radio Services under part 95 of this chapter (General Mobile Services, Radio Control Radio Services, and Citizens Band Radio Services); Maritime Service Stations (excluding Public Coast stations) (part 80 of this chapter); and Aviation Service Stations (part 87 of this chapter).

Provider-Specific Consumer Signal Boosters. Provider-Specific Consumer Signal Boosters may only operate on the frequencies and in the market areas of the specified licensee(s). Provider-Specific Consumer Signal Boosters may only be certificated and operated with the consent of the licensee(s) whose frequencies are being amplified by the device.

Pseudo Automatic Number Identification (Pseudo-ANI). A number, consisting of the same number of digits as ANI, that is not a North American Numbering Plan telephone directory number and may be used in place of an ANI to convey special meaning. The special meaning assigned to the pseudo-ANI is determined by agreements, as necessary, between the system originating the call, intermediate systems handling and routing the call, and the destination system.

Public Safety Answering Point. A point that has been designated to receive 911 calls and route them to emergency service personnel.

Public Switched Network. The network that includes any common carrier switched network, whether by wire or radio, including local exchange carriers, interexchange carriers, and mobile service providers, that uses the North American Numbering Plan, or public IP addresses, in connection with the provision of switched services.

Signal booster. A device that automatically receives, amplifies, and retransmits on a bi- or unidirectional basis, the signals received from base, fixed, mobile, or portable stations, with no change in frequency or authorized bandwidth.

Signal booster operator. The signal booster operator is the person or persons with control over the functioning

of the signal booster, or the person or persons with the ability to deactivate it in the event of technical malfunctioning or harmful interference to a primary radio service.

Statewide default answering point. An emergency answering point designated by the State to receive 911 calls for either the entire State or those portions of the State not otherwise served by a local PSAP.

Wideband Consumer Signal Boosters. Wideband Consumer Signal Boosters may operate on the frequencies and in the market areas of multiple licensees.

[59 FR 18495, Apr. 19, 1994, as amended at 61 FR 38402, July 24, 1996; 61 FR 40352, Aug. 2, 1996; 62 FR 18843, Apr. 17, 1997; 63 FR 2637, Jan. 16, 1998; 64 FR 60130, Nov. 4, 1999; 67 FR 1648, Jan. 14, 2002; 72 FR 50073, Aug. 30, 2007; 75 FR 22276, Apr. 28, 2010; 76 FR 26220, May 6, 2011; 78 FR 21559, Apr. 11, 2013; 80 FR 19850, Apr. 13, 2015]

§ 20.5 Citizenship.

(a) This rule implements section 310 of the Communications Act, 47 U.S.C. 310, regarding the citizenship of licensees in the commercial mobile radio services. Commercial mobile radio service authorizations may not be granted to or held by:

(1) Any foreign government or any representative thereof;

(2) Any alien or the representative of any alien;

(3) Any corporation organized under the laws of any foreign government;

(4) Any corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country; or

(5) Any corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country, if the Commission finds that the public interest will be served by the refusal or revocation of such license.

(b) The limits listed in paragraph (a) of this section may be exceeded by eligible individuals who held ownership interests on May 24, 1993, pursuant to the waiver provisions established in section 332(c)(6) of the Communications Act. Transfers of ownership to any other person in violation of paragraph (a) of this section are prohibited.

[59 FR 18495, Apr. 19, 1994, as amended at 61 FR 55580, Oct. 28, 1996]

§ 20.6 CMRS spectrum aggregation limit.

(a) *Spectrum limitation.* No licensee in the broadband PCS, cellular, or SMR services (including all parties under common control) regulated as CMRS (*see* 47 CFR 20.9) shall have an attributable interest in a total of more than 55 MHz of licensed broadband PCS, cellular, and SMR spectrum regulated as CMRS with significant overlap in any geographic area.

(b) *SMR spectrum.* To calculate the amount of attributable SMR spectrum for purposes of paragraph (a) of this section, an entity must count all 800 MHz and 900 MHz channels located at any SMR base station inside the geographic area (MTA or BTA) where there is significant overlap. All 800 MHz channels located on at least one of those identified base stations count as 50 kHz (25 kHz paired), and all 900 MHz channels located on at least one of those identified base stations count as 25 kHz (12.5 kHz paired); provided that any discrete 800 or 900 MHz channel shall be counted only once per licensee within the geographic area, even if the licensee in question utilizes the same channel at more than one location within the relevant geographic area. No more than 10 MHz of SMR spectrum in the 800 and 900 MHz SMR services will be attributed to an entity when determining compliance with the cap.

(c) *Significant overlap.* (1) For purposes of paragraph (a) of this section, significant overlap of a PCS licensed service area and CGSA(s) (as defined in § 22.911 of this chapter) or SMR service area(s) occurs when at least 10 percent of the population of the PCS licensed service area for the counties contained therein, as determined by the latest available decennial census figures as complied by the Bureau of the Census, is within the CGSA(s) and/or SMR service area(s).

(2) The Commission shall presume that an SMR service area covers less than 10 percent of the population of a PCS service area if none of the base stations of the SMR licensee are located within the PCS service area. For an SMR licensee's base stations that are located within a PCS service area, the channels licensed at those sites will be presumed to cover 10 percent of the population of the PCS service area, unless the licensee shows that its protected service contour for all of its base stations covers less than 10 percent of the population of the PCS service area.

(d) *Ownership attribution.* For purposes of paragraph (a) of this section, ownership and other interests in broadband PCS licensees, cellular licensees, or SMR licensees will be attributed to their holders pursuant to the following criteria:

(1) Controlling interest shall be attributable. Controlling interest means majority voting equity ownership, any general partnership interest, or any means of actual working control (including negative control) over the operation of the licensee, in whatever manner exercised.

(2) Partnership and other ownership interests and any stock interest amounting to 20 percent or more of the equity, or outstanding stock, or outstanding voting stock of a broadband PCS, cellular or SMR licensee shall be attributed, except that ownership will not be attributed unless the partnership and other ownership interests and any stock interest amount to at least 40 percent of the equity, or outstanding stock, or outstanding voting stock of a broadband PCS, cellular or SMR licensee if the ownership interest is held by a small business or a rural telephone company, as these terms are defined in §1.2110 of this chapter or other related provisions of the Commission's rules, or if the ownership interest is held by an entity with a non-controlling equity interest in a broadband PCS licensee or applicant that is a small business.

(3) Investment companies, as defined in 15 U.S.C. 80a–3, insurance companies and banks holding stock through their trust departments in trust accounts will be considered to have an attributable interest only if they hold 40 percent or more of the outstanding voting stock of a corporate broadband PCS, cellular or SMR licensee, or if any of the officers or directors of the broadband PCS, cellular or SMR licensee are representatives of the investment company, insurance company or bank concerned. Holdings by a bank or insurance company will be aggregated if the bank or insurance company has any right to determine how the stock will be voted. Holdings by investment companies will be aggregated if under common management.

(4) Non-voting stock shall be attributed as an interest in the issuing entity if in excess of the amounts set forth in paragraph (d)(2) of this section.

(5) Debt and instruments such as warrants, convertible debentures, options, or other interests (except non-voting stock) with rights of conversion to voting interests shall not be attributed unless and until converted, except that this provision does not apply in determining whether an entity is a small business, a rural telephone company, or a business owned by minorities and/or women, as these terms are defined in §1.2110 of this chapter or other related provisions of the Commission's rules.

(6) Limited partnership interests shall be attributed to limited partners and shall be calculated according to both the percentage of equity paid in and the percentage of distribution of profits and losses.

(7) Officers and directors of a broadband PCS licensee or applicant, cellular licensee, or SMR licensee shall be considered to have an attributable interest in the entity with which they are so associated. The officers and directors of an entity that controls a broadband PCS licensee or applicant, a cellular licensee, or an SMR licensee shall be considered to have an attributable interest in the broadband PCS licensee or applicant, cellular licensee, or SMR licensee.

(8) Ownership interests that are held indirectly by any party through one or more intervening corporations will be determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain and application of the relevant attribution benchmark to the resulting

product, except that if the ownership percentage for an interest in any link in the chain exceeds 50 percent or represents actual control, it shall be treated as if it were a 100 percent interest. (For example, if A owns 20% of B, and B owns 40% of licensee C, then A's interest in licensee C would be 8%. If A owns 20% of B, and B owns 51% of licensee C, then A's interest in licensee C would be 20% because B's ownership of C exceeds 50%.)

(9) Any person who manages the operations of a broadband PCS, cellular, or SMR licensee pursuant to a management agreement shall be considered to have an attributable interest in such licensee if such person, or its affiliate, has authority to make decisions or otherwise engage in practices or activities that determine, or significantly influence,

(i) The nature or types of services offered by such licensee;

(ii) The terms upon which such services are offered; or

(iii) The prices charged for such services.

(10) Any licensee or its affiliate who enters into a joint marketing arrangements with a broadband PCS, cellular, or SMR licensee, or its affiliate shall be considered to have an attributable interest, if such licensee, or its affiliate, has authority to make decisions or otherwise engage in practices or activities that determine, or significantly influence,

(i) The nature or types of services offered by such licensee;

(ii) The terms upon which such services are offered; or

(iii) The prices charged for such services.

(e) *Divestiture.* (1) Divestiture of interests as a result of a transfer of control or assignment of authorization must occur prior to consummating the transfer or assignment, except that a licensee that meets the requirements set forth in paragraph (e)(2) of this section shall have 90 days from final grant to come into compliance with the spectrum aggregation limit.

(2) An applicant with:

(i) Controlling or attributable ownership interests in broadband PCS, cellular, and/or SMR licenses where the geographic license areas cover 20 percent or less of the applicant's service area population;

(ii) Attributable interests in broadband PCS, cellular, and/or SMR licenses solely due to management agreements or joint marketing agreements; or

(iii) Non-controlling attributable interests in broadband PCS, cellular, and/or SMR licenses, regardless of the degree to which the geographic license areas cover the applicant's service area population, shall be eligible to have its application granted subject to a condition that the licensee shall come into compliance with the spectrum limitation set out in paragraph (a) within ninety (90) days after final grant. For purposes of this paragraph, a ''non-controlling attributable interest'' is one in which the holder has less than a fifty (50) percent voting interest and there is an unaffiliated single holder of a fifty (50) percent or greater voting interest.

(3) The applicant for a license that, if granted, would exceed the spectrum aggregation limitation in paragraph (a) of this section shall certify on its application that it and all parties to the application will come into compliance with this limitation. If such an applicant is a successful bidder in an auction, it must submit with its long-form application a signed statement describing its efforts to date and future plans to come into compliance with the spectrum aggregation limitation. A similar statement must also be included with any application for assignment of licenses or transfer of control that, if granted, would exceed the spectrum aggregation limit.

(4)(i) Parties holding controlling interests in broadband PCS, cellular, and/or SMR licensees that conflict with the attribution threshold or geographic overlap limitations set forth in this section will be considered to have come into compliance if they have submitted to the Commission an application for assignment of license or transfer of control of the conflicting licensee (*see* §1.948 of this chapter; *see also* §24.839 of this chapter (PCS)) by which, if granted, such parties no longer would have an attributable interest in the conflicting license. Divestiture may be to an interim trustee if a buyer has not been secured in the required period of

time, as long as the applicant has no interest in or control of the trustee, and the trustee may dispose of the license as it sees fit. Where parties to broadband PCS, cellular, or SMR applications hold less than controlling (but still attributable) interests in broadband PCS, cellular, or SMR licensee(s), they shall submit a certification that the applicant and all parties to the application have come into compliance with the limitations on spectrum aggregation set forth in this section.

(ii) Applicants that meet the requirements of paragraph (e)(2) of this section must tender to the Commission within ninety (90) days of final grant of the initial license, such an assignment or transfer application or, in the case of less than controlling (but still attributable) interests, a written certification that the applicant and all parties to the application have come into compliance with the limitations on spectrum aggregation set forth in this section. If no such transfer or assignment application or certification is tendered to the Commission within ninety (90) days of final grant of the initial license, the Commission may consider the certification and the divestiture statement to be material, bad faith misrepresentations and shall invoke the condition on the initial license or the assignment or transfer, cancelling or rescinding it automatically, shall retain all monies paid to the Commission, and, based on the facts presented, shall take any other action it may deem appropriate.

(f) *Sunset.* This rule section shall cease to be effective January 1, 2003.

NOTE 1 TO § 20.6: For purposes of the ownership attribution limit, all ownership interests in operations that serve at least 10 percent of the population of the PCS service area should be included in determining the extent of a PCS applicant's cellular or SMR ownership.

NOTE 2 TO § 20.6: When a party owns an attributable interest in more than one cellular or SMR system that overlaps a PCS service area, the total population in the overlap area will apply on a cumulative basis.

NOTE 3 TO § 20.6: Waivers of § 20.6(d) may be granted upon an affirmative showing:

(1) That the interest holder has less than a 50 percent voting interest in the licensee and there is an unaffiliated single holder of a 50 percent or greater voting interest;

(2) That the interest holder is not likely to affect the local market in an anticompetitive manner;

(3) That the interest holder is not involved in the operations of the licensee and does not have the ability to influence the licensee on a regular basis; and

(4) That grant of a waiver is in the public interest because the benefits to the public of common ownership outweigh any potential anticompetitive harm to the market.

[64 FR 54574, Oct. 7, 1999, as amended at 67 FR 1642, Jan. 14, 2002]

§ 20.7 Mobile services.

The following are mobile services within the meaning of sections 3(n) and 332 of the Communications Act, 47 U.S.C. 153(n), 332.

(a) Public mobile services (part 22 of this chapter), including fixed operations that support the mobile systems, but excluding Rural Radio Service and Basic Exchange Telecommunications Radio Service (part 22, subpart H of this chapter);

(b) Private land mobile services (part 90 of this chapter), including secondary fixed operations, but excluding fixed services such as call box operations and meter reading;

(c) Mobile satellite services (part 25 of this chapter) including dual-use equipment, terminals capable of transmitting while a platform is moving, but excluding satellite facilities provided through a transportable platform that cannot move when the communications service is offered;

(d) Marine and aviation services (parts 80 and 87 of this chapter), including fixed operations that support these marine and aviation mobile systems;

(e) Personal radio services (part 95 of this chapter), but excluding 218–219 MHz Service;

(f) Personal communications services (part 24 of this chapter);

(g) Auxiliary services provided by mobile service licensees, and ancillary fixed communications offered by personal communications service providers;

(h) Unlicensed services meeting the definition of commercial mobile radio service in § 20.3, such as the resale of commercial mobile radio services, but excluding unlicensed radio frequency devices under part 15 of this chapter

(including unlicensed personal communications service devices).

[59 FR 18495, Apr. 19, 1994, as amended at 63 FR 54077, Oct. 8, 1998]

§ 20.9 Commercial mobile radio service.

(a) The following mobile services shall be treated as common carriage services and regulated as commercial mobile radio services (including any such service offered as a hybrid service or offered on an excess capacity basis to the extent it meets the definition of commercial mobile radio service, or offered as an auxiliary or ancillary service), pursuant to Section 332 of the Communications Act, 47 U.S.C. 332:

(1) Private Paging (part 90 of this chapter), excluding not-for-profit paging systems that serve only the licensee's own internal communications needs;

(2) Stations that offer Industrial/Business Pool (§ 90.35 of this chapter) eligibles for-profit, interconnected service;

(3) Land Mobile Systems on 220–222 MHz (part 90 of this chapter), except services that are not-for-profit or do not offer interconnected service;

(4) Specialized Mobile Radio services that provide interconnected service (part 90 of this chapter);

(5) Public Coast Stations (part 80, subpart J of this chapter);

(6) Paging and Radiotelephone Service (part 22, subpart E of this chapter).

(7) Cellular Radiotelephone Service (part 22, subpart H of this chapter).

(8) Air-Ground Radiotelephone Service (part 22, subpart G of this chapter).

(9) Offshore Radiotelephone Service (part 22, subpart I of this chapter).

(10) Any mobile satellite service involving the provision of commercial mobile radio service (by licensees or resellers) directly to end users, except that mobile satellite licensees and other entities that sell or lease space segment capacity, to the extent that it does not provide commercial mobile radio service directly to end users, may provide space segment capacity to commercial mobile radio service providers on a non-common carrier basis, if so authorized by the Commission;

(11) Personal Communications Services (part 24 of this chapter), except as provided in paragraph (b) of this section;

(12) Mobile operations in the 218–219 MHz Service (part 95, subpart F of this chapter) that provide for-profit interconnected service to the public;

(13) For-profit subsidiary communications services transmitted on subcarriers within the FM baseband signal, that provide interconnected service (47 CFR 73.295 of this chapter); and

(14) A mobile service that is the functional equivalent of a commercial mobile radio service.

(i) A mobile service that does not meet the definition of commercial mobile radio service is presumed to be a private mobile radio service.

(ii) Any interested party may seek to overcome the presumption that a particular mobile radio service is a private mobile radio service by filing a petition for declaratory ruling challenging a mobile service provider's regulatory treatment as a private mobile radio service.

(A) The petition must show that: (*1*) The mobile service in question meets the definition of commercial mobile radio service; or

(*2*) The mobile service in question is the functional equivalent of a service that meets the definition of a commercial mobile radio service.

(B) A variety of factors will be evaluated to make a determination whether the mobile service in question is the functional equivalent of a commercial mobile radio service, including: consumer demand for the service to determine whether the service is closely substitutable for a commercial mobile radio service; whether changes in price for the service under examination, or for the comparable commercial mobile radio service would prompt customers to change from one service to the other; and market research information identifying the targeted market for the service under review.

(C) The petition must contain specific allegations of fact supported by affidavit(s) of person(s) with personal knowledge. The petition must be served on the mobile service provider against whom it is filed and contain a certificate of service to this effect. The

mobile service provider may file an opposition to the petition and the petitioner may file a reply. The general rules of practice and procedure contained in §§1.1 through 1.52 of this chapter shall apply.

(b) Licensees of a Personal Communications Service or applicants for a Personal Communications Service license, and VHF Public Coast Station geographic area licensees or applicants, and Automated Maritime Telecommunications System (AMTS) licensees or applicants, proposing to use any Personal Communications Service, VHF Public Coast Station, or AMTS spectrum to offer service on a private mobile radio service basis must overcome the presumption that Personal Communications Service, VHF Public Coast, and AMTS Stations are commercial mobile radio services.

(1) The applicant or licensee (who must file an application to modify its authorization) seeking authority to dedicate a portion of the spectrum for private mobile radio service, must include a certification that it will offer Personal Communications Service, VHF Public Coast Station, or AMTS service on a private mobile radio service basis. The certification must include a description of the proposed service sufficient to demonstrate that it is not within the definition of commercial mobile radio service in §20.3. Any application requesting to use any Personal Communications Service, VHF Public Coast Station, or AMTS spectrum to offer service on a private mobile radio service basis will be placed on public notice by the Commission.

(2) Any interested party may file a petition to deny the application within 30 days after the date of public notice announcing the acceptance for filing of the application. The petition shall contain specific allegations of fact supported by affidavit(s) of person(s) with personal knowledge to show that the applicant's request does not rebut the commercial mobile radio service presumption. The petition must be served on the applicant and contain a certificate of service to this effect. The applicant may file an opposition with allegations of fact supported by affidavit. The petitioner may file a reply. No additional pleadings will be allowed. The general rules of practice and procedure contained in §§1.1 through 1.52 of this chapter and §22.30 of this chapter shall apply.

(c) Any provider of private land mobile service before August 10, 1993 (including any system expansions, modifications, or acquisitions of additional licenses in the same service, even if authorized after this date), and any private paging service utilizing frequencies allocated as of January 1, 1993, that meet the definition of commercial mobile radio service, shall, except for purposes of §20.5 (applicable August 10, 1993 for the providers listed in this paragraph), be treated as private mobile radio service until August 10, 1996. After this date, these entities will be treated as commercial mobile radio service providers regulated under this part.

[59 FR 18495, Apr. 19, 1994, as amended at 62 FR 18843, Apr. 17, 1997; 63 FR 40062, July 27, 1998; 64 FR 26887, May 18, 1999; 64 FR 59659, Nov. 3, 1999; 66 FR 10968, Feb. 21, 2001; 72 FR 31194, June 6, 2007]

§20.11 Interconnection to facilities of local exchange carriers.

(a) A local exchange carrier must provide the type of interconnection reasonably requested by a mobile service licensee or carrier, within a reasonable time after the request, unless such interconnection is not technically feasible or economically reasonable. Complaints against carriers under section 208 of the Communications Act, 47 U.S.C. 208, alleging a violation of this section shall follow the requirements of §§1.711–1.734 of this chapter, 47 CFR 1.711–1.734.

(b) Local exchange carriers and commercial mobile radio service providers shall exchange Non-Access Telecommunications Traffic, as defined in §51.701 of this chapter, under a bill-and-keep arrangement, as defined in §51.713 of this chapter, unless they mutually agree otherwise.

(c) Local exchange carriers and commercial mobile radio service providers shall also comply with applicable provisions of part 51 of this chapter.

(d) Local exchange carriers may not impose compensation obligations for traffic not subject to access charges

upon commercial mobile radio service providers pursuant to tariffs.

(e) An incumbent local exchange carrier may request interconnection from a commercial mobile radio service provider and invoke the negotiation and arbitration procedures contained in section 252 of the Act. A commercial mobile radio service provider receiving a request for interconnection must negotiate in good faith and must, if requested, submit to arbitration by the state commission.

[59 FR 18495, Apr. 19, 1994, as amended at 61 FR 45619, Aug. 29, 1996; 70 FR 16145, Mar. 30, 2005; 76 FR 73852, Nov. 29, 2011; 77 FR 1640, Jan. 11, 2012]

§ 20.12 Resale and roaming.

(a)(1) *Scope of manual roaming and resale.* Paragraph (c) of this section is applicable to providers of Broadband Personal Communications Services (part 24, subpart E of this chapter), Cellular Radio Telephone Service (part 22, subpart H of this chapter), and specialized Mobile Radio Services in the 800 MHz and 900 MHz bands (included in part 90, subpart S of this chapter) if such providers offer real-time, two-way switched voice or data service that is interconnected with the public switched network and utilizes an in-network switching facility that enables the provider to re-use frequencies and accomplish seamless hand-offs of subscriber calls. The scope of paragraph (b) of this section, concerning the resale rule, is further limited so as to exclude from the requirements of that paragraph those Broadband Personal Communications Services C, D, E, and F block licensees that do not own and control and are not owned and controlled by firms also holding cellular A or B block licenses.

(2) *Scope of automatic roaming.* Paragraph (d) of this section is applicable to CMRS carriers if such carriers offer real-time, two-way switched voice or data service that is interconnected with the public switched network and utilizes an in-network switching facility that enables the carrier to re-use frequencies and accomplish seamless hand-offs of subscriber calls. Paragraph (d) of this section is also applicable to the provision of push-to-talk and text-messaging service by CMRS carriers.

(3) *Scope of offering roaming arrangements for commercial mobile data services.* Paragraph (e) of this section is applicable to all facilities-based providers of commercial mobile data services.

(b) *Resale.* The resale rule is applicable as follows:

(1) Each carrier subject to paragraph (b) of this section shall not restrict the resale of its services, unless the carrier demonstrates that the restriction is reasonable.

(2) The resale requirement shall not apply to customer premises equipment, whether or not it is bundled with services subject to the resale requirement in this paragraph.

(3) This paragraph shall cease to be effective five years after the last group of initial licenses for broadband PCS spectrum in the 1850–1910 and the 1930–1990 MHz bands is awarded; *i.e.*, at the close of November 24, 2002.

(c) *Manual roaming.* Each carrier subject to paragraph (a)(1) of this section must provide mobile radio service upon request to all subscribers in good standing to the services of any carrier subject to paragraph (a)(1) of this section, including roamers, while such subscribers are located within any portion of the licensee's licensed service area where facilities have been constructed and service to subscribers has commenced, if such subscribers are using mobile equipment that is technically compatible with the licensee's base stations.

(d) *Automatic roaming.* Upon a reasonable request, it shall be the duty of each host carrier subject to paragraph (a)(2) of this section to provide automatic roaming to any technologically compatible, facilities-based CMRS carrier on reasonable and not unreasonably discriminatory terms and conditions, pursuant to Sections 201 and 202 of the Communications Act, 47 U.S.C. 201 and 202. The Commission shall presume that a request by a technologically compatible CMRS carrier for automatic roaming is reasonable pursuant to Sections 201 and 202 of the Communications Act, 47 U.S.C. 201 and 202. This presumption may be rebutted on a case by case basis. The Commission will resolve automatic roaming disputes on a case-by-case basis, taking

into consideration the totality of the circumstances presented in each case.

(e) *Offering roaming arrangements for commercial mobile data services.* (1) A facilities-based provider of commercial mobile data services is required to offer roaming arrangements to other such providers on commercially reasonable terms and conditions, subject to the following limitations:

(i) Providers may negotiate the terms of their roaming arrangements on an individualized basis;

(ii) It is reasonable for a provider not to offer a data roaming arrangement to a requesting provider that is not technologically compatible;

(iii) It is reasonable for a provider not to offer a data roaming arrangement where it is not technically feasible to provide roaming for the particular data service for which roaming is requested and any changes to the host provider's network necessary to accommodate roaming for such data service are not economically reasonable;

(iv) It is reasonable for a provider to condition the effectiveness of a roaming arrangement on the requesting provider's provision of mobile data service to its own subscribers using a generation of wireless technology comparable to the technology on which the requesting provider seeks to roam.

(2) A party alleging a violation of this section may file a formal or informal complaint pursuant to the procedures in §§ 1.716 through 1.718, 1.720, 1.721, and 1.723 through 1.735 of this chapter, which sections are incorporated herein. For purposes of § 20.12(e), references to a ''carrier'' or ''common carrier'' in the formal and informal complaint procedures incorporated herein will mean a provider of commercial mobile data services. The Commission will resolve such disputes on a case-by-case basis, taking into consideration the totality of the circumstances presented in each case. The remedy of damages shall not be available in connection with any complaint alleging a violation of this section. Whether the appropriate procedural vehicle for a dispute is a complaint under this paragraph or a petition for declaratory ruling under § 1.2 of this chapter may vary depending on the circumstances of each case.

[64 FR 61027, Nov. 9, 1999, as amended at 65 FR 58482, Sept. 29, 2000; 72 FR 50074, Aug. 30, 2007; 75 FR 22276, Apr. 28, 2010; 76 FR 26220, May 6, 2011]

§ 20.13 State petitions for authority to regulate rates.

(a) States may petition for authority to regulate the intrastate rates of any commercial mobile radio service. The petition must include the following:

(1) Demonstrative evidence that market conditions in the state for commercial mobile radio services do not adequately protect subscribers to such services from unjust and unreasonable rates or rates that are unjustly or unreasonably discriminatory. Alternatively, a state's petition may include demonstrative evidence showing that market conditions for commercial mobile radio services do not protect subscribers adequately from unjust and unreasonable rates, or rates that are unjustly or unreasonably discriminatory, and that a substantial portion of the commercial mobile radio service subscribers in the state or a specified geographic area have no alternative means of obtaining basic telephone service. This showing may include evidence of the range of basic telephone service alternatives available to consumers in the state.

(2) The following is a non-exhaustive list of examples of the types of evidence, information, and analysis that may be considered pertinent to determine market conditions and consumer protection by the Commission in reviewing any petition filed by a state under this section:

(i) The number of commercial mobile radio service providers in the state, the types of services offered by commercial mobile radio service providers in the state, and the period of time that these providers have offered service in the state;

(ii) The number of customers of each commercial mobile radio service provider in the state; trends in each provider's customer base during the most recent annual period or other data covering another reasonable period if annual data is unavailable; and annual revenues and rates of return for each

commercial mobile radio service provider;

(iii) Rate information for each commercial mobile radio service provider, including trends in each provider's rates during the most recent annual period or other data covering another reasonable period if annual data is unavailable;

(iv) An assessment of the extent to which services offered by the commercial mobile radio service providers the state proposes to regulate are substitutable for services offered by other carriers in the state;

(v) Opportunities for new providers to enter into the provision of competing services, and an analysis of any barriers to such entry;

(vi) Specific allegations of fact (supported by affidavit of person with personal knowledge) regarding anti-competitive or discriminatory practices or behavior by commercial mobile radio service providers in the state;

(vii) Evidence, information, and analysis demonstrating with particularity instances of systematic unjust and unreasonable rates, or rates that are unjust or unreasonably discriminatory, imposed upon commercial mobile radio service subscribers. Such evidence should include an examination of the relationship between rates and costs. Additionally, evidence of a pattern of such rates, that demonstrates the inability of the commercial mobile radio service marketplace in the state to produce reasonable rates through competitive forces will be considered especially probative; and

(viii) Information regarding customer satisfaction or dissatisfaction with services offered by commercial mobile radio service providers, including statistics and other information about complaints filed with the state regulatory commission.

(3) Petitions must include a certification that the state agency filing the petition is the duly authorized state agency responsible for the regulation of telecommunication services provided in the state.

(4) Petitions must identify and describe in detail the rules the state proposes to establish if the petition is granted.

(5) States have the burden of proof. Interested parties may file comments in support or in opposition to the petition within 30 days after public notice of the filing of a petition by a state under this section. Any interested party may file a reply within 15 days after the expiration of the filing period for comments. No additional pleadings may be filed. Except for §1.45 of this chapter, practice and procedure rules contained in §§1.42–1.52 of this chapter shall apply. The provisions of §§1.771–1.773 of this chapter do not apply.

(6) The Commission shall act upon any petition filed by a state under this paragraph not later than the end of the nine-month period after the filing of the petition.

(7) If the Commission grants the petition, it shall authorize the state to regulate rates for commercial mobile radio services in the state during a reasonable period of time, as specified by the Commission. The period of time specified by the Commission will be that necessary to ensure that rates are just and reasonable, or not unjustly or unreasonably discriminatory.

(b) States that regulated rates for commercial mobile services as of June 1, 1993, may petition the Commission under this section before August 10, 1994, to extend this authority.

(1) The petition will be acted upon by the Commission in accordance with the provisions of paragraphs (a)(1) through (a)(5) of this section.

(2) The Commission shall act upon the petition (including any reconsideration) not later than the end of the 12-month period following the date of the filing of the petition by the state involved. Commercial mobile radio service providers offering such service in the state shall comply with the existing regulations of the state until the petition and any reconsideration of the petition are acted upon by the Commission.

(3) The provisions of paragraph (a)(7) of this section apply to any petition granted by the Commission under this paragraph.

(c) No sooner than 18 months from grant of authority by the Commission under this section for state rate regulations, any interested party may petition the Commission for an order to

discontinue state authority for rate regulation.

(1) Petitions to discontinue state authority for rate regulation must be based on recent empirical data or other significant evidence demonstrating that the exercise of rate authority by a state is no longer necessary to ensure that the rates for commercial mobile are just and reasonable or not unjustly or unreasonably discriminatory.

(2) Any interested party may file comments in support of or in opposition to the petition within 30 days after public notice of the filing of the petition. Any interested party may file a reply within 15 days after the time for filing comments has expired. No additional pleadings may be filed. Except for 1.45 of this chapter, practice and procedure rules contained in §1.42–1.52 of this chapter apply. The provisions of §§1.771–1.773 of this chapter do not apply.

(3) The Commission shall act upon any petition filed by any interested party under this paragraph within nine months after the filing of the petition.

§ 20.15 Requirements under Title II of the Communications Act.

(a) Commercial mobile radio services providers, to the extent applicable, must comply with sections 201, 202, 206, 207, 208, 209, 216, 217, 223, 225, 226, 227, and 228 of the Communications Act, 47 U.S.C. 201, 202, 206, 207, 208, 209, 216, 217, 223, 225, 226, 227, 228; part 68 of this chapter, 47 CFR part 68; and §§1.701–1.748, and 1.815 of this chapter, 47 CFR 1.701–1.748, 1.815.

(b) Commercial mobile radio service providers are not required to:

(1) File with the Commission copies of contracts entered into with other carriers or comply with other reporting requirements, or with §§1.781 through 1.814 and 43.21 of this chapter; except that commercial radio service providers that offer broadband service, as described in §1.7001(a) of this chapter or mobile telephony are required to file reports pursuant to §§1.7000 and 43.11 of this chapter. For purposes of this section, *mobile telephony* is defined as real-time, two-way switched voice service that is interconnected with the public switched network utilizing an in-network switching facility that enables the provider to reuse frequencies and accomplish seamless handoff of subscriber calls.

(2) Seek authority for interlocking directors (section 212 of the Communications Act);

(3) Submit applications for new facilities or discontinuance of existing facilities (section 214 of the Communications Act).

(c) Commercial mobile radio service providers shall not file tariffs for international and interstate service to their customers, interstate access service, or international and interstate operator service. Sections 1.771 through 1.773 and part 61 of this chapter are not applicable to international and interstate services provided by commercial mobile radio service providers. Commercial mobile radio service providers shall cancel tariffs for international and interstate service to their customers, interstate access service, and international and interstate operator service.

(d) Except as specified as in paragraphs (d)(1) and (2), nothing in this section shall be construed to modify the Commission's rules and policies on the provision of international service under part 63 of this chapter.

(1) Notwithstanding the provisions of §63.21(c) of this chapter, a commercial mobile radio service provider is not required to comply with §42.10 of this chapter.

(2) A commercial mobile radio service (CMRS) provider that is classified as dominant under §63.10 of this chapter due to an affiliation with a foreign carrier is required to comply with §42.11 of this chapter if the affiliated foreign carrier collects settlement payments from U.S. carriers for terminating U.S. international switched traffic at the foreign end of the route. Such a CMRS provider is not required to comply with §42.11, however, if it provides service on the affiliated route solely through the resale of an unaffiliated facilities-based provider's international switched services.

(3) For purposes of paragraphs (d)(1) and (2) of this section, *affiliated* and *foreign carrier* are defined in §63.09 of this Chapter.

(e) For obligations of commercial mobile radio service providers to provide local number portability, see § 52.1 of this chapter.

[59 FR 18495, Apr. 19, 1994, as amended at 61 FR 38637, July 25, 1996; 63 FR 43040, Aug. 11, 1998; 65 FR 19685, Apr. 12, 2000; 65 FR 24654, Apr. 27, 2000; 66 FR 16879, Mar. 28, 2001; 69 FR 77938, Dec. 29, 2004]

§ 20.18 911 Service.

(a) *Scope of section.* The following requirements are only applicable to CMRS providers, excluding mobile satellite service (MSS) operators, to the extent that they:

(1) Offer real-time, two way switched voice service that is interconnected with the public switched network; and

(2) Utilize an in-network switching facility that enables the provider to reuse frequencies and accomplish seamless hand-offs of subscriber calls. These requirements are applicable to entities that offer voice service to consumers by purchasing airtime or capacity at wholesale rates from CMRS licensees.

(b) *Basic 911 Service.* CMRS providers subject to this section must transmit all wireless 911 calls without respect to their call validation process to a Public Safety Answering Point, or, where no Public Safety Answering Point has been designated, to a designated statewide default answering point or appropriate local emergency authority pursuant to § 64.3001 of this chapter, provided that ''all wireless 911 calls'' is defined as ''any call initiated by a wireless user dialing 911 on a phone using a compliant radio frequency protocol of the serving carrier.''

(c) *TTY Access to 911 Services.* CMRS providers subject to this section must be capable of transmitting 911 calls from individuals with speech or hearing disabilities through means other than mobile radio handsets, *e.g.*, through the use of Text Telephone Devices (TTY).

(d) *Phase I enhanced 911 services.* (1) As of April 1, 1998, or within six months of a request by the designated Public Safety Answering Point as set forth in paragraph (j) of this section, whichever is later, licensees subject to this section must provide the telephone number of the originator of a 911 call and the location of the cell site or base station receiving a 911 call from any mobile handset accessing their systems to the designated Public Safety Answering Point through the use of ANI and Pseudo-ANI.

(2) When the directory number of the handset used to originate a 911 call is not available to the serving carrier, such carrier's obligations under the paragraph (d)(1) of this section extend only to delivering 911 calls and available call party information, including that prescribed in paragraph (l) of this section, to the designated Public Safety Answering Point.

NOTE TO PARAGRAPH (d): With respect to 911 calls accessing their systems through the use of TTYs, licensees subject to this section must comply with the requirements in paragraphs (d)(1) and (d)(2) of this section, as to calls made using a digital wireless system, as of October 1, 1998.

(e) *Phase II enhanced 911 service.* Licensees subject to this section must provide to the designated Public Safety Answering Point Phase II enhanced 911 service, *i.e.*, the location of all 911 calls by longitude and latitude in conformance with Phase II accuracy requirements (*see* paragraph (h) of this section).

(f) *Phase-in for network-based location technologies.* Licensees subject to this section who employ a network-based location technology shall provide Phase II 911 enhanced service to at least 50 percent of their coverage area or 50 percent of their population beginning October 1, 2001, or within 6 months of a PSAP request, whichever is later; and to 100 percent of their coverage area or 100 percent of their population within 18 months of such a request or by October 1, 2002, whichever is later.

(g) *Phase-in for handset-based location technologies.* Licensees subject to this section who employ a handset-based location technology may phase in deployment of Phase II enhanced 911 service, subject to the following requirements:

(1) Without respect to any PSAP request for deployment of Phase II 911 enhanced service, the licensee shall:

(i) Begin selling and activating location-capable handsets no later than October 1, 2001;

(ii) Ensure that at least 25 percent of all new handsets activated are location-capable no later than December 31, 2001;

(iii) Ensure that at least 50 percent of all new handsets activated are location-capable no later than June 30, 2002; and

(iv) Ensure that 100 percent of all new digital handsets activated are location-capable no later than December 31, 2002, and thereafter.

(v) By December 31, 2005, achieve 95 percent penetration of location-capable handsets among its subscribers.

(vi) Licensees that meet the enhanced 911 compliance obligations through GPS-enabled handsets and have commercial agreements with resellers will not be required to include the resellers' handset counts in their compliance percentages.

(2) Once a PSAP request is received, the licensee shall, in the area served by the PSAP, within six months or by October 1, 2001, whichever is later:

(i) Install any hardware and/or software in the CMRS network and/or other fixed infrastructure, as needed, to enable the provision of Phase II enhanced 911 service; and

(ii) Begin delivering Phase II enhanced 911 service to the PSAP.

(3) For all 911 calls from portable or mobile phones that do not contain the hardware and/or software needed to enable the licensee to provide Phase II enhanced 911 service, the licensee shall, after a PSAP request is received, support, in the area served by the PSAP, Phase I location for 911 calls or other available best practice method of providing the location of the portable or mobile phone to the PSAP.

(4) Licensees employing handset-based location technologies shall ensure that location-capable portable or mobile phones shall conform to industry interoperability standards designed to enable the location of such phones by multiple licensees.

(h) *Phase II accuracy*. Licensees subject to this section shall comply with the following standards for Phase II location accuracy and reliability, to be tested and measured either at the county or at the PSAP service area geographic level, based on outdoor measurements only:

(1) *Network-based technologies:*

(i) 100 meters for 67 percent of calls, consistent with the following benchmarks:

(A) One year from January 18, 2011, carriers shall comply with this standard in 60 percent of counties or PSAP service areas. These counties or PSAP service areas must cover at least 70 percent of the population covered by the carrier across its entire network. Compliance will be measured on a per-county or per-PSAP basis using, at the carrier's election, either

(*1*) Network-based accuracy data, or

(*2*) Blended reporting as provided in paragraph (h)(1)(iv) of this section.

(B) Three years from January 18, 2011, carriers shall comply with this standard in 70 percent of counties or PSAP service areas. These counties or PSAP service areas must cover at least 80 percent of the population covered by the carrier across its entire network. Compliance will be measured on a per-county or per-PSAP basis using, at the carrier's election, either

(*1*) Network-based accuracy data, or

(*2*) Blended reporting as provided in paragraph (h)(1)(iv) of this section.

(C) Five years from January 18, 2011, carriers shall comply with this standard in 100% of counties or PSAP service areas covered by the carrier. Compliance will be measured on a per-county or per-PSAP basis, using, at the carrier's election, either

(*1*) Network-based accuracy data,

(*2*) Blended reporting as provided in paragraph (h)(1)(iv) of this section, or

(*3*) Handset-based accuracy data as provided in paragraph (h)(1)(v) of this section.

(ii) 300 meters for 90 percent of calls, consistent with the following benchmarks:

(A) Three years from January 18, 2011, carriers shall comply with this standard in 60 percent of counties or PSAP service areas. These counties or PSAP service areas must cover at least 70 percent of the population covered by the carrier across its entire network. Compliance will be measured on a per-county or per-PSAP basis using, at the carrier's election, either

(*1*) Network-based accuracy data, or

(*2*) Blended reporting as provided in paragraph (h)(1)(iv) of this section.

(B) Five years from January 18, 2011, carriers shall comply in 70 percent of counties or PSAP service areas. These counties or PSAP service areas must cover at least 80 percent of the population covered by the carrier across its entire network. Compliance will be measured on a per-county or per-PSAP basis using, at the carrier's election, either

(*1*) Network-based accuracy data, or

(*2*) Blended reporting as provided in paragraph (h)(1)(iv) of this section.

(C) Eight years from January 18, 2011, carriers shall comply in 85 percent of counties or PSAP service areas. Compliance will be measured on a per-county or per-PSAP basis using, at the carrier's election, either

(*1*) Network-based accuracy data,

(*2*) Blended reporting as provided in paragraph (h)(1)(iv) of this section, or

(*3*) Handset-based accuracy data as provided in paragraph (h)(1)(v) of this section.

(iii) County-level or PSAP-level location accuracy standards for network-based technologies will be applicable to those counties or PSAP service areas, on an individual basis, in which a network-based carrier has deployed Phase II in at least one cell site located within a county's or PSAP service area's boundary. Compliance with the requirements of paragraph (h)(1)(i) and paragraph (h)(1)(ii) of this section shall be measured and reported independently.

(iv) Accuracy data from both network-based solutions and handset-based solutions may be blended to measure compliance with the accuracy requirements of paragraph (h)(1)(i)(A) through (C) and paragraph (h)(1)(ii)(A) through (C) of this section. Such blending shall be based on weighting accuracy data in the ratio of assisted GPS (''A–GPS'') handsets to non-A–GPS handsets in the carrier's subscriber base. The weighting ratio shall be applied to the accuracy data from each solution and measured against the network-based accuracy requirements of paragraph (h)(1) of this section.

(v) A carrier may rely solely on handset-based accuracy data in any county or PSAP service area if at least 85 percent of its subscribers, networkwide, use A–GPS handsets, or if it offers A–GPS handsets to subscribers in that county or PSAP service area at no cost to the subscriber.

(vi) A carrier may exclude from compliance particular counties, or portions of counties, where triangulation is not technically possible, such as locations where at least three cell sites are not sufficiently visible to a handset. Carriers must file a list of the specific counties or portions of counties where they are utilizing this exclusion within 90 days following approval from the Office of Management and Budget for the related information collection. This list must be submitted electronically into PS Docket No. 07–114, and copies must be sent to the National Emergency Number Association, the Association of Public-Safety Communications Officials-International, and the National Association of State 9–1–1 Administrators. Further, carriers must submit in the same manner any changes to their exclusion lists within thirty days of discovering such changes. This exclusion will sunset on [8 years after effective date].

(2) *Handset-based technologies:*

(i) Two years from January 18, 2011, 50 meters for 67 percent of calls, and 150 meters for 80 percent of calls, on a per-county or per-PSAP basis. However, a carrier may exclude up to 15 percent of counties or PSAP service areas from the 150 meter requirement based upon heavy forestation that limits handset-based technology accuracy in those counties or PSAP service areas.

(ii) Eight years from January 18, 2011, 50 meters for 67 percent of calls, and 150 meters for 90 percent of calls, on a per-county or per-PSAP basis. However, a carrier may exclude up to 15 percent of counties or PSAP service areas from the 150 meter requirement based upon heavy forestation that limits handset-based technology accuracy in those counties or PSAP service areas.

(iii) Carriers must file a list of the specific counties or PSAP service areas where they are utilizing the exclusion for heavy forestation within 90 days following approval from the Office of Management and Budget for the related information collection. This list must be submitted electronically into PS Docket No. 07–114, and copies must be sent to the National Emergency

Number Association, the Association of Public-Safety Communications Officials-International, and the National Association of State 9–1–1 Administrators. Further, carriers must submit in the same manner any changes to their exclusion lists within thirty days of discovering such changes.

(iv) Providers of new CMRS networks that meet the definition of covered CMRS providers under paragraph (a) of this section must comply with the requirements of paragraphs (h)(2)(i) through (iii) of this section. For this purpose, a ''new CMRS network'' is a CMRS network that is newly deployed subsequent to the effective date of the Third Report and Order in PS Docket No. 07–114 and that is not an expansion or upgrade of an existing CMRS network.

(3) *Latency (Time to First Fix).* For purposes of measuring compliance with the location accuracy standards of this paragraph, a call will be deemed to satisfy the standard only if it provides the specified degree of location accuracy within a maximum latency period of 30 seconds, as measured from the time the user initiates the 911 call to the time the location fix appears at the location information center: Provided, however, that the CMRS provider may elect not to include for purposes of measuring compliance therewith any calls lasting less than 30 seconds.

(i) *Indoor location accuracy for 911 and testing requirements*—(1) *Definitions:* The terms as used in this section have the following meaning:

(i) *Dispatchable location:* A location delivered to the PSAP by the CMRS provider with a 911 call that consists of the street address of the calling party, plus additional information such as suite, apartment or similar information necessary to adequately identify the location of the calling party. The street address of the calling party must be validated and, to the extent possible, corroborated against other location information prior to delivery of dispatchable location information by the CMRS provider to the PSAP.

(ii) *Media Access Control (MAC) Address.* A location identifier of a Wi-Fi access point.

(iii) *National Emergency Address Database (NEAD).* A database that utilizes MAC address information to identify a dispatchable location for nearby wireless devices within the CMRS provider's coverage footprint.

(iv) *Nationwide CMRS provider:* A CMRS provider whose service extends to a majority of the population and land area of the United States.

(v) *Non-nationwide CMRS provider:* Any CMRS provider other than a nationwide CMRS provider.

(vi) *Test Cities.* The six cities (San Francisco, Chicago, Atlanta, Denver/Front Range, Philadelphia, and Manhattan Borough) and surrounding geographic areas that correspond to the six geographic regions specified by the February 7, 2014 ATIS Document, ''Considerations in Selecting Indoor Test Regions,'' for testing of indoor location technologies.

(2) *Indoor location accuracy standards:* CMRS providers subject to this section shall meet the following requirements:

(i) *Horizontal location.* (A) Nationwide CMRS providers shall provide; dispatchable location, or ; x/y location within 50 meters, for the following percentages of wireless 911 calls within the following timeframes, measured from the effective date of the adoption of this rule:

(*1*) Within 2 years: 40 percent of all wireless 911 calls.

(*2*) Within 3 years: 50 percent of all wireless 911 calls.

(*3*) Within 5 years: 70 percent of all wireless 911 calls.

(*4*) Within 6 years: 80 percent of all wireless 911 calls.

(B) Non-nationwide CMRS providers shall provide; dispatchable location or; x/y location within 50 meters, for the following percentages of wireless 911 calls within the following timeframes, measured from the effective date of the adoption of this rule:

(*1*) Within 2 years: 40 percent of all wireless 911 calls.

(*2*) Within 3 years: 50 percent of all wireless 911 calls.

(*3*) Within 5 years or within six months of deploying a commercially-operating VoLTE platform in their network, whichever is later: 70 percent of all wireless 911 calls.

(*4*) Within 6 years or within one year of deploying a commercially-operating VoLTE platform in their network,

whichever is later: 80 percent of all wireless 911 calls.

(ii) *Vertical location.* CMRS providers shall provide vertical location information with wireless 911 calls as described in this section within the following timeframes measured from the effective date of the adoption of this rule:

(A) *Within 3 years:* All CMRS providers shall make uncompensated barometric data available to PSAPs with respect to any 911 call placed from any handset that has the capability to deliver barometric sensor information.

(B) *Within 3 years:* Nationwide CMRS providers shall develop one or more z-axis accuracy metrics validated by an independently administered and transparent test bed process as described in paragraph (i)(3)(i) of this section, and shall submit the proposed metric or metrics, supported by a report of the results of such development and testing, to the Commission for approval.

(C) Within 6 years: In each of the top 25 CMAs, nationwide CMRS providers shall deploy either;) dispatchable location, or ; z-axis technology in compliance with any z-axis accuracy metric that has been approved by the Commission,

(*1*) In each CMA where dispatchable location is used: nationwide CMRS providers must ensure that the NEAD is populated with a sufficient number of total dispatchable location reference points to equal 25 percent of the CMA population.

(*2*) In each CMA where z-axis technology is used: nationwide CMRS providers must deploy z-axis technology to cover 80 percent of the CMA population.

(D) Within 8 years: In each of the top 50 CMAs, nationwide CMRS providers shall deploy either

(*1*) Dispatchable location or;

(*2*) Such z-axis technology in compliance with any z-axis accuracy metric that has been approved by the Commission.

(E) Non-nationwide CMRS providers that serve any of the top 25 or 50 CMAs will have an additional year to meet each of the benchmarks in paragraphs (i)(2)(ii)(C) and (D) of this section.

(iii) *Compliance.* Within 60 days after each benchmark date specified in paragraphs (i)(2)(i) and (ii) of this section, CMRS providers must certify that they are in compliance with the location accuracy requirements applicable to them as of that date. CMRS providers shall be presumed to be in compliance by certifying that they have complied with the test bed and live call data provisions described in paragraph (i)(3) of this section.

(A) All CMRS providers must certify that the indoor location technology (or technologies) used in their networks are deployed consistently with the manner in which they have been tested in the test bed. A CMRS provider must update certification whenever it introduces a new technology into its network or otherwise modifies its network, such that previous performance in the test bed would no longer be consistent with the technology's modified deployment.

(B) CMRS providers that provide quarterly reports of live call data in one or more of the six test cities specified in paragraph (i)(1)(vi) of this section must certify that their deployment of location technologies throughout their coverage area is consistent with their deployment of the same technologies in the areas that are used for live call data reporting.

(C) Non-nationwide CMRS providers that do not provide service or report quarterly live call data in any of the six test cities specified in paragraph (i)(1)(vi) of this section must certify that they have verified based on their own live call data that they are in compliance with the requirements of paragraphs (i)(2)(i)(B) and (ii) of this section.

(iv) *Enforcement.* PSAPs may seek Commission enforcement within their geographic service area of the requirements of paragraphs (i)(2)(i) and (ii) of this section, but only so long as they have implemented policies that are designed to obtain all location information made available by CMRS providers when initiating and delivering 911 calls to the PSAP. Prior to seeking Commission enforcement, a PSAP must provide the CMRS provider with [30] days written notice, and the CMRS provider shall have an opportunity to address the issue informally. If the issue has

not been addressed to the PSAP's satisfaction within 90 days, the PSAP may seek enforcement relief.

(3) *Indoor location accuracy testing and live call data reporting*—(i) *Indoor location accuracy test bed.* CMRS providers must establish the test bed described in this section within 12 months of the effective date of this rule. CMRS providers must validate technologies intended for indoor location, including dispatchable location technologies and technologies that deliver horizontal and/or vertical coordinates, through an independently administered and transparent test bed process, in order for such technologies to be presumed to comply with the location accuracy requirements of this paragraph. The test bed shall meet the following minimal requirements in order for the test results to be considered valid for compliance purposes:

(A) Include testing in representative indoor environments, including dense urban, urban, suburban and rural morphologies;

(B) Test for performance attributes including location accuracy (ground truth as measured in the test bed), latency (Time to First Fix), and reliability (yield); and

(C) Each test call (or equivalent) shall be independent from prior calls and accuracy will be based on the first location delivered after the call is initiated.

(D) In complying with paragraph (i)(3)(i)(B) of this section, CMRS providers shall measure yield separately for each individual indoor location morphology (dense urban, urban, suburban, and rural) in the test bed, and based upon the specific type of location technology that the provider intends to deploy in real-world areas represented by that particular morphology. CMRS providers must base the yield percentage based on the number of test calls that deliver a location in compliance with any applicable indoor location accuracy requirements, compared to the total number of calls that successfully connect to the testing network. CMRS providers may exclude test calls that are dropped or otherwise disconnected in 10 seconds or less from calculation of the yield percentage (both the denominator and numerator).

(ii) *Collection and reporting of aggregate live 911 call location data.* CMRS providers providing service in any of the Test Cities or portions thereof must collect and report aggregate data on the location technologies used for live 911 calls in those areas.

(A) CMRS providers subject to this section shall identify and collect information regarding the location technology or technologies used for each 911 call in the reporting area during the calling period.

(B) CMRS providers subject to this section shall report Test City call location data on a quarterly basis to the Commission, the National Emergency Number Association, the Association of Public Safety Communications Officials, and the National Association of State 911 Administrators, with the first report due 18 months from the effective date of rules adopted in this proceeding.

(C) CMRS providers subject to this section shall also provide quarterly live call data on a more granular basis that allows evaluation of the performance of individual location technologies within different morphologies (*e.g.*, dense urban, urban, suburban, rural). To the extent available, live call data for all CMRS providers shall delineate based on a per technology basis accumulated and so identified for:

(*1*) Each of the ATIS ESIF morphologies;

(*2*) On a reasonable community level basis; or

(*3*) By census block. This more granular data will be used for evaluation and not for compliance purposes.

(D) Non-nationwide CMRS providers that operate in a single Test City need only report live 911 call data from that city or portion thereof that they cover. Non-nationwide CMRS providers that operate in more than one Test City must report live 911 call data only in half of the regions (as selected by the provider). In the event a non-nationwide CMRS provider begins coverage in a Test City it previously did not serve, it must update its certification pursuant to paragraph (i)(2)(iii)(C) of this section to reflect this change in its network and begin reporting data from

the appropriate areas. All non-nationwide CMRS providers must report their Test City live call data every 6 months, beginning 18 months from the effective date of rules adopted in this proceeding.

(E) Non-nationwide CMRS providers that do not provide coverage in any of the Test Cities can satisfy the requirement of paragraph (i)(3)(ii) of this section by collecting and reporting data based on the largest county within its footprint. In addition, where a non-nationwide CMRS provider serves more than one of the ATIS ESIF morphologies, it must include a sufficient number of representative counties to cover each morphology.

(iii) *Data retention.* CMRS providers shall retain testing and live call data gathered pursuant to this section for a period of 2 years.

(4) *Submission of plans and reports.* The following reporting and certification obligations apply to all CMRS providers subject to this section, which may be filed electronically in PS Docket No. 07–114:

(i) *Initial implementation plan.* No later than 18 months from the effective date of the adoption of this rule, nationwide CMRS providers shall report to the Commission on their plans for meeting the indoor location accuracy requirements of paragraph (i)(2) of this section. Non-nationwide CMRS providers will have an additional 6 months to submit their implementation plans.

(ii) *Progress reports.* No later than 18 months from the effective date of the adoption of this rule, each CMRS provider shall file a progress report on implementation of indoor location accuracy requirements. Non-nationwide CMRS providers will have an additional 6 months to submit their progress reports. All CMRS providers shall provide an additional progress report no later than 36 months from the effective date of the adoption of this rule. The 36-month reports shall indicate what progress the provider has made consistent with its implementation plan, and the nationwide CMRS providers shall include an assessment of their deployment of dispatchable location solutions. For any CMRS provider participating in the development of the NEAD database, this progress report must include detail as to the implementation of the NEAD database described in paragraphs (i)(4)(iii) and (iv) of this section.

(iii) *NEAD privacy and security plan.* Prior to activation of the NEAD but no later than 18 months from the effective date of the adoption of this rule, the nationwide CMRS providers shall file with the Commission and request approval for a security and privacy plan for the administration and operation of the NEAD. The plan must include the identity of an administrator for the NEAD, who will serve as a point of contact for the Commission and shall be accountable for the effectiveness of the security, privacy, and resiliency measures.

(iv) *NEAD use certification.* Prior to use of the NEAD or any information contained therein to meet such requirements, CMRS providers must certify that they will not use the NEAD or associated data for any non-911 purpose, except as otherwise required by law.

(j) *Confidence and uncertainty data.* (1) Except as provided in paragraphs (j)(2)–(3) of this section, CMRS providers subject to this section shall provide for all wireless 911 calls, whether from outdoor or indoor locations, x- and y-axis (latitude, longitude) confidence and uncertainty information (C/U data) on a per-call basis upon the request of a PSAP. The data shall specify

(i) The caller's location with a uniform confidence level of 90 percent, and;

(ii) The radius in meters from the reported position at that same confidence level. All entities responsible for transporting confidence and uncertainty between CMRS providers and PSAPs, including LECs, CLECs, owners of E911 networks, and emergency service providers, must enable the transmission of confidence and uncertainty data provided by CMRS providers to the requesting PSAP.

(2) Upon meeting the 3-year timeframe pursuant to paragraph (i)(2)(i) of this section, CMRS providers shall provide with wireless 911 calls that have a dispatchable location the C/U data for the x- and y-axis (latitude, longitude) required under paragraph (j)(1) of this section.

(3) Upon meeting the 6-year timeframe pursuant to paragraph (i)(2)(i) of this section, CMRS providers shall provide with wireless 911 calls that have a dispatchable location the C/U data for the x- and y-axis (latitude, longitude) required under paragraph (j)(1) of this section.

(k) *Provision of live 911 call data for PSAPs.* Notwithstanding other 911 call data collection and reporting requirements in paragraph (i) of this section, CMRS providers must record information on all live 911 calls, including, but not limited to, the positioning source method used to provide a location fix associated with the call. CMRS providers must also record the confidence and uncertainty data that they provide pursuant to paragraphs (j)(1) through (3) of this section. This information must be made available to PSAPs upon request, and shall be retained for a period of two years.

(l) *Reports on Phase II plans.* Licensees subject to this section shall report to the Commission their plans for implementing Phase II enhanced 911 service, including the location-determination technology they plan to employ and the procedure they intend to use to verify conformance with the Phase II accuracy requirements by November 9, 2000. Licensees are required to update these plans within thirty days of the adoption of any change. These reports and updates may be filed electronically in a manner to be designated by the Commission.

(m) *Conditions for enhanced 911 services*—(1) *Generally.* The requirements set forth in paragraphs (d) through (h)(2) and in paragraph (j) of this section shall be applicable only to the extent that the administrator of the applicable designated PSAP has requested the services required under those paragraphs and such PSAP is capable of receiving and utilizing the requested data elements and has a mechanism for recovering the PSAP's costs associated with them.

(2) *Commencement of six-month period.* (i) Except as provided in paragraph (ii) of this section, for purposes of commencing the six-month period for carrier implementation specified in paragraphs (d), (f) and (g) of this section, a PSAP will be deemed capable of receiving and utilizing the data elements associated with the service requested, if it can demonstrate that it has:

(A) Ordered the necessary equipment and has commitments from suppliers to have it installed and operational within such six-month period; and

(B) Made a timely request to the appropriate local exchange carrier for the necessary trunking, upgrades, and other facilities.

(ii) For purposes of commencing the six-month period for carrier implementation specified in paragraphs (f) and (g) of this section, a PSAP that is Phase I-capable using a Non-Call Path Associated Signaling (NCAS) technology will be deemed capable of receiving and utilizing the data elements associated with Phase II service if it can demonstrate that it has made a timely request to the appropriate local exchange carrier for the ALI database upgrade necessary to receive the Phase II information.

(3) *Tolling of six-month period.* Where a wireless carrier has served a written request for documentation on the PSAP within 15 days of receiving the PSAP's request for Phase I or Phase II enhanced 911 service, and the PSAP fails to respond to such request within 15 days of such service, the six-month period for carrier implementation specified in paragraphs (d), (f), and (g) of this section will be tolled until the PSAP provides the carrier with such documentation.

(4) *Carrier certification regarding PSAP readiness issues.* At the end of the six-month period for carrier implementation specified in paragraphs (d), (f) and (g) of this section, a wireless carrier that believes that the PSAP is not capable of receiving and utilizing the data elements associated with the service requested may file a certification with the Commission. Upon filing and service of such certification, the carrier may suspend further implementation efforts, except as provided in paragraph (j)(4)(x) of this section.

(i) As a prerequisite to filing such certification, no later than 21 days prior to such filing, the wireless carrier must notify the affected PSAP, in writing, of its intent to file such certification. Any response that the carrier

receives from the PSAP must be included with the carrier's certification filing.

(ii) The certification process shall be subject to the procedural requirements set forth in sections 1.45 and 1.47 of this chapter.

(iii) The certification must be in the form of an affidavit signed by a director or officer of the carrier, documenting:

(A) The basis for the carrier's determination that the PSAP will not be ready;

(B) Each of the specific steps the carrier has taken to provide the E911 service requested;

(C) The reasons why further implementation efforts cannot be made until the PSAP becomes capable of receiving and utilizing the data elements associated with the E911 service requested; and

(D) The specific steps that remain to be completed by the wireless carrier and, to the extent known, the PSAP or other parties before the carrier can provide the E911 service requested.

(iv) All affidavits must be correct. The carrier must ensure that its affidavit is correct, and the certifying director or officer has the duty to personally determine that the affidavit is correct.

(v) A carrier may not engage in a practice of filing inadequate or incomplete certifications for the purpose of delaying its responsibilities.

(vi) To be eligible to make a certification, the wireless carrier must have completed all necessary steps toward E911 implementation that are not dependent on PSAP readiness.

(vii) A copy of the certification must be served on the PSAP in accordance with §1.47 of this chapter. The PSAP may challenge in writing the accuracy of the carrier's certification and shall serve a copy of such challenge on the carrier. *See* §§1.45 and 1.47 and §§1.720 through 1.736 of this chapter.

(viii) If a wireless carrier's certification is facially inadequate, the six-month implementation period specified in paragraphs (d), (f) and (g) of this section will not be suspended as provided for in paragraph (j)(4) of this section.

(ix) If a wireless carrier's certification is inaccurate, the wireless carrier will be liable for noncompliance as if the certification had not been filed.

(x) A carrier that files a certification under paragraph (j)(4) of this section shall have 90 days from receipt of the PSAP's written notice that it is capable of receiving and utilizing the data elements associated with the service requested to provide such service in accordance with the requirements of paragraphs (d) through (h) of this section.

(5) *Modification of deadlines by agreement.* Nothing in this section shall prevent Public Safety Answering Points and carriers from establishing, by mutual consent, deadlines different from those imposed for carrier and PSAP compliance in paragraphs (d), (f), and (g)(2) of this section.

(n) *Dispatch service.* A service provider covered by this section who offers dispatch service to customers may meet the requirements of this section with respect to customers who utilize dispatch service either by complying with the requirements set forth in paragraphs (b) through (e) of this section, or by routing the customer's emergency calls through a dispatcher. If the service provider chooses the latter alternative, it must make every reasonable effort to explicitly notify its current and potential dispatch customers and their users that they are not able to directly reach a PSAP by calling 911 and that, in the event of an emergency, the dispatcher should be contacted.

(o) *Non-service-initialized handsets.* (1) Licensees subject to this section that donate a non-service-initialized handset for purposes of providing access to 911 services are required to:

(i) Program each handset with 911 plus the decimal representation of the seven least significant digits of the Electronic Serial Number, International Mobile Equipment Identifier, or any other identifier unique to that handset;

(ii) Affix to each handset a label which is designed to withstand the length of service expected for a non-service-initialized phone, and which notifies the user that the handset can only be used to dial 911, that the 911 operator will not be able to call the user back, and that the user should convey

the exact location of the emergency as soon as possible; and

(iii) Institute a public education program to provide the users of such handsets with information regarding the limitations of non-service-initialized handsets.

(2) Manufacturers of 911-only handsets that are manufactured on or after May 3, 2004, are required to:

(i) Program each handset with 911 plus the decimal representation of the seven least significant digits of the Electronic Serial Number, International Mobile Equipment Identifier, or any other identifier unique to that handset;

(ii) Affix to each handset a label which is designed to withstand the length of service expected for a non-service-initialized phone, and which notifies the user that the handset can only be used to dial 911, that the 911 operator will not be able to call the user back, and that the user should convey the exact location of the emergency as soon as possible; and

(iii) Institute a public education program to provide the users of such handsets with information regarding the limitations of 911-only handsets.

(3) *Definitions.* The following definitions apply for purposes of this paragraph.

(i) *Non-service-initialized handset.* A handset for which there is no valid service contract with a provider of the services enumerated in paragraph (a) of this section.

(ii) *911-only handset.* A non-service-initialized handset that is manufactured with the capability of dialing 911 only and that cannot receive incoming calls.

(p) *Reseller obligation.* (1) Beginning December 31, 2006, resellers have an obligation, independent of the underlying licensee, to provide access to basic and enhanced 911 service to the extent that the underlying licensee of the facilities the reseller uses to provide access to the public switched network complies with sections 20.18(d)–(g).

(2) Resellers have an independent obligation to ensure that all handsets or other devices offered to their customers for voice communications and sold after December 31, 2006 are capable of transmitting enhanced 911 information to the appropriate PSAP, in accordance with the accuracy requirements of section 20.18(i).

(q) *Text-to-911 Requirements*—(1) *Covered Text Provider:* Notwithstanding any other provisions in this section, for purposes of this paragraph (n) of this section, a ''covered text provider'' includes all CMRS providers as well as all providers of interconnected text messaging services that enable consumers to send text messages to and receive text messages from all or substantially all text-capable U.S. telephone numbers, including through the use of applications downloaded or otherwise installed on mobile phones.

(2) *Automatic Bounce-back Message:* an automatic text message delivered to a consumer by a covered text provider in response to the consumer's attempt to send a text message to 911 when the consumer is located in an area where text-to-911 service is unavailable or the covered text provider does not support text-to-911 service generally or in the area where the consumer is located at the time.

(3) No later than September 30, 2013, all covered text providers shall provide an automatic bounce-back message under the following circumstances:

(i) A consumer attempts to send a text message to a Public Safety Answering Point (PSAP) by means of the three-digit short code ''911''; and

(ii) The covered text provider cannot deliver the text because the consumer is located in an area where:

(A) Text-to-911 service is unavailable; or

(B) The covered text provider does not support text-to-911 service at the time.

(4)(i) A covered text provider is not required to provide an automatic bounce-back message when:

(A) Transmission of the text message is not controlled by the provider;

(B) A consumer is attempting to text 911, through a text messaging application that requires CMRS service, from a non-service initialized handset;

(C) When the text-to-911 message cannot be delivered to a PSAP due to failure in the PSAP network that has not been reported to the provider; or

(D) A consumer is attempting to text 911 through a device that is incapable

of sending texts via three digit short codes, provided the software for the device cannot be upgraded over the air to allow text-to-911.

(ii) The provider of a preinstalled or downloadable interconnected text application is considered to have ''control'' over transmission of text messages for purposes of paragraph (n)(4)(i)(A) of this section. However, if a user or a third party modifies or manipulates the application after it is installed or downloaded so that it no longer supports bounce-back messaging, the application provider will be presumed not to have control.

(5) The automatic bounce-back message shall, at a minimum, inform the consumer that text-to-911 service is not available and advise the consumer or texting program user to use another means to contact emergency services.

(6) Covered text providers that support text-to-911 must provide a mechanism to allow PSAPs that accept text-to-911 to request temporary suspension of text-to-911 service for any reason, including, but not limited to, network congestion, call taker overload, PSAP failure, or security breach, and to request resumption of text-to-911 service after such temporary suspension. During any period of suspension of text-to-911 service, the covered text provider must provide an automatic bounce-back message to any consumer attempting to text to 911 in the area subject to the temporary suspension.

(7) Notwithstanding any other provisions in this section, when a consumer is roaming on a covered text provider's host network pursuant to §20.12, the covered text provider operating the consumer's home network shall have the obligation to originate an automatic bounce-back message to such consumer when the consumer is located in an area where text-to-911 service is unavailable, or the home provider does not support text-to-911 service in that area at the time. The host provider shall not impede the consumer's 911 text message to the home provider and/or any automatic bounce-back message originated by the home provider to the consumer roaming on the host network.

(8) A software application provider that transmits text messages directly into the SMS network of the consumer's underlying CMRS provider satisfies the obligations of paragraph (n)(3) of this section provided it does not prevent or inhibit delivery of the CMRS provider's automatic bounce-back message to the consumer.

(9) *911 text message.* A 911 text message is a message, consisting of text characters, sent to the short code ''911'' and intended to be delivered to a PSAP by a covered text provider, regardless of the text messaging platform used.

(10) *Delivery of 911 text messages.* (i) No later than December 31, 2014, all covered text providers must have the capability to route a 911 text message to a PSAP. In complying with this requirement, covered text providers must obtain location information sufficient to route text messages to the same PSAP to which a 911 voice call would be routed, unless the responsible local or state entity designates a different PSAP to receive 911 text messages and informs the covered text provider of that change. All covered text providers using device-based location information that requires consumer activation must clearly inform consumers that they must grant permission for the text messaging application to access the wireless device's location information in order to enable text-to-911. If a consumer does not permit this access, the covered text provider's text application must provide an automated bounce-back message as set forth in paragraph (n)(3) of this section.

(ii) Covered text providers must begin routing all 911 text messages to a PSAP by June 30, 2015, or within six months of the PSAP's valid request for text-to-911 service, whichever is later, unless an alternate timeframe is agreed to by both the PSAP and the covered text provider. The covered text provider must notify the Commission of the dates and terms of the alternate timeframe within 30 days of the parties' agreement.

(iii) *Valid Request* means that:

(A) The requesting PSAP is, and certifies that it is, technically ready to receive 911 text messages in the format requested;

(B) The appropriate local or state 911 service governing authority has specifically authorized the PSAP to accept and, by extension, the covered text provider to provide, text-to-911 service; and

(C) The requesting PSAP has provided notification to the covered text provider that it meets the foregoing requirements. Registration by the PSAP in a database made available by the Commission in accordance with requirements established in connection therewith, or any other written notification reasonably acceptable to the covered text provider, shall constitute sufficient notification for purposes of this paragraph.

(iv) The requirements set forth in paragraphs (n)(10)(i) through (iii) of this section do not apply to in-flight text messaging providers, MSS providers, or IP Relay service providers, or to 911 text messages that originate from Wi-Fi only locations or that are transmitted from devices that cannot access the CMRS network.

(11) *Access to SMS networks for 911 text messages.* To the extent that CMRS providers offer Short Message Service (SMS), they shall allow access by any other covered text provider to the capabilities necessary for transmission of 911 text messages originating on such other covered text providers' application services. Covered text providers using the CMRS network to deliver 911 text messages must clearly inform consumers that, absent an SMS plan with the consumer's underlying CMRS provider, the covered text provider may be unable to deliver 911 text messages. CMRS providers may migrate to other technologies and need not retain SMS networks solely for other covered text providers' 911 use, but must notify the affected covered text providers not less than 90 days before the migration is to occur.

[63 FR 2637, Jan. 16, 1998]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 20.18, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.fdsys.gov.

EFFECTIVE DATE NOTES: 1. At 68 FR 2918, Jan. 22, 2003, in § 20.18, paragraph (j) was revised. Paragraphs (j)(4) and (5) contain information collection and recordkeeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

2. At 72 FR 27708, May 16, 2007, in § 20.18, paragraph (a) was revised. The paragraph contains information collection and recordkeeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

§ 20.19 Hearing aid-compatible mobile handsets.

(a) Scope of section; definitions. (1) The hearing aid compatibility requirements of this section apply to providers of digital CMRS in the United States to the extent that they offer real-time, two-way switched voice or data service that is interconnected with the public switched network and utilizes an in-network switching facility that enables the provider to reuse frequencies and accomplish seamless hand-offs of subscriber calls, and such service is provided over frequencies in the 698 MHz to 6 GHz bands.

(2) The requirements of this section also apply to the manufacturers of the wireless handsets that are used in delivery of the services specified in paragraph (a)(1) of this section.

(3) *Definitions.* For purposes of this section:

(i) *Handset* refers to a device used in delivery of the services specified in paragraph (a)(1) of this section that contains a built-in speaker and is typically held to the ear in any of its ordinary uses.

(ii) *Manufacturer* refers to a wireless handset manufacturer to which the requirements of this section apply.

(iii) *Model* refers to a wireless handset device that a manufacturer has designated as a distinct device model, consistent with its own marketing practices. However, if a manufacturer assigns different model device designations solely to distinguish units sold to different carriers, or to signify other distinctions that do not relate to either form, features, or capabilities, such designations shall not count as distinct models for purposes of this section.

(iv) *Service provider* refers to a provider of digital CMRS to which the requirements of this section apply.

(v) *Tier I carrier* refers to a CMRS provider that offers such service nationwide.

(b) *Hearing aid compatibility; technical standards*—(1) *For radio frequency interference.* A wireless handset submitted for equipment certification or for a permissive change relating to hearing aid compatibility must meet, at a minimum, the M3 rating associated with the technical standard set forth in either the standard document ''American National Standard Methods of Measurement of Compatibility Between Wireless Communication Devices and Hearing Aids,'' ANSI C63.19–2007 or ANSI C63.19–2011. Any grants of certification issued before January 1, 2010, under previous versions of ANSI C63.19 remain valid for hearing aid compatibility purposes.

(2) *For inductive coupling.* A wireless handset submitted for equipment certification or for a permissive change relating to hearing aid compatibility must meet, at a minimum, the T3 rating associated with the technical standard set forth in either the standard document ''American National Standard Methods of Measurement of Compatibility Between Wireless Communication Devices and Hearing Aids,'' ANSI C63.19–2007 or ANSI C63.19–2011. Any grants of certification issued before January 1, 2010, under previous versions of ANSI C63.19 remain valid for hearing aid compatibility purposes.

(3) *Handsets operating over multiple frequency bands or air interfaces.* (i) Except as provided in paragraph (b)(3)(ii) of this section, a wireless handset used for digital CMRS only over the 698 MHz to 6 GHz frequency bands is hearing aid-compatible with regard to radio frequency interference or inductive coupling if it meets the applicable technical standard set forth in paragraph (b)(1) or (b)(2) of this section for all frequency bands and air interfaces over which it operates, and the handset has been certified as compliant with the test requirements for the applicable standard pursuant to §2.1033(d) of this chapter. A wireless handset that incorporates operations outside the 698 MHz to 6 GHz frequency bands is hearing aid-compatible if the handset otherwise satisfies the requirements of this paragraph.

(ii) A handset that is introduced by the manufacturer prior to July 17, 2013, and that does not meet the requirements for hearing aid compatibility under paragraph (b)(3)(i) of this section, is hearing aid-compatible for radio frequency interference or inductive coupling only with respect to those frequency bands and air interfaces for which technical standards are stated in ANSI C63.19–2007 if it meets, at a minimum, an M3 rating (for radio frequency interference) or a T3 rating (for inductive coupling) under ANSI C63.19–2007 for all such frequency bands and air interfaces over which it operates, and the handset has been certified as compliant with the test requirements for the applicable standard pursuant to §2.1033(d) of this chapter.

(4) All factual questions of whether a wireless handset meets the technical standard(s) of this paragraph shall be referred for resolution to the Chief, Office of Engineering and Technology, Federal Communications Commission, 445 12th Street, SW., Washington, DC 20554.

(c) Phase-in of requirements relating to radio frequency interference. The following applies to each manufacturer and service provider that offers wireless handsets used in the delivery of the services specified in paragraph (a) of this section and that does not fall within the *de minimis* exception set forth in paragraph (e) of this section. However, prior to July 17, 2014 for manufacturers and Tier I carriers and October 17, 2014 for service providers other than Tier I carriers, the requirements of this section do not apply to handset operations over frequency bands and air interfaces for which technical standards are not stated in ANSI C63.19–2007.

(1) *Manufacturers*—(i) *Number of hearing aid-compatible handset models offered.* For each digital air interface for which it offers wireless handsets in the United States or imported for use in the United States, each manufacturer of wireless handsets must offer handset models that comply with paragraph (b)(1) of this section. Prior to September 8, 2011, handset models for purposes of this paragraph include only models offered to service providers in the United States.

(A) If it offers four to six models, at least two of those handset models must comply with the requirements set forth in paragraph (b)(1) of this section.

(B) If it offers more than six models, at least one-third of those handset models (rounded down to the nearest whole number) must comply with the requirements set forth in paragraph (b)(1) of this section.

(ii) *Refresh requirement.* Beginning in calendar year 2009, and for each year thereafter that it elects to produce a new model, each manufacturer that offers any new model for a particular air interface during the calendar year must ''refresh'' its offerings of hearing aid-compatible handset models by offering a mix of new and existing models that comply with paragraph (b)(1) of this section according to the following requirements:

(A) For manufacturers that offer three models per air interface, at least one new model rated M3 or higher shall be introduced every other calendar year.

(B) For manufacturers that offer four or more models operating over a particular air interface, the number of models rated M3 or higher that must be new models introduced during that calendar year is equal to one-half of the minimum number of models rated M3 or higher required for that air interface (rounded up to the nearest whole number).

(C) Beginning September 10, 2012, for manufacturers that together with their parent, subsidiary, or affiliate companies under common ownership or control, have had more than 750 employees for at least two years and that offer two models over an air interface for which they have been offering handsets for at least two years, at least one new model rated M3 or higher shall be introduced every other calendar year.

(2) *Tier I carriers.* For each digital air interface for which it offers wireless handsets to customers, each Tier I carrier must either:

(i) Ensure that at least fifty (50) percent of the handset models it offers comply with paragraph (b)(1) of this section, calculated based on the total number of unique digital wireless handset models the carrier offers nationwide; or

(ii) Ensure that it offers, at a minimum, the following specified number of handset models that comply with paragraph (b)(1) of this section:

(A) Prior to February 15, 2009, at least eight (8) handset models;

(B) Beginning February 15, 2009, at least nine (9) handset models; and

(C) Beginning February 15, 2010, at least ten (10) handset models.

(3) *Service providers other than Tier I carriers.* For each digital air interface for which it offers wireless handsets to customers, each service provider other than a Tier I carrier must:

(i) Prior to September 7, 2008, include in the handset models it offers at least two handset models that comply with paragraph (b)(1) of this section;

(ii) Beginning September 7, 2008, either:

(A) Ensure that at least fifty (50) percent of the handset models it offers comply with paragraph (b)(1) of this section, calculated based on the total number of unique digital wireless handset models the service provider offers nationwide; or

(B) Ensure that it offers, at a minimum, the following specified number of handset models that comply with paragraph (b)(1) of this section:

(*1*) Until May 15, 2009, at least eight (8) handset models;

(*2*) Beginning May 15, 2009, at least nine (9) handset models; and

(*3*) Beginning May 15, 2010, at least ten (10) handset models.

(4) *All service providers.* The following requirements apply to Tier I carriers and all other service providers.

(i) *In-store testing.* Each service provider must make available for consumers to test, in each retail store owned or operated by the provider, all of its handset models that comply with paragraph (b)(1) of this section.

(ii) *Offering models with differing levels of functionality.* Each service provider must offer its customers a range of hearing aid-compatible models with differing levels of functionality (*e.g.*, operating capabilities, features offered, prices). Each provider may determine the criteria for determining these differing levels of functionality, and must disclose its methodology to the Commission pursuant to paragraph (i)(3)(vii) of this section.

(d) Phase-in of requirements relating to inductive coupling capability. The following applies to each manufacturer and service provider that offers wireless handsets used in the delivery of the services specified in paragraph (a) of this section and that does not fall within the *de minimis* exception set forth in paragraph (e) of this section. However, prior to July 17, 2014 for manufacturers and Tier I carriers and October 17, 2014 for service providers other than Tier I carriers, the requirements of this section do not apply to handset operations over frequency bands and air interfaces for which technical standards are not stated in ANSI C63.19–2007.

(1) *Manufacturers.* Each manufacturer offering to service providers four or more handset models, and beginning September 8, 2011, each manufacturer offering four or more handset models, in a digital air interface for use in the United States or imported for use in the United States must ensure that it offers to service providers, and beginning September 8, 2011, must ensurel that it offers, at a minimum, the following number of handset models that comply with the requirements set forth in paragraph (b)(2) of this section, whichever number is greater in any given year.

(i) At least two (2) handset models in that air interface; or

(ii) At least the following percentage of handset models (rounded down to the nearest whole number):

(A) Beginning February 15, 2009, at least twenty (20) percent of its handset models in that air interface, provided that, of any such models introduced during calendar year 2009, one model may be rated using ANSI C63.19–2006 (June 12, 2006), and all other models introduced during that year or subsequent years shall be rated using ANSI C63.19–2007 (June 8, 2007) or subsequently adopted version as may be approved pursuant to paragraph (k);

(B) Beginning February 15, 2010, at least twenty-five (25) percent of its handset models in that air interface; and

(C) Beginning February 15, 2011, at least one-third of its handset models in that air interface.

(2) *Tier I carriers.* For each digital air interface for which it offers wireless handsets to service providers, each Tier I carrier must:

(i) Ensure that at least one-third of the handset models it offers comply with paragraph (b)(2) of this section, calculated based on the total number of unique digital wireless handset models the carrier offers nationwide; or

(ii) Ensure that it offers, at a minimum, the following specified number of handset models that comply with paragraph (b)(2) of this section:

(A) Prior to February 15, 2009, at least three (3) handset models;

(B) Beginning February 15, 2009, at least five (5) handset models;

(C) Beginning February 15, 2010, at least seven (7) handset models; and

(D) Beginning February 15, 2011, at least ten (10) handset models.

(3) *Service providers other than Tier I carriers.* For each digital air interface for which it offers wireless handsets to customers, each service provider other than a Tier I carrier must:

(i) Prior to September 7, 2008, include in the handset models it offers at least two handset models that comply with paragraph (b)(2) of this section;

(ii) Beginning September 7, 2008, either:

(A) Ensure that at least one-third of the handset models it offers comply with paragraph (b)(2) of this section, calculated based on the total number of unique digital wireless handset models the carrier offers nationwide; or

(B) Ensure that it offers, at a minimum, the following specified number of handset models that comply with paragraph (b)(2) of this section:

(*1*) Until May 15, 2009, at least three (3) handset models;

(*2*) Beginning May 15, 2009, at least five (5) handset models;

(*3*) Beginning May 15, 2010, at least seven (7) handset models; and

(*4*) Beginning May 15, 2011, at least ten (10) handset models.

(4) *All service providers.* The following requirements apply to Tier I carriers and all other service providers.

(i) *In-store testing.* Each service provider must make available for consumers to test, in each retail store owned or operated by the provider, all

of its handset models that comply with paragraph (b)(2) of this section.

(ii) *Offering models with differing levels of functionality*. Each service provider must offer its customers a range of hearing aid-compatible models with differing levels of functionality (*e.g.*, operating capabilities, features offered, prices). Each provider may determine the criteria for determining these differing levels of functionality, and must disclose its methodology to the Commission pursuant to paragraph (i)(3)(vii) of this section.

(e) *De minimis exception*. (1)(i) Manufacturers or service providers that offer two or fewer digital wireless handsets in an air interface in the United States are exempt from the requirements of this section in connection with that air interface, except with regard to the reporting requirements in paragraph (i) of this section. Service providers that obtain handsets only from manufacturers that offer two or fewer digital wireless handset models in an air interface in the United States are likewise exempt from the requirements of this section other than paragraph (i) of this section in connection with that air interface.

(ii) Notwithstanding paragraph (e)(1)(i) of this section, beginning September 10, 2012, manufacturers that have had more than 750 employees for at least two years and service providers that have had more than 1500 employees for at least two years, and that have been offering handsets over an air interface for at least two years, that offer one or two digital wireless handsets in that air interface in the United States must offer at least one handset model compliant with paragraphs (b)(1) and (b)(2) of this section in that air interface, except as provided in paragraph (e)(1)(iii) of this section. Service providers that obtain handsets only from manufacturers that offer one or two digital wireless handset models in an air interface in the United States, and that have had more than 750 employees for at least two years and have offered handsets over that air interface for at least two years, are required to offer at least one handset model in that air interface compliant with paragraphs (b)(1) and (b)(2) of this section, except as provided in paragraph (e)(1)(iii) of this section. For purposes of this paragraph, employees of a parent, subsidiary, or affiliate company under common ownership or control with a manufacturer or service provider are considered employees of the manufacturer or service provider. Manufacturers and service providers covered by this paragraph must also comply with all other requirements of this section.

(iii) Manufacturers and service providers that offer one or two digital handset models that operate over the GSM air interface in the 1900 MHz band may satisfy the requirements of paragraph (e)(1)(ii) of this section by offering at least one handset model that complies with paragraph (b)(2) of this section and that either complies with paragraph (b)(1) of this section or meets the following conditions:

(A) The handset enables the user optionally to reduce the maximum power at which the handset will operate by no more than 2.5 decibels, except for emergency calls to 911, only for GSM operations in the 1900 MHz band;

(B) The handset would comply with paragraph (b)(1) of this section if the power as so reduced were the maximum power at which the handset could operate; and

(C) Customers are informed of the power reduction mode as provided in paragraph (f)(3) of this section. Manufacturers and service providers covered by this paragraph must also comply with all other requirements of this section.

(2) Manufacturers or service providers that offer three digital wireless handset models in an air interface must offer at least one handset model compliant with paragraphs (b)(1) and (b)(2) of this section in that air interface. Service providers that obtain handsets only from manufacturers that offer three digital wireless handset models in an air interface in the United States are required to offer at least one handset model in that air interface compliant with paragraphs (b)(1) and (b)(2) of this section.

(f) *Labeling and disclosure requirements*—(1) *Labeling requirements*. Manufacturers and service providers shall ensure that handsets that are hearing aid-compatible, as defined in paragraph

(b) of this section, clearly display the rating, as defined in paragraphs (b)(1) and (b)(2) of this section, on the packaging material of the handset. In the event that a hearing aid-compatible handset achieves different radio interference or inductive coupling ratings over different air interfaces or different frequency bands, the RF interference reduction and inductive coupling capability ratings displayed shall be the lowest rating assigned to that handset for any air interface or frequency band. An explanation of the ANSI C63.19 rating system must also be included in the device's user's manual or as an insert in the packaging material for the handset.

(2) Disclosure requirements relating to handsets treated as hearing aid-compatible over fewer than all their operations.

(i) Each manufacturer and service provider shall ensure that, wherever it provides hearing aid compatibility ratings for a handset that is considered hearing aid-compatible under paragraph (b)(3)(ii) of this section only with respect to those frequency bands and air interfaces for which technical standards are stated in ANSI C63.19–2007 and that has not been tested for hearing aid compatibility under ANSI C63.19–2011, or any handset that operates over frequencies outside of the 698 MHz to 6 GHz bands, it discloses to consumers, by clear and effective means (e.g., inclusion of call-out cards or other media, revisions to packaging materials, supplying of information on Web sites), that the handset has not been rated for hearing aid compatibility with respect to some of its operation(s). This disclosure shall include the following language:

This phone has been tested and rated for use with hearing aids for some of the wireless technologies that it uses. However, there may be some newer wireless technologies used in this phone that have not been tested yet for use with hearing aids. It is important to try the different features of this phone thoroughly and in different locations, using your hearing aid or cochlear implant, to determine if you hear any interfering noise. Consult your service provider or the manufacturer of this phone for information on hearing aid compatibility. If you have questions about return or exchange policies, consult your service provider or phone retailer.

(ii) However, service providers are not required to include this language in the packaging material for handsets that incorporate a Wi-Fi air interface and that were obtained by the service provider before March 8, 2011, provided that the service provider otherwise discloses by clear and effective means that the handset has not been rated for hearing aid compatibility with respect to Wi-Fi operation.

(iii) Each manufacturer and service provider shall ensure that, wherever it provides hearing aid compatibility ratings for a handset that is considered hearing aid-compatible under paragraph (b)(3)(ii) of this section only with respect to those frequency bands and air interfaces for which technical standards are stated in ANSI C63.19–2007, and that the manufacturer has tested and found not to meet hearing aid compatibility requirements under ANSI C63.19–2011 for operations over one or more air interfaces or frequency bands for which technical standards are not stated in ANSI C63.19–2007, it discloses to consumers, by clear and effective means (e.g., inclusion of call-out cards or other media, revisions to packaging materials, supplying of information on Web sites), that the handset does not meet the relevant rating or ratings with respect to such operation(s).

(3) *Disclosure requirement relating to handsets that allow the user to reduce the maximum power for GSM operation in the 1900 MHz band.* Handsets offered to satisfy paragraph (e)(1)(iii) of this section shall be labeled as meeting an M3 rating. Each manufacturer and service provider shall ensure that, wherever this rating is displayed, it discloses to consumers, by clear and effective means (*e.g.*, inclusion of call-out cards or other media, revisions to packaging materials, supplying of information on Web sites), that user activation of a special mode is necessary to meet the hearing aid compatibility standard. In addition, each manufacturer or service provider shall ensure that the device manual or a product insert explains how to activate the special mode and that doing so may result in a reduction of coverage.

(g) *Model designation requirements.* Where a manufacturer has made physical changes to a handset that result in a change in the hearing aid compatibility rating under paragraph (b)(1) or (b)(2) of this section, the altered handset must be given a model designation distinct from that of the handset prior to its alteration.

(h) *Web site requirements.* Beginning January 15, 2009, each manufacturer and service provider subject to this section that operates a publicly-accessible Web site must make available on its Web site a list of all hearing aid-compatible models currently offered, the ratings of those models, and an explanation of the rating system. Each service provider must also specify on its Web site, based on the levels of functionality that the service provider has defined, the level that each hearing aid-compatible model falls under as well as an explanation of how the functionality of the handsets varies at the different levels.

(i) *Reporting requirements*—(1) *Reporting dates.* Manufacturers shall submit reports on efforts toward compliance with the requirements of this section on January 15, 2009 and on July 15, 2009, and on an annual basis on July 15 thereafter. Service providers shall submit reports on efforts toward compliance with the requirements of this section on January 15, 2009, and annually thereafter. Information in the reports must be up-to-date as of the last day of the calendar month preceding the due date of the report.

(2) *Content of manufacturer reports.* Reports filed by manufacturers must include:

(i) Digital wireless handset models tested, since the most recent report, for compliance with the applicable hearing aid compatibility technical ratings;

(ii) Compliant handset models offered to service providers since the most recent report, identifying each model by marketing model name/number(s) and FCC ID number;

(iii) For each compliant model, the air interface(s) and frequency band(s) over which it operates, the hearing aid compatibility ratings for each frequency band and air interface under ANSI Standard C63.19, the ANSI Standard C63.19 version used, and the months in which the model was available to service providers since the most recent report;

(iv) Non-compliant models offered to service providers since the most recent report, identifying each model by marketing model name/number(s) and FCC ID number;

(v) For each non-compliant model, the air interface(s) over which it operates and the months in which the model was available to service providers since the most recent report;

(vi) Total numbers of compliant and non-compliant models offered to service providers for each air interface as of the time of the report;

(vii) Any instance, as of the date of the report or since the most recent report, in which multiple compliant or non-compliant devices were marketed under separate model name/numbers but constitute a single model for purposes of the hearing aid compatibility rules, identifying each device by marketing model name/number and FCC ID number;

(viii) Status of product labeling;

(ix) Outreach efforts; and

(x) If the manufacturer maintains a public Web site, the Web site address of the page(s) containing the information regarding hearing aid-compatible handset models required by paragraph (h) of this section.

NOTE TO PARAGRAPH (i)(2): For reports due on January 15, 2009, information provided with respect to paragraphs (i)(2)(ii) through(i)(2)(v) and (i)(2)(vii) and (i)(2)(viii) need be provided only for the six-month period from July 1 to December 31, 2008.

(3) *Content of service provider reports.* Reports filed by service providers must include:

(i) Compliant handset models offered to customers since the most recent report, identifying each model by marketing model name/number(s) and FCC ID number;

(ii) For each compliant model, the air interface(s) and frequency band(s) over which it operates, the hearing aid compatibility ratings for each frequency band and air interface under ANSI Standard C63.19, and the months in which the model was available since the most recent report;

(iii) Non-compliant models offered since the most recent report, identifying each model by marketing model name/number(s) and FCC ID number;

(iv) For each non-compliant model, the air interface(s) over which it operates and the months in which the model was available since the most recent report;

(v) Total numbers of compliant and non-compliant models offered to customers for each air interface over which the service provider offers service as of the time of the report;

(vi) Information related to the retail availability of compliant handset models;

(vii) The levels of functionality into which the compliant handsets fall and an explanation of the service provider's methodology for determining levels of functionality;

(viii) Status of product labeling;

(ix) Outreach efforts; and

(x) If the service provider maintains a public Web site, the Web site address of the page(s) containing the information regarding hearing aid-compatible handset models required by paragraph (h) of this section.

NOTE TO PARAGRAPH (i)(3): For reports due on January 15, 2009, information provided with respect to paragraphs (i)(3)(i) through (i)(3)(iv) and (i)(3)(vi) through (i)(3)(viii) need be provided only for the six-month period from July 1 to December 31, 2008.

(4) *Format.* The Wireless Telecommunications Bureau is delegated authority to approve or prescribe formats and methods for submission of these reports. Any format that the Bureau may approve or prescribe shall be made available on the Bureau's Web site.

(j) *Enforcement.* Enforcement of this section is hereby delegated to those states that adopt this section and provide for enforcement. The procedures followed by a state to enforce this section shall provide a 30-day period after a complaint is filed, during which time state personnel shall attempt to resolve a dispute on an informal basis. If a state has not adopted or incorporated this section, or failed to act within six (6) months from the filing of a complaint with the state public utility commission, the Commission will accept such complaints. A written notification to the complainant that the state believes action is unwarranted is not a failure to act. The procedures set forth in part 68, subpart E of this chapter are to be followed.

(k) *Delegation of rulemaking authority.* (1) The Chief of the Wireless Telecommunications Bureau and the Chief of the Office of Engineering and Technology are delegated authority, by notice-and-comment rulemaking, to issue an order amending this section to the extent necessary to adopt technical standards for additional frequency bands and/or air interfaces upon the establishment of such standards by ANSI Accredited Standards Committee C63™, provided that the standards do not impose with respect to such frequency bands or air interfaces materially greater obligations than those imposed on other services subject to this section. Any new obligations on manufacturers and Tier I carriers pursuant to paragraphs (c) through (i) of this section as a result of such standards shall become effective no less than one year after release of the order adopting such standards and any new obligations on other service providers shall become effective no less than 15 months after the release of such order, except that any new obligations on manufacturers and service providers subject to paragraph (e)(1)(ii) of this section shall become effective no less than two years after the release of such order.

(2) The Chief of the Wireless Telecommunications Bureau and the Chief of the Office of Engineering and Technology are delegated authority, by notice-and-comment rulemaking if required by statute or otherwise in the public interest, to issue an order amending this section to the extent necessary to approve any version of the technical standards for radio frequency interference or inductive coupling adopted subsequently to ANSI C63.19–2007 for use in determining whether a wireless handset meets the appropriate rating over frequency bands and air interfaces for which technical standards have previously been adopted either by the Commission or pursuant to paragraph (k)(1) of this section. This delegation is limited to the approval of changes to the technical standard that

do not raise major compliance issues. Further, by such approvals, the Chiefs may only permit, and not require, the use of such subsequent versions of standard document ANSI C63.19 to establish hearing aid compatibility.

(l) The standards required in this section are incorporated by reference into this section with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than those specified in this section, the FCC must publish notice of change in the FEDERAL REGISTER and the material must be available to the public. All approved material is available for inspection at the Federal Communications Commission (FCC), 445 12th St. SW., Reference Information Center, Room CY–A257, Washington, DC 20554 and is available from the sources indicated below. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030 or go to *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*.

(1) IEEE Operations Center, 445 Hoes Lane, Piscataway, NJ 08854–4141, (732) 981–0060, *http://www.ieee.org/portal/site*.

(i) ANSI C63.19–2007, American National Standard Methods of Measurement of Compatibility between Wireless Communication Devices and Hearing Aids, June 8, 2007

(ii) ANSI C63.19–2011, American National Standard Methods of Measurement of Compatibility between Wireless Communication Devices and Hearing Aids, May 27, 2011

(2) [Reserved]

[73 FR 25587, May 7, 2008, as amended at 75 FR 54522, Sept. 8, 2010; 77 FR 41928, July 17, 2012]

§ 20.20 Conditions applicable to provision of CMRS service by incumbent Local Exchange Carriers.

(a) *Separate affiliate.* An incumbent LEC providing in-region broadband CMRS shall provide such services through an affiliate that satisfies the following requirements:

(1) The affiliate shall maintain separate books of account from its affiliated incumbent LEC. Nothing in this section requires the affiliate to maintain separate books of account that comply with part 32 of this chapter;

(2) The affiliate shall not jointly own transmission or switching facilities with its affiliated incumbent LEC that the affiliated incumbent LEC uses for the provision of local exchange service in the same in-region market. Nothing in this section prohibits the affiliate from sharing personnel or other resources or assets with its affiliated incumbent LEC; and

(3) The affiliate shall acquire any services from its affiliated incumbent LEC for which the affiliated incumbent LEC is required to file a tariff at tariffed rates, terms, and conditions. Other transactions between the affiliate and the incumbent LEC for services that are not acquired pursuant to tariff must be reduced to writing and must be made on a compensatory, arm's length basis. All transactions between the incumbent LEC and the affiliate are subject to part 32 of this chapter, including the affiliate transaction rules. Nothing in this section shall prohibit the affiliate from acquiring any unbundled network elements or exchange services for the provision of a telecommunications service from its affiliated incumbent LEC, subject to the same terms and conditions as provided in an agreement approved under section 252 of the Communications Act of 1934, as amended.

(b) *Independence.* The affiliate required in paragraph (a) of this section shall be a separate legal entity from its affiliated incumbent LEC. The affiliate may be staffed by personnel of its affiliated incumbent LEC, housed in existing offices of its affiliated incumbent LEC, and use its affiliated incumbent LEC's marketing and other services, subject to paragraphs (a)(3) and (c) of this section.

(c) *Joint marketing.* Joint marketing of local exchange and exchange access service and CMRS services by an incumbent LEC shall be subject to part 32 of this chapter. In addition, such agreements between the affiliate and the incumbent LEC must be reduced to writing and made available for public inspection upon request at the principle place of business of the affiliate

and the incumbent LEC. The documentation must include a certification statement identical to the certification statement currently required to be included with all Automated Reporting and Management Information Systems (ARMIS) reports. The affiliate must also provide a detailed written description of the terms and conditions of the transaction on the Internet within 10 days of the transaction through the affiliate's home page.

(d) *Exceptions*—(1) *Rural telephone companies.* Rural telephone companies are exempted from the requirements set forth in paragraphs (a), (b) and (c) of this section. A competing telecommunications carrier, interconnected with the rural telephone company, however, may petition the FCC to remove the exemption, or the FCC may do so on its own motion, where the rural telephone company has engaged in anticompetitive conduct.

(2) *Incumbent LECs with fewer than 2 percent of subscriber lines.* Incumbent LECs with fewer than 2 percent of the nation's subscriber lines installed in the aggregate nationwide may petition the FCC for suspension or modification of the requirements set forth in paragraphs (a), (b) and (c) of this section. The FCC will grant such a petition where the incumbent LEC demonstrates that suspension or modification of the separate affiliate requirement is

(i) Necessary to avoid a significant adverse economic impact on users of telecommunications services generally or to avoid a requirement that would be unduly economically burdensome, and

(ii) Consistent with the public interest, convenience, and necessity.

(e) *Definitions.* Terms used in this section have the following meanings:

Affiliate. ''Affiliate'' means a person that (directly or indirectly) owns or controls, is owned or controlled by, or is under common ownership with, another person. For purposes of this section, the term ''own'' means to own an equity interest (or the equivalent thereof) of more than 10 percent.

Broadband Commercial Mobile Radio Service (Broadband CMRS). For the purposes of this section, ''broadband CMRS'' means Cellular Radiotelephone Service (part 22, subpart H of this chapter), Specialized Mobile Radio (part 90, subpart S of this chapter), and broadband Personal Communications Services (part 24, subpart E of this chapter).

Incumbent Local Exchange Carrier (Incumbent LEC). ''Incumbent LEC'' has the same meaning as that term is defined in § 51.5 of this chapter.

In-region. For the purposes of this section, an incumbent LEC's broadband CMRS service is considered ''in-region'' when 10 percent or more of the population covered by the CMRS affiliate's authorized service area, as determined by the 1990 census figures, is within the affiliated incumbent LEC's wireline service area.

Rural Telephone Company. ''Rural Telephone Company'' has the same meaning as that term is defined in § 51.5 of this chapter.

(f) *Sunset.* This section will no longer be effective after January 1, 2002.

[62 FR 63871, Dec. 3, 1997, as amended at 66 FR 10968, Feb. 21, 2001]

§ 20.21 Signal boosters.

(a) *Operation of Consumer Signal Boosters.* A subscriber in good standing of a commercial mobile radio service system may operate a Consumer Signal Booster for personal use under the authorization held by the licensee providing service to the subscriber provided that the subscriber complies with paragraphs (a)(1) through (6). Failure to comply with all applicable rules in this section and all applicable technical rules for the frequency band(s) of operation voids the authority to operate the Consumer Signal Booster.

(1) Prior to operation, the subscriber obtains the consent of the licensee providing service to the subscriber;

(2) Prior to operation, the subscriber registers the Consumer Signal Booster with the licensee providing service to the subscriber;

(3) The subscriber only operates the Consumer Signal Booster with approved antennas, cables, and/or coupling devices as specified by the manufacturer of the Consumer Signal Booster;

(4) The subscriber operates the Consumer Signal Booster on frequencies used for the provision of subscriber-

based services under parts 22 (Cellular), 24 (Broadband PCS), 27 (AWS–1, 700 MHz Lower A–E Blocks, and 700 MHz Upper C Block), and 90 (Specialized Mobile Radio) of this chapter. Operation on part 90 (Specialized Mobile Radio) frequencies is permitted upon the Commission's release of a public notice announcing the date Consumer Signal Boosters may be used in the band;

(5) The Consumer Signal Booster complies with paragraphs (e), (f), (g), and (h) of this section and § 2.907 of this chapter; and

(6) The subscriber may not deactivate any features of the Consumer Signal Booster which are designed to prevent harmful interference to wireless networks. These features must be enabled and operating at all times the signal booster is in use.

(b) *De minimis operation of Consumer Signal Boosters.* A third party's incidental use of a subscriber's Consumer Signal Booster operated under this paragraph is *de minimis* and shall be authorized under the authorization held by the licensee providing service to the third party.

(c) *Operation of Industrial Signal Boosters.* An individual or non-individual, other than a representative of a foreign government, may operate an Industrial Signal Booster provided that the individual or non-individual:

(1) Has an FCC license or obtains the express consent of the licensee(s) whose frequencies are being retransmitted by the device on a regular basis, and

(2) Uses an Industrial Signal Booster which complies with paragraph (f) of this section.

(d) *Operation on a secondary, non-interference basis.* Operation of signal boosters under this section is on a secondary, non-interference basis to primary services licensed for the frequency bands on which they transmit, and to primary services licensed for the adjacent frequency bands that might be affected by their transmissions.

(1) The operation of signal boosters must not cause harmful interference to the communications of any primary licensed service.

(2) Upon request of an FCC representative or a licensee experiencing harmful interference, a signal booster operator must:

(i) Cooperate in determining the source of the interference, and

(ii) If necessary, deactivate the signal booster immediately, or as soon as practicable, if immediate deactivation is not possible.

(e) *Consumer Signal Booster Network Protection Standard.* (1) All Consumer Signal Boosters must incorporate features to prevent harmful interference to wireless networks including but not limited to those enumerated in this section.

(2) *Certification requirements.* (i) A Consumer Signal Booster can only be certificated and operated if it complies with all applicable rules in this subpart and all applicable technical rules for the frequency band(s) of operation including, but not limited to: § 22.355 of this chapter, Public Mobile Services, frequency tolerance; § 22.913 of this chapter, Cellular Radiotelephone Service effective radiated power limits; § 22.917 of this chapter, Cellular Radiotelephone Service, emission limitations for cellular equipment; § 24.232 of this chapter, Broadband Personal Communications Service, power and antenna height limits; § 24.238 of this chapter, Broadband Personal Communications Service, emission limitations for Broadband PCS equipment; § 27.50 of this chapter, Miscellaneous Wireless Communications Services, power and antenna height limits; § 27.53 of this chapter, Miscellaneous Wireless Communications Services, emission limits; § 90.205 of this chapter, Private Land Mobile Radio Services, power and antenna height limits; § 90.210 of this chapter, Private Land Mobile Radio Services, emission masks; and § 90.247 of this chapter, Private Land Mobile Radio Services, mobile repeater stations.

(ii) In case of any conflict between the rules set forth in this section and the rules set forth in parts 22, 24, 27, and 90 of title 47, chapter I of the Code of Federal Regulations, the rules in this section shall govern.

(iii) The application for certification must satisfy the Commission that the Consumer Signal Boosters' features designed to prevent harmful interference and protect wireless networks cannot be easily defeated and must be enabled at all times.

(3) *Frequency Bands.* Consumer Signal Boosters must be designed and manufactured such that they only operate on the frequencies used for the provision of subscriber-based services under parts 22 (Cellular), 24 (Broadband PCS), 27 (AWS–1, 700 MHz Lower A–E Blocks, and 700 MHz Upper C Block), and 90 (Specialized Mobile Radio) of this chapter. The Commission will not certificate any Consumer Signal Boosters for operation on part 90 of this chapter (Specialized Mobile Radio) frequencies until the Commission releases a public notice announcing the date Consumer Signal Boosters may be used in the band.

(4) *Self-monitoring.* Consumer Signal Boosters must automatically self-monitor their operation to ensure compliance with applicable noise and gain limits and either self-correct or shut down automatically if their operation exceeds those parameters.

(5) *Anti-oscillation.* Consumer Signal Boosters must be able to detect and mitigate any unintended oscillations in uplink and downlink bands (such as may result from insufficient isolation between the antennas).

(6) *Power Down.* Consumer Signal Boosters must automatically power down or cease amplification as they approach any affected base station.

(7) *Interference Avoidance for Wireless Subsystems.* Consumer Signal Boosters using unlicensed (part 15 of this chapter) or other frequency bands for wireless transmissions between donor and server subsystems for their internal operations must employ interference avoidance methods to prevent interference transmitted into authorized CMRS spectrum bands.

(8) *Wideband Consumer Signal Boosters.* A Wideband Consumer Signal Booster will meet the Consumer Signal Booster Network Protection Standard if it complies with paragraphs (e)(1) through (e)(7) of this section and the following:

(i) *Technical Requirements*—(A) *Noise Limits.* (*1*) The transmitted noise power in dBm/MHz of consumer boosters at their uplink port shall not exceed −103 dBm/MHz—RSSI. RSSI (received signal strength indication expressed in negative dB units relative to 1 mW) is the downlink composite received signal power in dBm at the booster donor port for all base stations in the band of operation.

(*2*) The transmitted maximum noise power in dBm/MHz of consumer boosters at their uplink and downlink ports shall not exceed the following limits:

(*i*) Fixed booster maximum noise power shall not exceed −102.5 dBm/MHz + 20 Log_{10} (Frequency), where Frequency is the uplink mid-band frequency of the supported spectrum bands in MHz.

(*ii*) Mobile booster maximum noise power shall not exceed −59 dBm/MHz.

(*iii*) Compliance with Noise limits will use instrumentation calibrated in terms of RMS equivalent voltage, and with booster input ports terminated or without input signals applied within the band of measurement.

(B) *Bidirectional Capability.* Consumer Boosters must be able to provide equivalent uplink and downlink gain and conducted uplink power output that is at least 0.05 watts. One-way consumer boosters (*i.e.*, uplink only, downlink only, uplink impaired, downlink impaired) are prohibited. Spectrum block filtering may be used provided the uplink filter attenuation is not less than the downlink filter attenuation, and where RSSI is measured after spectrum block filtering is applied referenced to the booster's input port for each band of operation.

(C) *Booster Gain Limits.* (*1*) The uplink gain in dB of a consumer booster referenced to its input and output ports shall not exceed −34 dB—RSSI + MSCL.

(*i*) Where RSSI is the downlink composite received signal power in dBm at the booster donor port for all base stations in the band of operation. RSSI is expressed in negative dB units relative to 1 mW.

(*ii*) Where MSCL (Mobile Station Coupling Loss) is the minimum coupling loss in dB between the wireless device and input port of the consumer booster. MSCL must be calculated or measured for each band of operation and provided in compliance test reports.

(*2*) The uplink and downlink maximum gain of a Consumer Booster referenced to its input and output ports shall not exceed the following limits:

(*i*) Fixed Booster maximum gain shall not exceed 6.5 dB + 20 Log_{10} (Frequency)

(*ii*) Where, Frequency is the uplink mid-band frequency of the supported spectrum bands in MHz.

(*iii*) Mobile Booster maximum gain shall not exceed 50 dB when using an inside antenna (e.g., inside a vehicle), 23 dB when using direct contact coupling (e.g., cradle-type boosters), or 15 dB when directly connected (e.g., boosters with a physical connection to the phone).

(D) *Power Limits.* A booster's uplink power must not exceed 1 watt composite conducted power and equivalent isotropic radiated power (EIRP) for each band of operation. Composite downlink power shall not exceed 0.05 watt (17 dBm) conducted and EIRP for each band of operation. Compliance with power limits will use instrumentation calibrated in terms of RMS equivalent voltage.

(E) *Out of Band Emission Limits.* Booster out of band emissions (OOBE) shall be at least 6 dB below the FCC's mobile emission limits for the supported bands of operation. Compliance to OOBE limits will utilize high peak-to-average CMRS signal types.

(F) *Intermodulation Limits.* The transmitted intermodulation products of a consumer booster at its uplink and downlink ports shall not exceed the power level of −19 dBm for the supported bands of operation. Compliance with intermodulation limits will use boosters operating at maximum gain and maximum rated output power, with two continuous wave (CW) input signals spaced 600 kHz apart and centered in the pass band of the booster, and with a 3 kHz measurement bandwidth.

(G) *Booster Antenna Kitting.* All consumer boosters must be sold with user manuals specifying all antennas and cables that meet the requirements of this section. All consumer boosters must be sold together with antennas, cables, and/or coupling devices that meet the requirements of this section. The grantee is required to submit a technical document with the application for FCC equipment authorization that shows compliance of all antennas, cables and/or coupling devices with the requirements of this section, including any antenna or equipment upgrade options that may be available at initial purchase or as a subsequent upgrade.

(H) *Transmit Power Off Mode.* When the consumer booster cannot otherwise meet the noise and gain limits defined herein it must operate in ''Transmit Power Off Mode.'' In this mode of operation, the uplink and downlink noise power shall not exceed −70 dBm/MHz and both uplink and downlink gain shall not exceed the lesser of 23 dB or MSCL.

(I) *Uplink Inactivity.* When a consumer booster is not serving an active device connection after 5 minutes the uplink noise power shall not exceed −70 dBm/MHz.

(ii) *Interference Safeguards.* Consumer boosters must include features to prevent harmful interference including, at a minimum, those enumerated in this subsection. These features may not be deactivated by the operator and must be enabled and operating at all times the signal booster is in use.

(A) *Anti-Oscillation.* Consumer boosters must be able to detect and mitigate (*i.e.*, by automatic gain reduction or shut down), any oscillations in uplink and downlink bands. Oscillation detection and mitigation must occur automatically within 0.3 seconds in the uplink band and within 1 second in the downlink band. In cases where oscillation is detected, the booster must continue mitigation for at least one minute before restarting. After five such restarts, the booster must not resume operation until manually reset.

(B) *Gain Control.* Consumer boosters must have automatic limiting control to protect against excessive input signals that would cause output power and emissions in excess of that authorized by the Commission.

(C) *Interference Avoidance for Wireless Subsystems.* Consumer boosters using unlicensed (part 15) or other frequency bands for wireless transmissions between donor and server subsystems for its internal operations must employ interference avoidance methods to prevent interference transmitted into authorized CMRS spectrum bands and must meet applicable limits for radio-frequency exposure.

(9) *Provider-Specific Consumer Signal Boosters.* A Provider-Specific Consumer Signal Booster will meet the Consumer Signal Booster Network Protection Standard if it complies with paragraphs (e)(1) through (e)(7) of this section and the following:

(i) *Technical Requirements*—(A) *Noise Limits.* The transmitted noise power in dBm/MHz of frequency selective consumer boosters outside the licensee's spectrum blocks at their uplink and downlink ports shall not exceed the following limits:

(*1*) −103 dBm/MHz − RSSI

(*i*) Where RSSI is the downlink composite signal power received in dBm for frequencies in the band of operation outside the licensee's spectrum block as measured after spectrum block filtering is applied and is referenced to the booster's donor port for each band of operation. RSSI is expressed in negative dB units relative to 1 mW.

(*ii*) Boosters with MSCL less than 40 dB, shall reduce the Noise output in (A) by 40 dB − MSCL, where MSCL is the minimum coupling loss in dB between the wireless device and booster's server port. MSCL must be calculated or measured for each band of operation and provided in compliance test reports.

(*2*)(*i*) Fixed booster maximum downlink noise power shall not exceed −102.5 dBm/MHz + 20 Log_{10} (Frequency), where Frequency is the uplink mid-band frequency of the supported spectrum bands in MHz.

(*ii*) Mobile booster maximum noise power shall not exceed −59 dBm/MHz.

(*iii*) Compliance with Noise limits will use instrumentation calibrated in terms of RMS equivalent voltage, and with booster input ports terminated or without input signals applied within the band of measurement.

(B) *Bidirectional Capability.* Consumer Boosters must be able to provide equivalent uplink and downlink gain and conducted uplink power output that is at least 0.05 watts. One-way consumer boosters (*i.e.*, uplink only, downlink only, uplink impaired, downlink impaired) are prohibited. Spectrum block filtering used must provide uplink filter attenuation not less than the downlink filter attenuation, and where RSSI is measured after spectrum block filtering is applied referenced to the booster's input port for each band of operation.

(C) *Booster Gain Limits.* The gain of the frequency selective consumer booster shall meet the limits below.

(*1*) The uplink and downlink gain in dB of a frequency selective consumer booster referenced to its input and output ports shall not exceed BSCL − 28 dB − (40 dB − MSCL).

(*i*) Where BSCL is the coupling loss between the booster's donor port and the base station's input port, and MSCL is the minimum coupling loss in dB between the wireless device and the booster's server port. MSCL must be calculated or measured for each band of operation and provided in compliance test reports.

(*ii*) In order of preference, BSCL is determined as follows: determine path loss between the base station and the booster; such measurement shall be based on measuring the received forward pilot/control channel power at the booster and reading the pilot/control channel transmit power from the base station as defined in the system information messages sent by the base station; estimate BSCL by assuming that the base station is transmitting at a level of + 25 dBm per channel (assume a small, lightly loaded cell) and measuring the total received signal power level within the channel in dBm (RPCH) received at the booster input port. BSCL is then calculated as 25–RPCH; or assume that the BSCL is 70 dB without performing any measurement.

(*2*) The uplink and downlink maximum gain of a frequency selective consumer booster referenced to its input and output ports shall not exceed the following limits:

(*i*) Fixed Booster maximum gain shall not exceed 19.5 dB + 20 Log_{10} (Frequency), or 100 dB for systems having automatic gain adjustment based on isolation measurements between booster donor and server antennas.

(*ii*) Where, Frequency is the uplink mid-band frequency of the supported spectrum bands in MHz.

(*iii*) Mobile Booster maximum gain shall not exceed 15 dB when directly

connected (*e.g.*, boosters with a physical connection to the subscriber device), 23 dB when using direct contact coupling (*e.g.*, cradle-type boosters), or 50 dB when using an inside antenna (*e.g.*, inside a vehicle). For systems using an inside antenna that have automatic gain adjustment based on isolation measurements between booster donor and server antenna and automatic feedback cancellation, the mobile booster maximum gain shall not exceed 58 dB and 65 dB for frequencies below and above 1 GHz, respectively.

(D) *Power Limits.* A booster's uplink power must not exceed 1 watt composite conducted power and equivalent isotropic radiated power (EIRP) for each band of operation. Downlink power shall not exceed 0.05 watt (17 dBm) composite and 10 dBm per channel conducted and EIRP for each band of operation. Compliance with power limits will use instrumentation calibrated in terms of RMS equivalent voltage.

(E) *Out of Band Gain Limits.* (*1*) A frequency selective booster shall have the following minimum attenuation referenced to the gain in the center of the pass band of the booster:

(*i*) −20 dB at the band edge, where band edge is the end of the licensee's allocated spectrum,

(*ii*) −30 dB at 1 MHz offset from band edge,

(*iii*) −40 dB at 5 MHz offset from band edge.

(*2*) A frequency selective booster having maximum gain greater than 80 dB (referenced to the center of the pass band) shall limit the out of band gain to 60 dB at 0.2 MHz offset from the band edge, and 45 dB at 1 MHz offset from the band edge, where band edge is the end of the licensee's allocated spectrum.

(F) *Out of Band Emission Limits.* Booster out of band emissions (OOBE) shall meet the FCC's mobile emission limits for the supported bands of operation. Compliance to OOBE limits will utilize high peak-to-average CMRS signal types.

(G) *Intermodulation Limits.* The transmitted intermodulation products of a consumer booster at its uplink and downlink ports shall not exceed the power level of −19 dBm for the supported bands of operation. Compliance with intermodulation limits will use boosters operating at maximum gain and maximum rated output power, with two continuous wave (CW) input signals spaced 600 kHz apart and centered in the pass band of the booster, and with a 3 kHz measurement bandwidth.

(H) *Booster Antenna Kitting.* All consumer boosters must be sold with user manuals specifying all antennas and cables that meet the requirements of this section. All consumer boosters must be sold together with antennas, cables, and/or coupling devices that meet the requirements of this section. The grantee is required to submit a technical document with the application for FCC equipment authorization that shows compliance of all antennas, cables, and/or coupling devices with the requirements of this section, including any antenna or equipment upgrade options that may be available at initial purchase or as a subsequent upgrade.

(I) *Transmit Power Off Mode.* When the consumer booster cannot otherwise meet the noise and gain limits defined herein it must operate in ''Transmit Power OFF Mode.'' In this mode of operation, the uplink and downlink noise power shall not exceed −70 dBm/MHz and uplink gain shall not exceed the lesser of 23 dB or MSCL.

(J) *Uplink Inactivity.* When a consumer booster is not serving an active device connection after 5 seconds the uplink noise power shall not exceed −70 dBm/MHz.

(ii) *Interference Safeguards.* Consumer boosters must include features to prevent harmful interference including, at a minimum, those enumerated in this subsection. These features may not be deactivated by the operator and must be enabled and operating at all times the signal booster is in use.

(A) *Anti-Oscillation.* Consumer boosters must be able to detect and mitigate (*i.e.*, by automatic gain reduction or shut down), any oscillations in uplink and downlink bands. Oscillation detection and mitigation must occur automatically within 0.3 seconds in the uplink band and within 1 second in the downlink band. In cases where oscillation is detected, the booster must continue mitigation for at least one

minute before restarting. After five such restarts, the booster must not resume operation until manually reset.

(B) *Gain Control.* Consumer boosters must have automatic limiting control to protect against excessive input signals that would cause output power and emissions in excess of that authorized by the Commission.

(C) *Interference Avoidance for Wireless Subsystems.* Consumer boosters using unlicensed (part 15) or other frequency bands for wireless transmissions between donor and server subsystems for its internal operations must employ interference avoidance methods to prevent interference transmitted into authorized CMRS spectrum bands.

(10) *Equivalent Protections.* Consumer Signal Boosters which do not meet the technical specifications enumerated in paragraphs (e)(1) through (e)(9) of this section may also meet the Network Protection Standard if they provide equivalent protections as determined by the Wireless Telecommunications Bureau.

(f) *Signal booster labeling requirements.* (1) Signal booster manufacturers, distributors, and retailers must ensure that all signal boosters marketed on or after March 1, 2014 include the following advisories:

(i) In on-line, point-of-sale marketing materials,

(ii) In any print or on-line owner's manual and installation instructions,

(iii) On the outside packaging of the device, and

(iv) On a label affixed to the device:

(A) For Consumer Signal Boosters:

(*1*) This is a CONSUMER device.

BEFORE USE, you MUST REGISTER THIS DEVICE with your wireless provider and have your provider's consent. Most wireless providers consent to the use of signal boosters. Some providers may not consent to the use of this device on their network. If you are unsure, contact your provider.

You MUST operate this device with approved antennas and cables as specified by the manufacturer. Antennas MUST be installed at least 20 cm (8 inches) from any person.

You MUST cease operating this device immediately if requested by the FCC or a licensed wireless service provider.

WARNING. E911 location information may not be provided or may be inaccurate for calls served by using this device.

(*2*) The label for Consumer Signal Boosters certified for fixed indoor operation also must include the following language:

This device may be operated ONLY in a fixed location for in-building use.

(B) For Industrial Signal Boosters:

WARNING. This is NOT a CONSUMER device. It is designed for installation by FCC LICENSEES and QUALIFIED INSTALLERS. You MUST have an FCC LICENSE or express consent of an FCC Licensee to operate this device. Unauthorized use may result in significant forfeiture penalties, including penalties in excess of $100,000 for each continuing violation.

(2) A Consumer Signal Booster label may contain an acknowledgement that particular provider(s) have given their consent for all consumers to use the device. Such an acknowledgement would be inserted prior to, ''Some wireless providers may not consent to the use of this device on their network. If you are unsure, contact your provider.'' The remaining language of the advisory shall remain the same.

(g) *Marketing and sale of signal boosters.* Except as provided in § 2.803 of this chapter, no person, manufacturer, distributor, or retailer may market, distribute or offer for sale or lease any Consumer Signal Booster that does not comply with the requirements of this section to any person in the United States or to any person intending to operate the Consumer Signal Booster within the United States at any time on or after March 1, 2014. Consumer Signal Boosters may only be sold to members of the general public for their personal use.

(h) *Registration.* Each licensee consenting to the operation of a Consumer Signal Booster must establish a free registration mechanism for subscribers and register all Consumer Signal Boosters to which it consents. A licensee must establish a registration mechanism by the later of March 1, 2014 or within 90 days of consenting to the operation of a Consumer Signal Booster. At a minimum, a licensee must collect:

(1) The name of the Consumer Signal Booster owner and/or operator, if different individuals;

(2) The make, model, and serial number of the device;

(3) The location of the device; and

(4) The date of initial operation. Licensee consent is voluntary and may be withdrawn at the licensee's discretion.

[78 FR 21559, Apr. 11, 2013, as amended at 79 FR 70795, Nov. 28, 2014]

§ 20.22 Rules governing mobile spectrum holdings.

(a) Applicants for mobile wireless licenses for commercial use, for assignment or transfer of control of such licenses, or for long-term *de facto* transfer leasing arrangements as defined in §1.9003 of this chapter and long-term spectrum manager leasing arrangements as identified in §1.9020(e)(1)(ii) must demonstrate that the public interest, convenience, and necessity will be served thereby. The Commission will evaluate any such license application consistent with the policies set forth in Policies Regarding Mobile Spectrum Holdings, *Report and Order*, FCC 14–63, WT Docket No. 12–269, adopted May 15, 2014.

(b) *Attribution of interests.* (1) The following criteria will apply to attribute partial ownership and other interests in spectrum holdings for purposes of:

(i) Applying a mobile spectrum holding limit to the licensing of spectrum through competitive bidding; and

(ii) Applying the initial spectrum screen to secondary market transactions.

(2) *Controlling interests shall be attributable.* Controlling interest means majority voting equity ownership, any general partnership interest, or any means of actual working control (including negative control) over the operation of the licensee, in whatever manner exercised.

(3) *Non-controlling interests of 10 percent or more in spectrum shall be attributable.* Interests of less than 10 percent in spectrum shall be attributable if such interest confers *de facto* control, including but not limited to partnership and other ownership interests and any stock interest in a licensee.

(4) The following interests in spectrum shall also be attributable to holders:

(i) Officers and directors of a licensee shall be considered to have an attributable interest in the entity with which they are so associated. The officers and directors of an entity that controls a licensee or applicant shall be considered to have an attributable interest in the licensee.

(ii) Ownership interests that are held indirectly by any party through one or more intervening corporations will be determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain and application of the relevant attribution benchmark to the resulting product, except that if the ownership percentage for an interest in any link in the chain exceeds 50 percent or represents actual control, it shall be treated as if it were a 100 percent interest. (For example, if A owns 20% of B, and B owns 40% of licensee C, then A's interest in licensee C would be 8%. If A owns 20% of B, and B owns 51% of licensee C, then A's interest in licensee C would be 20% because B's ownership of C exceeds 50%).

(iii) Any person who manages the operations of a licensee pursuant to a management agreement shall be considered to have an attributable interest in such licensee if such person, or its affiliate, has authority to make decisions or otherwise engage in practices or activities that determine, or significantly influence, the nature or types of services offered by such licensee, the terms upon which such services are offered, or the prices charged for such services.

(iv) Any licensee or its affiliate who enters into a joint marketing arrangement with another licensee or its affiliate shall be considered to have an attributable interest in the other licensee's holdings if it has authority to make decisions or otherwise engage in practices or activities that determine or significantly influence the nature or types of services offered by the other licensee, the terms upon which such services are offered, or the prices charged for such services.

(v) Limited partnership interests shall be attributed to limited partners and shall be calculated according to both the percentage of equity paid in and the percentage of distribution of profits and losses.

(vi) Debt and instruments such as warrants, convertible debentures, options, or other interests (except nonvoting stock) with rights of conversion

to voting interests shall not be attributed unless and until converted or unless the Commission determines that these interests confer *de facto* control.

(vii) Long-term *de facto* transfer leasing arrangements as defined in §1.9003 of this chapter and long-term spectrum manager leasing arrangements as identified in §1.9020(e)(1)(ii) that enable commercial use shall be attributable to lessees, lessors, sublessees, and sublessors for purposes of this section.

(c) *600 MHz Band holdings.* (1) The Commission will reserve licenses for up to 30 megahertz of the 600 MHz Band, offered in the Incentive Auction authorized by Congress pursuant to 47 U.S.C. 309(j)(8)(G), for otherwise qualified bidders who do not hold an attributable interest in 45 megahertz or more of the total 134 megahertz of below-1-GHz spectrum which consists of the cellular (50 megahertz), the 700 MHz (70 megahertz), and the SMR (14 megahertz) spectrum in a Partial Economic Area (PEA), as calculated on a county by county population-weighted basis, utilizing 2010 U.S. Census data. The amount of reserved and unreserved 600 MHz Band licenses will be determined based on the market-based spectrum reserve set forth in Policies Regarding Mobile Spectrum Holdings, *Report and Order*, FCC 14–63, WT Docket No. 12–269, adopted May 15, 2014, as well as subsequent Public Notices. Nothing in this paragraph will limit, or may be construed to limit, an otherwise qualified bidder that is a non-nationwide provider of mobile wireless services from bidding on any reserved or unreserved license offered in the Incentive Auction.

(2) For a period of six years, after initial licensing, no 600 MHz Band license, regardless of whether it is reserved or unreserved, may be transferred, assigned, partitioned, disaggregated, or long term leased to any entity that, after consummation of the transfer, assignment, or leased on a long term basis, would hold an attributable interest in one-third or more of the total suitable and available below-1-GHz spectrum as calculated on a county by county population-weighted basis in the relevant license area, utilizing 2010 U.S. Census data.

(3) For a period of six years, after initial licensing, no 600 MHz Band reserved license may be transferred, assigned, partitioned, disaggregated, or leased on a long term basis to an entity that was not qualified to bid on that reserved spectrum license under paragraph (c)(1) of this section at the time of the Incentive Auction short-form application deadline.

[79 FR 40002, July 11, 2014]

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AUTHORITY: 47 U.S.C. 154, 222, 303, 309, and 332.

SOURCE: 59 FR 59507, Nov. 17, 1994, unless otherwise noted.

Subpart A—Scope and Authority

§ 22.1 Basis and purpose.

This section contains a concise general statement of the basis and purpose of the rules in this part, pursuant to 5 U.S.C. 553(c).

(a) *Basis.* These rules are issued pursuant to the Communications Act of 1934, as amended, 47 U.S.C. 151 *et. seq.*

(b) *Purpose.* The purpose of these rules is to establish the requirements and conditions under which radio stations may be licensed and used in the Public Mobile Services.

[59 FR 59507, Nov. 17, 1994, as amended at 70 FR 19307, Apr. 13, 2005]

§ 22.3 Authorization required.

Stations in the Public Mobile Services must be used and operated only in accordance with the rules in this part and with a valid authorization granted by the FCC under the provisions of this part.

(a) The holding of an authorization does not create any rights beyond the terms, conditions and period specified in the authorization. Authorizations may be granted upon proper application, provided that the FCC finds that the applicant is qualified in regard to citizenship, character, financial, technical and other criteria, and that the public interest, convenience and necessity will be served. See 47 U.S.C. 301, 308, and 309.

(b) Authority for subscribers to operate mobile or fixed stations in the Public Mobile Services, except for certain stations in the Rural Radiotelephone Service, is included in the authorization held by the licensee providing service to them. Subscribers are not required to apply for, and the FCC does not accept applications from subscribers for, individual mobile or fixed station authorizations in the Public Mobile Services, except that individual authorizations are required to operate rural subscriber stations in the Rural Radiotelephone Service under certain circumstances. See § 22.703.

[59 FR 59507, Nov. 17, 1994, as amended at 70 FR 19307, Apr. 13, 2005]

§ 22.5 Citizenship.

The rules in this section implement section 310 of the Communications Act of 1934, as amended (47 U.S.C. § 310), in regard to the citizenship of licensees in the Public Mobile Services.

(a) *Foreign governments.* The FCC will not grant an authorization in the Public Mobile Services to any foreign government or any representative thereof.

(b) *Alien ownership or control.* The FCC will not grant an authorization in the Public Mobile Services to:

(1) Any alien or the representative of any alien;

(2) Any corporation organized under the laws of any foreign government;

(3) Any corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country;

(4) Any corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country, if the FCC finds that the public interest will be served by the refusal or revocation of such license.

[59 FR 59507, Nov. 17, 1994, as amended at 61 FR 55580, Oct. 28, 1996]

§ 22.7 General eligibility.

Any entity, other than those precluded by section 310 of the Communications Act of 1934, as amended, 47 U.S.C. 310, is eligible to hold a license under this part. Applications are granted only if the applicant is legally, financially, technically and otherwise qualified to render the proposed service.

[70 FR 19307, Apr. 13, 2005]

§ 22.9 Operation of certificated signal boosters.

Individuals and non-individuals may operate certificated Consumer Signal Boosters on frequencies regulated under this part provided that such operation complies with all applicable rules under this part and § 20.21 of this chapter. Failure to comply with all applicable rules voids the authority to operate a signal booster.

[78 FR 21563, Apr. 11, 2013]

§ 22.99 Definitions.

Terms used in this part have the following meanings:

Air-Ground Radiotelephone Service. A radio service in which licensees are authorized to offer and provide radio telecommunications service for hire to subscribers in aircraft.

Airborne station. A mobile station in the Air-Ground Radiotelephone Service authorized for use on aircraft while in flight or on the ground.

Antenna structure. A structure comprising an antenna, the tower or other structure that exists solely to support antennas, and any surmounting appurtenances (attachments such as beacons or lightning rods).

Antenna. A device that converts radio frequency electrical energy to radiated electromagnetic energy and vice versa; in a transmitting station, the device from which radio waves are emitted.

Authorized bandwidth. The necessary or occupied bandwidth of an emission, whichever is more.

Authorized spectrum. The spectral width of that portion of the electromagnetic spectrum within which the emission power of the authorized transmitter(s) must be contained, in accordance with the rules in this part. The authorized spectrum comprises one channel bandwidth or the bandwidths of two or more contiguous channels.

Auxiliary test transmitter. A fixed transmitter used to test Public Mobile systems.

Base transmitter. A stationary transmitter that provides radio telecommunications service to mobile and/or fixed receivers, including those associated with mobile stations.

Blanketing interference. Disturbance in consumer receivers located in the immediate vicinity of a transmitter, caused by currents directly induced into the consumer receiver's circuitry by the relatively high field strength of the transmitter.

Cardinal radials. Eight imaginary straight lines extending radially on the ground from an antenna location in the following azimuths with respect to true North: 0°, 45°, 90°, 135°, 180°, 225°, 270°, 315°.

Carrier frequency. The frequency of the unmodulated electrical wave at the output of an amplitude modulated (AM), frequency modulated (FM) or phase modulated (PM) transmitter.

Cell. The service area of an individual transmitter location in a cellular system.

Cellular Geographic Service Area (CGSA). The licensed geographic area within which a Cellular system is entitled to protection and adverse effects are recognized, for the purpose of determining whether a petitioner has standing, in the Cellular Radiotelephone Service, and within which the Cellular licensee is permitted to transmit, or consent to allow other Cellular licensees to transmit, electromagnetic energy and signals on the assigned channel block, in order to provide Cellular service. *See* § 22.911.

Cellular Market Area (CMA). A standard geographic area used by the FCC for administrative convenience in the licensing of Cellular systems; a more recent term for ''Cellular market'' (and includes Metropolitan Statistical Areas (MSAs) and Rural Service Areas (RSAs)). *See* § 22.909.

Cellular markets. This term is obsolescent. *See* definition for ''Cellular Market Area (CMA).''

Cellular Radiotelephone Service. A radio service in which licensees are authorized to offer and provide cellular service for hire to the general public. This service was formerly titled Domestic Public Cellular Radio Telecommunications Service.

Cellular repeater. In the Cellular Radiotelephone Service, a stationary transmitter or device that automatically re-radiates the transmissions of base transmitters at a particular cell site and mobile stations communicating with those base transmitters, with or without channel translation.

Cellular service. Radio telecommunication services provided using a cellular system.

Cellular system. An automated high-capacity system of one or more multichannel base stations designed to provide radio telecommunication services to mobile stations over a wide area in a spectrally efficient manner. Cellular systems employ techniques such as low transmitting power and automatic hand-off between base stations of communications in progress to enable channels to be reused at relatively short distances. Cellular systems may also employ digital techniques such as

voice encoding and decoding, data compression, error correction, and time or code division multiple access in order to increase system capacity.

Center frequency. The frequency of the middle of the bandwidth of a channel.

Central office transmitter. A fixed transmitter in the Rural Radiotelephone Service that provides service to rural subscriber stations.

CGSA. See *Cellular Geographic Service Area*.

Channel. The portion of the electromagnetic spectrum assigned by the FCC for one emission. In certain circumstances, however, more than one emission may be transmitted on a channel.

Channel bandwidth. The spectral width of a channel, as specified in this part, within which 99% of the emission power must be contained.

Channel block. A group of channels that are assigned together, not individually.

Channel pair. Two channels that are assigned together, not individually. In this part, channel pairs are indicated by an ellipsis between the center frequencies.

Communications channel. In the Cellular Radiotelephone and Air-Ground Radiotelephone Services, a channel used to carry subscriber communications.

Construction period. The period between the date of grant of an authorization and the date of required commencement of service.

Control channel. In the Cellular Radiotelephone Service and the Air-Ground Radiotelephone Service, a channel used to transmit information necessary to establish or maintain communications. In the other Public Mobile Services, a channel that may be assigned to a control transmitter.

Control point. A location where the operation of a public mobile station is supervised and controlled by the licensee of that station.

Control transmitter. A fixed transmitter in the Public Mobile Services that transmits control signals to one or more base or fixed stations for the purpose of controlling the operation of the base or fixed stations, and/or transmits subscriber communications to one or more base or fixed stations that retransmit them to subscribers.

Dead spots. Small areas within a service area where the field strength is lower than the minimum level for reliable service. Service within dead spots is presumed.

Dispatch service. A radiotelephone service comprising communications between a dispatcher and one or more mobile units. These communications normally do not exceed one minute in duration and are transmitted directly through a base station, without passing through mobile telephone switching facilities.

Effective radiated power (ERP). The effective radiated power of a transmitter (with antenna, transmission line, duplexers etc.) is the power that would be necessary at the input terminals of a reference half-wave dipole antenna in order to produce the same maximum field intensity. ERP is usually calculated by multiplying the measured transmitter output power by the specified antenna system gain, relative to a half-wave dipole, in the direction of interest.

Emission. The electromagnetic energy radiated from an antenna.

Emission designator. An internationally accepted symbol for describing an emission in terms of its bandwidth and the characteristics of its modulation, if any. See § 2.201 of this chapter for details.

Emission mask. The design limits imposed, as a condition or certification, on the mean power of emissions as a function of frequency both within the authorized bandwidth and in the adjacent spectrum.

Equivalent isotropically radiated power (EIRP). The equivalent isotropically radiated power of a transmitter (with antenna, transmission line, duplexers etc.) is the power that would be necessary at the input terminals of a reference isotropic radiator in order to produce the same maximum field intensity. An isotropic radiator is a theoretical lossless point source of radiation with unity gain in all directions. EIRP is usually calculated by multiplying the measured transmitter output power by the specified antenna system gain, relative to an isotropic radiator, in the direction of interest.

Extension. In the Cellular Radiotelephone Service, an area within the service area boundary (calculated using the methodology of § 22.911) of a Cellular system but outside the licensed Cellular Geographic Service Area boundary. *See* §§ 22.911 and 22.912.

Facsimile service. Transmission of still images from one place to another by means of radio.

Fill-in transmitters. Transmitters added to a station, in the same area and transmitting on the same channel or channel block as previously authorized transmitters, that do not expand the existing service area, but are established for the purpose of improving reception in dead spots.

Fixed transmitter. A stationary transmitter that communicates with other stationary transmitters.

Frequency. The number of cycles occurring per second of an electrical or electromagnetic wave; a number representing a specific point in the electromagnetic spectrum.

Ground station. In the Air-Ground Radiotelephone Service, a stationary transmitter that provides service to airborne mobile stations.

Gulf of Mexico Service Area (GMSA). The cellular market comprising the water area of the Gulf of Mexico bounded on the West, North and East by the coastline. Coastline, for this purpose, means the line of ordinary low water along that portion of the coast which is in direct contact with the open sea, and the line marking the seaward limit of inland waters. Inland waters include bays, historic inland waters and waters circumscribed by a fringe of islands within the immediate vicinity of the shoreline.

Height above average terrain (HAAT). The height of an antenna above the average elevation of the surrounding area.

In-building radiation systems. Supplementary systems comprising low power transmitters, receivers, indoor antennas and/or leaky coaxial cable radiators, designed to improve service reliability inside buildings or structures located within the service areas of stations in the Public Mobile Services.

Initial cellular applications. Applications for authority to construct and operate a new cellular system, excluding applications for interim operating authority.

Interfering contour. The locus of points surrounding a transmitter where the predicted median field strength of the signal from that transmitter is the maximum field strength that is not considered to cause interference at the service contour of another transmitter.

Interoffice transmitter. A fixed transmitter in the Rural Radiotelephone Service that communicates with other interoffice transmitters for the purpose of interconnecting rural central offices.

Mobile station. One or more transmitters that are capable of operation while in motion.

Necessary bandwidth. The calculated spectral width of an emission. Calculations are made using procedures set forth in part 2 of this chapter. The bandwidth so calculated is considered to be the minimum necessary to convey information at the desired rate with the desired accuracy.

Occupied bandwidth. The measured spectral width of an emission. The measurement determines occupied bandwidth as the difference between upper and lower frequencies where 0.5% of the emission power is above the upper frequency and 0.5% of the emission power is below the lower frequency.

Offshore central transmitter. A fixed transmitter in the Offshore Radiotelephone Service that provides service to offshore subscriber stations.

Offshore Radiotelephone Service. A radio service in which licensees are authorized to offer and provide radio telecommunication services for hire to subscribers on structures in the offshore coastal waters of the Gulf of Mexico.

Offshore subscriber station. One or more fixed and/or mobile transmitters in the Offshore Radiotelephone Service that receive service from offshore central transmitters.

Pager. A small radio receiver designed to be carried by a person and to give an aural, visual or tactile indication when activated by the reception of a radio signal containing its specific code. It may also reproduce sounds and/or display messages that were also

transmitted. Some pagers also transmit a radio signal acknowledging that a message has been received.

Paging geographic area authorization. An authorization conveying the exclusive right to establish and expand one or more stations throughout a paging geographic area or, in the case of a partitioned geographic area, throughout a specified portion of a paging geographic area, on a specified channel allocated for assignment in the Paging and Radiotelephone Service. These are subject to the conditions that no interference may be caused to existing co-channel stations operated by other licensees within the paging geographic area and that no interference may be caused to existing or proposed co-channel stations of other licensees in adjoining paging geographic areas.

Paging geographic areas. Standard geographic areas used by the FCC for administrative convenience in the licensing of stations to operate on channels allocated for assignment in the Paging and Radiotelephone Service. *See* § 22.503(b).

Paging and Radiotelephone Service. A radio service in which common carriers are authorized to offer and provide paging and radiotelephone service for hire to the general public. This service was formerly titled Public Land Mobile Service.

Paging service. Transmission of coded radio signals for the purpose of activating specific pagers; such transmissions may include messages and/or sounds.

Public Mobile Services. Radio services in which licensees are authorized to offer and provide mobile and related fixed radio telecommunication services for hire to the public.

Radio telecommunication services. Communication services provided by the use of radio, including radiotelephone, radiotelegraph, paging and facsimile service.

Radiotelegraph service. Transmission of messages from one place to another by means of radio.

Radiotelephone service. Transmission of sound from one place to another by means of radio.

Repeater. A fixed transmitter that retransmits the signals of other stations.

Roamer. A mobile station receiving service from a station or system in the Public Mobile Services other than one to which it is a subscriber.

Rural Radiotelephone Service. A radio service in which licensees are authorized to offer and provide radio telecommunication services for hire to subscribers in areas where it is not feasible to provide communication services by wire or other means.

Rural subscriber station. One or more fixed transmitters in the Rural Radiotelephone Service that receive service from central office transmitters.

Service area. The geographic area considered by the FCC to be reliably served by a station in the Public Mobile Services.

Service contour. The locus of points surrounding a transmitter where the predicted median field strength of the signal from that transmitter is the minimum field strength that is considered sufficient to provide reliable service to mobile stations.

Service to subscribers. Service to at least one subscriber that is not affiliated with, controlled by or related to the providing carrier.

Signal booster. A stationary device that automatically reradiates signals from base transmitters without channel translation, for the purpose of improving the reliability of existing service by increasing the signal strength in dead spots.

Station. A station equipped to engage in radio communication or radio transmission of energy (47 U.S.C. 153(k)).

Telecommunications common carrier. An individual, partnership, association, joint-stock company, trust or corporation engaged in rendering radio telecommunications services to the general public for hire.

Temporary fixed station. One or more fixed transmitters that normally do not remain at any particular location for longer than 6 months.

Universal licensing system. The Universal Licensing System (ULS) is the consolidated database, application filing system, and processing system for all Wireless Radio Services. ULS supports electronic filing of all applications and related documents by applicants and licensees in the Wireless

Radio Services, and provides public access to licensing information.

Unserved Area. With regard to a channel block allocated for assignment in the Cellular Radiotelephone Service: Geographic area in the District of Columbia, or any State, Territory or Possession of the United States of America that is not within any Cellular Geographic Service Area of any Cellular system authorized to transmit on that channel block. With regard to a channel allocated for assignment in the Paging and Radiotelephone service: Geographic area within the District of Columbia, or any State, Territory or possession of the United States of America that is not within the service contour of any base transmitter in any station authorized to transmit on that channel.

[59 FR 59507, Nov. 17, 1994, as amended at 61 FR 31050, June 19, 1996; 61 FR 54098, Oct. 17, 1996; 62 FR 11628, Mar. 12, 1997; 63 FR 36603, July 7, 1998; 63 FR 68943, Dec. 14, 1998; 67 FR 9609, Mar. 4, 2002; 70 FR 19307, Apr. 13, 2005; 79 FR 72150, Dec. 5, 2014]

Subpart B—Licensing Requirements and Procedures

APPLICATIONS AND NOTIFICATIONS

§ 22.107 General application requirements.

In general, applications for authorizations, assignments of authorizations, or consent to transfer of control of licensees in the Public Mobile Services must:

(a) Demonstrate the applicant's qualifications to hold an authorization in the Public Mobile services;

(b) State how a grant would serve the public interest, convenience, and necessity;

(c) Contain all information required by FCC rules or application forms;

(d) Propose operation of a facility in compliance with all rules governing the Public Mobile service;

(e) Be amended as necessary to remain substantially accurate and complete in all significant respects, in accordance with the provisions of § 1.65 of this chapter; and,

(f) Be signed in accordance with § 1.743 of this chapter.

§ 22.131 Procedures for mutually exclusive applications.

Two or more pending applications are mutually exclusive if the grant of one application would effectively preclude the grant of one or more of the others under Commission rules governing the Public Mobile Services involved. The Commission uses the general procedures in this section for processing mutually exclusive applications in the Public Mobile Services. Additional specific procedures are prescribed in the subparts of this part governing the individual Public Mobile Services (see §§ 22.509, 22.717, and 22.949) and in part 1 of this chapter.

(a) *Separate applications.* Any applicant that files an application knowing that it will be mutually exclusive with one or more applications should not include in the mutually exclusive application a request for other channels or facilities that would not, by themselves, render the application mutually exclusive with those other applications. Instead, the request for such other channels or facilities should be filed in a separate application.

(b) *Filing groups.* Pending mutually exclusive applications are processed in filing groups. Mutually exclusive applications in a filing group are given concurrent consideration. The Commission may dismiss as defective (pursuant to § 1.945 of this chapter) any mutually exclusive application(s) whose filing date is outside of the date range for inclusion in the filing group. The types of filing groups used in day-to-day application processing are specified in paragraph (c)(3) of this section. A filing group is one of the following types:

(1) *Renewal filing group.* A renewal filing group comprises a timely-filed application for renewal of an authorization and all timely-filed mutually exclusive competing applications (*see* § 1.935 of this chapter).

(2) *Same-day filing group.* A same-day filing group comprises all mutually exclusive applications whose filing date is the same day, which is normally the filing date of the first-filed application(s).

(3) *Thirty-day notice and cut-off filing group.* A 30-day notice and cut-off filing group comprises mutually exclusive applications whose filing date is no

later than thirty (30) days after the date of the Public Notice listing the first-filed application(s) (according to the filing dates) as acceptable for filing.

(4) *Window filing group.* A window filing group comprises mutually exclusive applications whose filing date is within an announced filing window. An announced filing window is a period of time between and including two specific dates, which are the first and last dates on which applications (or amendments) for a particular purpose may be accepted for filing. In the case of a one-day window, the two dates are the same. The dates are made known to the public in advance.

(c) *Procedures.* Generally, the Commission may grant one application in a filing group of mutually exclusive applications and dismiss the other application(s) in the filing that are excluded by that grant, pursuant to §1.945 of this chapter.

(1) *Selection methods.* In selecting the application to grant, the Commission will use competitive bidding.

(2) *Dismissal of applications.* The Commission may dismiss any application in a filing group that is defective or otherwise subject to dismissal under §1.945 of this chapter, either before or after employing selection procedures.

(3) *Type of filing group used.* Except as otherwise provided in this part, the type of filing group used in the processing of two or more mutually exclusive applications depends upon the purpose(s) of the applications.

(i) If one of the mutually exclusive applications is a timely-filed application for renewal of an authorization, a renewal filing group is used.

(ii) If any mutually exclusive application filed on the earliest filing date is an application for modification and none of the mutually exclusive applications is a timely-filed application for renewal, a same-day filing group is used.

(iii) If all of the mutually exclusive applications filed on the earliest filing date are applications for initial authorization, a 30-day notice and cut-off filing group is used.

(4) *Disposition.* If there is only one application in any type of filing group, the Commission may grant that application and dismiss without prejudice any mutually exclusive applications not in the filing group. If there is more than one mutually exclusive application in a filing group, the Commission disposes of these applications as follows:

(i) *Applications in a renewal filing group.* All mutually exclusive applications in a renewal filing group are designated for comparative consideration in a hearing.

(ii) *Applications in a 30-day notice and cut-off filing group.* (A) If all of the mutually exclusive applications in a 30-day notice and cut-off filing group are applications for initial authorization, the FCC administers competitive bidding procedures in accordance with §§22.201 through 22.227 and subpart Q of part 1 of this chapter, as applicable. After such procedures, the application of the successful bidder may be granted and the other applications may be dismissed without prejudice.

(B) If any of the mutually exclusive applications in a 30-day notice and cut-off filing group is an application for modification, the Commission may attempt to resolve the mutual exclusivity by facilitating a settlement between the applicants. If a settlement is not reached within a reasonable time, the FCC may designate all applications in the filing group for comparative consideration in a hearing. In this event, the result of the hearing disposes all of the applications in the filing group.

(iii) *Applications in a same-day filing group.* If there are two or more mutually exclusive applications in a same-day filing group, the Commission may attempt to resolve the mutual exclusivity by facilitating a settlement between the applicants. If a settlement is not reached within a reasonable time, the Commission may designate all applications in the filing group for comparative consideration in a hearing. In this event, the result of the hearing disposes of all of the applications in the filing group.

(iv) *Applications in a window filing group.* Applications in a window filing group are processed in accordance with the procedures for a 30-day notice and cut-off filing group in paragraph (c)(4)(ii) of this section.

(d) *Terminology.* For the purposes of this section, terms have the following meanings:

(1) The *filing date* of an application is the date on which that application was received in a condition acceptable for filing or the date on which the most recently filed major amendment to that application was received, whichever is later, excluding major amendments in the following circumstances:

(i) The major amendment reflects only a change in ownership or control found by the Commission to be in the public interest;

(ii) The major amendment as received is defective or otherwise found unacceptable for filing; or

(iii) The application being amended has been designated for hearing and the Commission or the presiding officer accepts the major amendment.

(2) An *application for initial authorization* is:

(i) Any application requesting an authorization for a new system or station;

(ii) Any application requesting authorization for an existing station to operate on an additional channel, unless the additional channel is for paired two-way radiotelephone operation, is in the same frequency range as the existing channel(s), and will be operationally integrated with the existing channel(s) such as by trunking;

(iii) Any application requesting authorization for a new transmitter at a location more than 2 kilometers (1.2 miles) from any existing transmitters of the applicant licensee on the requested channel or channel block; or

(iv) Any application to expand the Cellular Geographic Service Area of an existing Cellular system. *See* § 22.911.

(v) Any ''short-form'' application (filed on FCC Form 175) requesting a new paging geographic area authorization.

[59 FR 59954, Nov. 21, 1994, as amended at 62 FR 11629, Mar. 12, 1997; 63 FR 68943, Dec. 14, 1998; 79 FR 72150, Dec. 5, 2014]

§ 22.143 Construction prior to grant of application.

Applicants may construct facilities in the Public Mobile services prior to grant of their applications, subject to the provisions of this section, but must not operate such facilities until the FCC grants an authorization. If the conditions stated in this section are not met, applicants must not begin to construct facilities in the Public Mobile Services.

(a) *When applicants may begin construction.* An applicant may begin construction of a facility 35 days after the date of the Public Notice listing the application for that facility as acceptable for filing.

(b) *Notification to stop.* If the FCC for any reason determines that construction should not be started or should be stopped while an application is pending, and so notifies the applicant, orally (followed by written confirmation) or in writing, the applicant must not begin construction or, if construction has begun, must stop construction immediately.

(c) *Assumption of risk.* Applicants that begin construction pursuant to this section before receiving an authorization do so at their own risk and have no recourse against the United States for any losses resulting from:

(1) Applications that are not granted;

(2) Errors or delays in issuing Public Notices;

(3) Having to alter, relocate or dismantle the facility; or

(4) Incurring whatever costs may be necessary to bring the facility into compliance with applicable laws, or FCC rules and orders.

(d) *Conditions.* Except as indicated, all pre-grant construction is subject to the following conditions:

(1) The application is not mutually exclusive with any other application, except for successful bidders and tentative selectees in the Cellular Radiotelephone Service;

(2) No petitions to deny the application have been filed;

(3) The application does not include a request for a waiver of one or more FCC rules;

(4) For any construction or alteration that would exceed the requirements of § 17.7 of this chapter, the licensee has notified the appropriate Regional Office of the Federal Aviation Administration (FAA Form 7460–1), secured a valid FAA determination of ''no hazard,'' and received antenna height clearance and obstruction

marking and lighting specifications (FCC Form 854R) from the FCC for the proposed construction or alteration.

(5) The applicant has indicated in the application that the proposed facility would not have a significant environmental effect, in accordance with §§1.1301 through 1.1319 of this chapter; and,

(6) Under applicable international agreements and rules in this part, individual coordination of the proposed channel assignment(s) with a foreign administration is not required.

[59 FR 59507, Nov. 17, 1994, as amended at 70 FR 19308, Apr. 13, 2005; 77 FR 3954, Jan. 26, 2012; 79 FR 72151, Dec. 5, 2014]

§ 22.150 Standard pre-filing technical coordination procedure.

For operations on certain channels in the Public Mobile Services, carriers must attempt to coordinate the proposed use of spectrum with other spectrum users prior to filing an application for authority to operate a station. Rules requiring this procedure for specific channels and types of stations are contained in the subparts governing the individual Public Mobile Services.

(a) Coordination comprises two steps—notification and response. Each step may be accomplished orally or in writing.

(b) Notification must include relevant technical details of the proposal. At minimum, this should include the following:

(1) Geographical coordinates of the antenna site(s).

(2) Transmitting and receiving channels to be added or changed.

(3) Transmitting power, emission type and polarization.

(4) Transmitting antenna pattern and maximum gain.

(5) Transmitting antenna height above ground level.

(c) Applicants and licensees receiving notification must respond promptly, even if no channel usage conflicts are anticipated. If any notified party fails to respond within 30 days, the applicant may file the application without a response from that party.

(d) The 30-day period begins on the date the notification is submitted to the Commission via the ULS. If the notification is by mail, this date may be ascertained by:

(1) The return receipt on certified mail,

(2) The enclosure of a card to be dated and returned by the party being notified, or

(3) A reasonable estimate of the time required for the mail to reach its destination. In this case, the date when the 30-day period will expire must be stated in the notification.

(e) All channel usage conflicts discovered during the coordination process should be resolved prior to filing of the application. If the applicant is unable or unwilling to resolve a particular conflict, the application may be accepted for filing if it contains a statement describing the unresolved conflict and a brief explanation of the reasons why a resolution was not achieved.

(f) If a number of changes in the technical parameters of a proposed facility become necessary during the course of the coordination process, an attempt should be made to minimize the number of separate notifications. If the changes are incorporated into a completely revised notice, the items that were changed from the previous notice should be identified.

(g) In situations where subsequent changes are not numerous or complex, the party receiving the changed notification should make an effort to respond in less than 30 days. If the applicant believes a shorter response time is reasonable and appropriate, it should so indicate in the notice and suggest a response date.

(h) If a subsequent change in the technical parameters of a proposed facility could not affect the facilities of one or more of the parties that received an initial notification, the applicant is not required to coordinate that change with these parties. However, these parties must be advised of the change and of the opinion that coordination is not required.

[59 FR 59507, Nov. 17, 1994, as amended at 63 FR 68944, Dec. 14, 1998]

§ 22.165 Additional transmitters for existing systems.

A licensee may operate additional transmitters at additional locations on

the same channel or channel block as its existing system without obtaining prior Commission approval provided:

(a) *International coordination.* The locations and/or technical parameters of the additional transmitters are such that individual coordination of the channel assignment(s) with a foreign administration, under applicable international agreements and rules in this part, is not required.

(b) *Antenna structure registration.* Certain antenna structures must be registered with the Commission prior to construction or alteration. Registration requirements are contained in part 17 of this chapter.

(c) *Environmental.* The additional transmitters must not have a significant environmental effect as defined by §§ 1.1301 through 1.1319 of this chapter.

(d) *Paging and Radiotelephone Service.* The provisions in this paragraph apply for stations in the Paging and Radiotelephone Service.

(1) The interfering contours of the additional transmitter(s) must be totally encompassed by the composite interfering contour of the existing station (or stations under common control of the applicant) on the same channel, except that this limitation does not apply to nationwide network paging stations or in-building radiation systems.

(2) [Reserved]

(3) The additional transmitters must not operate on control channels in the 72–76 MHz, 470–512 MHz, 928 MHz, 932 MHz, 941 MHz or 959 MHz frequency ranges.

(e) *Cellular Radiotelephone Service.* The service area boundaries (SABs) of the additional transmitters, as calculated by the method set forth in § 22.911(a), must not cause an expansion of the Cellular Geographic Service Area (CGSA), and must not extend outside the CGSA boundary into Unserved Area unless such extension is less than 130 contiguous square kilometers (50 contiguous square miles). The licensee must seek prior approval (using FCC Form 601) regarding any transmitters to be added under this section that would cause an expansion of the CGSA, or an SAB extension of 130 contiguous square kilometers (50 contiguous square miles) or more, into Unserved Area. *See* §§ 22.912, 22.953.

(f) *Air-ground Radiotelephone Service.* Ground stations may be added to Commercial Aviation air-ground systems at previously established ground station locations, pursuant to § 22.859, subject to compliance with the applicable technical rules. This section does not apply to General Aviation air-ground stations.

(g) *Rural Radiotelephone Service.* A ''service area'' and ''interfering contours'' must be determined using the same method as for stations in the Paging and Radiotelephone Service. The service area and interfering contours so determined for the additional transmitter(s) must be totally encompassed by the similarly determined composite service area contour and predicted interfering contour, respectively, of the existing station on the same channel. This section does not apply to Basic Exchange Telecommunications Radio Systems.

(h) *Offshore Radiotelephone Service.* This section does not apply to stations in the Offshore Radiotelephone Service.

(i) *Provision of information upon request.* Upon request by the FCC, licensees must supply administrative or technical information concerning the additional transmitters. At the time transmitters are added pursuant to this section, licensees must make a record of the pertinent technical and administrative information so that such information is readily available. See § 22.303.

[59 FR 59507, Nov. 17, 1994; 59 FR 64856, Dec. 16, 1994; as amended at 62 FR 11629, Mar. 12, 1997; 63 FR 68944, Dec. 14, 1998; 64 FR 53240, Oct. 1, 1999; 67 FR 77190, Dec. 17, 2002; 78 FR 25174, Apr. 29, 2013; 79 FR 72151, Dec. 5, 2014]

§ 22.169 International coordination of channel assignments.

Channel assignments under this part are subject to the applicable provisions and requirements of treaties and other international agreements between the United States government and the governments of Canada and Mexico.

COMPETITIVE BIDDING PROCEDURES

SOURCE: 62 FR 11629, Mar. 12, 1997, unless otherwise noted.

§ 22.201 Paging geographic area authorizations are subject to competitive bidding.

Mutually exclusive initial applications for paging geographic area licenses are subject to competitive bidding. The general competitive bidding procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this subpart and part 90 of this chapter.

[67 FR 45366, July 9, 2002]

§§ 22.203–22.211 [Reserved]

§ 22.213 Filing of long-form applications.

After an auction, the Commission will not accept long form applications for paging geographic authorizations from anyone other than the auction winners and parties seeking partitioned authorizations pursuant to agreements with auction winners under § 22.221.

[67 FR 45366, July 9, 2002]

§ 22.215 [Reserved]

§ 22.217 Bidding credit for small businesses.

A winning bidder that qualifies as a small business, as defined in § 22.223(b)(1), or a consortium of small businesses may use a bidding credit of thirty-five (35) percent to lower the cost of its winning bid. A winning bidder that qualifies as a small business, as defined in § 22.223(b)(2), or consortium of small businesses may use a bidding credit of twenty-five (25) percent to lower the cost of its winning bid.

[68 FR 42998, July 21, 2003]

§ 22.221 Eligibility for partitioned licenses.

If partitioned licenses are being applied for in conjunction with a license(s) to be awarded through competitive bidding procedures—

(a) The applicable procedures for filing short-form applications and for submitting upfront payments and down payments contained in this chapter shall be followed by the applicant, who must disclose as part of its short-form application all parties to agreement(s) with or among other entities to partition the license pursuant to this section, if won at auction (*see* 47 CFR 1.2105(a)(2)(viii));

(b) Each party to an agreement to partition the authorization must file a long-form application (FCC Form 601) for its respective, mutually agreed-upon geographic area together with the application for the remainder of the MEA or EA filed by the auction winner.

(c) If the partitioned authorization is being applied for as a partial assignment of the MEA or EA authorization following grant of the initial authorization, request for authorization for partial assignment of an authorization shall be made pursuant to § 1.948 of this part.

[59 FR 59507, Nov. 17, 1994, as amended at 64 FR 33781, June 24, 1999]

§ 22.223 Designated entities.

(a) *Scope.* The definitions in this section apply to §§ 22.201 through 22.227, unless otherwise specified in those sections.

(b) A small business is an entity that either:

(1) Together with its affiliates and controlling interests has average gross revenues that are not more than $3 million for the preceding three years; or

(2) Together with its affiliates and controlling interests has average gross revenues that are not more than $15 million for the preceding three years.

[68 FR 42998, July 21, 2003]

§ 22.225 Certifications, disclosures, records maintenance, and definitions.

(a) *Records maintenance.* All winning bidders qualifying as small businesses shall maintain at their principal place of business an updated file of ownership, revenue, and asset information, including any documents necessary to establish small businesses under § 22.223. Licensees (and their successors-in-interest) shall maintain such files for the term of the license. Applicants that do not obtain the license(s) for which they applied shall maintain such files until the grant of such license(s) is final, or one year from the date of

the filing of their short-form application (FCC Form 175), whichever is earlier.

(b) *Definition.* The term small business used in this section is defined in § 22.223.

[67 FR 45367, July 9, 2002, as amended at 68 FR 42998, July 21, 2003]

§ 22.227 Petitions to deny and limitations on settlements.

(a) Procedures regarding petitions to deny long-form applications in the paging service will be governed by § 1.939 of this chapter.

(b) The consideration that an individual or an entity will be permitted to receive for agreeing to withdraw an application or petition to deny will be limited by the provisions set forth in § 1.935 of this chapter.

[67 FR 45367, July 9, 2002]

§ 22.229 Designated entities.

(a) *Eligibility for small business provisions.* (1) A very small business is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding $3 million for the preceding three years.

(2) A small business is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding $15 million for the preceding three years.

(3) An entrepreneur is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding $40 million for the preceding three years.

(b) *Bidding credits.* A winning bidder that qualifies as a very small business, as defined in this section, or a consortium of very small businesses may use the bidding credit specified in § 1.2110(f)(2)(i) of this chapter. A winning bidder that qualifies as a small business, as defined in this section, or a consortium of small businesses may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter. A winning bidder that qualifies as an entrepreneur, as defined in this section, or a consortium of entrepreneurs may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter.

[67 FR 11434, Mar. 14, 2002, as amended at 68 FR 42998, July 21, 2003]

Subpart C—Operational and Technical Requirements

OPERATIONAL REQUIREMENTS

§ 22.301 Station inspection.

Upon reasonable request, the licensee of any station authorized in the Public Mobile Services must make the station and station records available for inspection by authorized representatives of the Commission at any reasonable hour.

[59 FR 59955, Nov. 21, 1994]

§ 22.303 Retention of station authorizations; identifying transmitters.

The current authorization for each station, together with current administrative and technical information concerning modifications to facilities pursuant to § 1.929 of this chapter, and added facilities pursuant to § 22.165 must be retained as a permanent part of the station records. A clearly legible photocopy of the authorization must be available at each regularly attended control point of the station, or in lieu of this photocopy, licensees may instead make available at each regularly attended control point the address or location where the licensee's current authorization and other records may be found.

[70 FR 61058, Oct. 20, 2005]

§ 22.305 Operator and maintenance requirements.

FCC operator permits and licenses are not required to operate, repair or maintain equipment authorized in the Public Mobile Services. Station licensees are responsible for the proper operation and maintenance of their stations, and for compliance with FCC rules.

§ 22.307 Operation during emergency.

Licensees of stations in the Public Mobile services may, during a period of emergency in which normal communications facilities are disrupted as a result of hurricane, flood, earthquake

or other natural disaster, civil unrest, widespread vandalism, national emergencies or emergencies declared by Executive Order of the President, use their stations to temporarily provide emergency communications services in a manner or configuration not normally allowed by this part, provided that such operations comply with the provisions of this section.

(a) *Technical limitations.* Public Mobile stations providing temporary emergency communications service must not transmit:

(1) On channels other than those authorized for normal operations.

(2) With power in excess of that authorized for normal operations;

(3) Emission types other than those authorized for normal operations.

(b) *Discontinuance.* Temporary emergency use of Public Mobile stations must be discontinued as soon as normal communication facilities are restored. The FCC may, at any time, order the discontinuance of any such emergency communication services.

§ 22.313 Station identification.

The licensee of each station in the Public Mobile Services must ensure that the transmissions of that station are identified in accordance with the requirements of this section.

(a) Station identification is not required for transmission by:

(1) Stations in the Cellular Radiotelephone Service;

(2) General aviation ground stations in the Air-ground Radiotelephone Service;

(3) [Reserved]

(4) Stations using Basic Exchange Telephone Radio Systems in the Rural Radiotelephone Service;

(5) [Reserved]

(6) Stations operating pursuant to paging geographic area authorizations.

(b) For all other stations in the Public Mobile Services, station identification must be transmitted each hour within five minutes of the hour, or upon completion of the first transmission after the hour. Transmission of station identification may be temporarily delayed to avoid interrupting the continuity of any public communication in progress, provided that station identification is transmitted at the conclusion of that public communication.

(c) Station identification must be transmitted by telephony using the English language or by telegraphy using the international Morse code, and in a form that can be received using equipment appropriate for the modulation type employed, and understood without the use of unscrambling devices, except that, alternatively, station identification may be transmitted digitally, provided that the licensee provides the Commission with information sufficient to decode the digital transmission to ascertain the call sign. Station identification comprises transmission of the call sign assigned by the Commission to the station, however, the following may be used in lieu of the call sign.

(1) For transmission from subscriber operated transmitters, the telephone number or other designation assigned by the carrier, provided that a written record of such designations is maintained by the carrier;

(2) For general aviation airborne mobile stations in the Air-Ground Radiotelephone Service, the official FAA registration number of the aircraft;

(3) For stations in the Paging and Radiotelephone Service, a call sign assigned to another station within the same system.

[59 FR 59507, Nov. 17, 1994, as amended at 59 FR 59955, Nov. 21, 1994; 62 FR 11633, Mar. 12, 1997; 70 FR 19308, Apr. 13, 2005]

§ 22.317 Discontinuance of station operation.

If the operation of a Public Mobile Services station is permanently discontinued, the licensee shall send authorization for cancellation by electronic filing via the ULS on FCC Form 601. For purposes of this section, any station that has not provided service to subscribers for 90 continuous days is considered to have been permanently discontinued, unless the applicant notified the FCC otherwise prior to the end of the 90 day period and provided a date on which operation will resume, which date must not be in excess of 30 additional days.

[59 FR 59507, Nov. 17, 1994, as amended at 61 FR 54099, Oct. 17, 1996; 63 FR 68944, Dec. 14, 1998]

§ 22.321 Equal employment opportunities.

Public Mobile Services licensees shall afford equal opportunity in employment to all qualified persons, and personnel must not be discriminated against in employment because of sex, race, color, religion, or national origin.

(a) *Equal employment opportunity program.* Each licensee shall establish, maintain, and carry out a positive continuing program of specific practices designed to assure equal opportunity in every aspect of employment policy and practice.

(1) Under the terms of its program, each licensee shall:

(i) Define the responsibility of each level of management to insure a positive application and vigorous enforcement of the policy of equal opportunity, and establish a procedure to review and control managerial and supervisory performance.

(ii) Inform its employees and recognized employee organizations of the positive equal employment opportunity policy and program and enlist their cooperation.

(iii) Communicate its equal employment opportunity policy and program and its employment needs to sources of qualified applicants without regard to sex, race, color, religion or national origin, and solicit their recruitment assistance on a continuing basis.

(iv) Conduct a continuing campaign to exclude every form of prejudice or discrimination based upon sex, race, color, religion, or national origin, from the licensee's personnel policies and practices and working conditions.

(v) Conduct a continuing review of job structure and employment practices and adopt positive recruitment, training, job design and other measures needed in order to ensure genuine equality of opportunity to participate fully in all organizational units, occupations and levels of responsibility.

(2) The program must reasonably address specific concerns through policies and actions as set forth in this paragraph, to the extent that they are appropriate in consideration of licensee size, location and other factors.

(i) *To assure nondiscrimination in recruiting.* (A) Posting notices in the licensee's offices informing applicants for employment of their equal employment rights and their right to notify the Equal Employment Opportunity Commission (EEOC), the Federal Communications Commission (FCC), or other appropriate agency. Where a substantial number of applicants are Spanish-surnamed Americans, such notice should be posted in both Spanish and English.

(B) Placing a notice in bold type on the employment application informing prospective employees that discrimination because of sex, race, color, religion or national origin is prohibited, and that they may notify the EEOC, the FCC or other appropriate agency if they believe they have been discriminated against.

(C) Placing employment advertisements in media which have significant circulation among minority groups in the recruiting area.

(D) Recruiting through schools and colleges with significant minority group enrollments.

(E) Maintaining systematic contacts with minority and human relations organizations, leaders and spokespersons to encourage referral of qualified minority or female applicants.

(F) Encouraging present employees to refer minority or female applicants.

(G) Making known to the appropriate recruitment sources in the employer's immediate area that qualified minority members are being sought for consideration whenever the licensee hires.

(ii) *To assure nondiscrimination in selection and hiring.* (A) Instructing employees of the licensee who make hiring decisions that all applicants for all jobs are to be considered without discrimination.

(B) Where union agreements exist, cooperating with the union or unions in the development of programs to assure qualified minority persons or females of equal opportunity for employment, and including an effective nondiscrimination clause in new or renegotiated union agreements.

(C) Avoiding use of selection techniques or tests that have the effect of discriminating against minority groups or females.

(iii) *To assure nondiscriminatory placement and promotion.* (A) Instructing employees of the licensee who make decisions on placement and promotion that minority employees and females are to be considered without discrimination, and that job areas in which there is little or no minority or female representation should be reviewed to determine whether this results from discrimination.

(B) Giving minority groups and female employees equal opportunity for positions which lead to higher positions. Inquiring as to the interest and skills of all lower-paid employees with respect to any of the higher-paid positions, followed by assistance, counseling, and effective measures to enable employees with interest and potential to qualify themselves for such positions.

(C) Reviewing seniority practices to insure that such practices are nondiscriminatory and do not have a discriminatory effect.

(D) Avoiding use of selection techniques or tests that have the effect of discriminating against minority groups or females.

(iv) *To assure nondiscrimination in other areas of employment practices.* (A) Examining rates of pay and fringe benefits for present employees with equivalent duties and adjusting any inequities found.

(B) Providing opportunity to perform overtime work on a basis that does not discriminate against qualified minority groups or female employees.

(b) *EEO statement.* Each licensee having 16 or more full-time employees shall file with the FCC, no later than May 31st following the grant of that licensee's first Public Mobile Services authorization, a statement describing fully its current equal employment opportunity program, indicating specific practices to be followed in order to assure equal employment opportunity on the basis of sex, race, color, religion or national origin in such aspects of employment practices as regards recruitment, selection, training, placement, promotion, pay, working conditions, demotion, layoff and termination. Any licensee having 16 or more full-time employees that changes its existing equal employment opportunity program shall file with the FCC, no later than May 31st thereafter, a revised statement reflecting the change(s).

NOTE TO PARAGRAPH (b) OF §22.321: Licensees having 16 or more full-time employees that were granted their first Public Mobile Services authorization prior to January 1, 1995, and do not have a current EEO statement on file with the FCC, must file such statement, required by paragraph (b) of this section, no later than May 31, 1995.

(c) *Report of complaints filed against licensees.* Each licensee, regardless of how many employees it has, shall submit an annual report to the FCC no later than May 31st of each year indicating whether any complaints regarding violations by the licensee or equal employment provisions of Federal, State, Territorial, or local law have been filed before anybody having competent jurisdiction.

(1) The report should state the parties involved, the date filing, the courts or agencies before which the matters have been heard, the appropriate file number (if any), and the respective disposition or current status of any such complaints.

(2) Any licensee who has filed such information with the EEOC may file a notification of such filing with the FCC in lieu of a report.

(d) *Complaints of violations of Equal Employment Programs.* Complaints alleging employment discrimination against a common carrier licensee are considered by the FCC in the following manner:

(1) If a complaint raising an issue of discrimination is received against a licensee who is within the jurisdiction of the EEOC, it is submitted to that agency. The FCC maintains a liaison with that agency that keeps the FCC informed of the disposition of complaints filed against common carrier licensees.

(2) Complaints alleging employment discrimination against a common carrier licensee who does not fall under the jurisdiction of the EEOC but is covered by appropriate enforceable State law, to which penalties apply, may be submitted by the FCC to the respective State agency.

(3) Complaints alleging employment discrimination against a common carrier licensee who does not fall under

the jurisdiction of the EEOC or an appropriate State law, are accorded appropriate treatment by the FCC.

(4) The FCC will consult with the EEOC on all matters relating to the evaluation and determination of compliance by the common carrier licensees with the principles of equal employment as set forth herein.

(5) Complaints indicating a general pattern of disregard of equal employment practices which are received against a licensee that is required to file an employment report to the FCC under §1.815(a) of this chapter are investigated by the FCC.

(e) *FCC records.* A copy of every annual employment report, equal employment opportunity program statement, reports on complaints regarding violation of equal employment provisions of Federal, State, Territorial, or local law, and copies of all exhibits, letters, and other documents filed as part thereof, all amendments thereto, all correspondence between the licensee and the FCC pertaining to the reports after they have been filed and all documents incorporated therein by reference, are open for public inspection at the offices of the FCC.

(f) *Licensee records.* Each licensee required to file annual employment reports (pursuant to §1.815(a) of this chapter), equal employment opportunity program statements, and annual reports on complaints regarding violations of equal employment provisions of Federal, State, Territorial, or local law shall maintain for public inspection a file containing a copy of each such report and copies of all exhibits, letters, and other documents filed as part thereto, all correspondence between the licensee and the FCC pertaining to the reports after they have been filed and all documents incorporated therein by reference. The documents must be retained for a period of 2 years.

§ 22.325 Control points.

Each station in the Public Mobile Services must have at least one control point and a person on duty who is responsible for station operation. This section does not require that the person on duty be at the control point or continuously monitor all transmissions of the station. However, the control point must have facilities that enable the person on duty to turn off the transmitters in the event of a malfunction.

TECHNICAL REQUIREMENTS

§ 22.351 Channel assignment policy.

The channels allocated for use in the Public Mobile Services are listed in the applicable subparts of this part. Channels and channel blocks are assigned in such a manner as to facilitate the rendition of service on an interference-free basis in each service area. Except as otherwise provided in this part, each channel or channel block is assigned exclusively to one licensee in each service area. All applicants for, and licensees of, stations in the Public Mobile Services shall cooperate in the selection and use of channels in order to minimize interference and obtain the most efficient use of the allocated spectrum.

[70 FR 19308, Apr. 13, 2005]

§ 22.352 Protection from interference.

Public Mobile Service stations operating in accordance with applicable FCC rules and the terms and conditions of their authorizations are normally considered to be non-interfering. If the FCC determines, however, that interference that significantly interrupts or degrades a radio service is being caused, it may, in accordance with the provisions of sections 303(f) and 316 of the Communications Act of 1934, as amended, (47 U.S.C. 303(f), 316), require modifications to any Public Mobile station as necessary to eliminate such interference.

(a) *Failure to operate as authorized.* Any licensee causing interference to the service of other stations by failing to operate its station in full accordance with its authorization and applicable FCC rules shall discontinue all transmissions, except those necessary for the immediate safety of life or property, until it can bring its station into full compliance with the authorization and rules.

(b) *Intermodulation interference.* Licensees should attempt to resolve such interference by technical means.

(c) *Situations in which no protection is afforded.* Except as provided elsewhere in this part, no protection from interference is afforded in the following situations:

(1) *Interference to base receivers from base or fixed transmitters.* Licensees should attempt to resolve such interference by technical means or operating arrangements.

(2) *Inteference to mobile receivers from mobile transmitters.* No protection is provided against mobile-to-mobile interference.

(3) *Interference to base receivers from mobile transmitters.* No protection is provided against mobile-to-base interference.

(4) *Interference to fixed stations.* Licensees should attempt to resolve such interference by technical means or operating arrangements.

(5) *Anomalous or infrequent propagation modes.* No protection is provided against interference caused by tropospheric and ionospheric propagation of signals.

(6) *Facilities for which the Commission is not notified.* No protection is provided against interference to the service of any additional or modified transmitter operating pursuant to §1.929 or §22.165, unless and until the licensee modifies its authorization using FCC Form 601.

(7) *In-building radiation systems.* No protection is provided against interference to the service of in-building radiation systems (see §22.383).

[59 FR 59507, Nov. 17, 1994, as amended at 62 FR 11633, Mar. 12, 1997; 63 FR 68944, Dec. 14, 1998; 70 FR 19308, Apr. 13, 2005]

§22.353 Blanketing interference.

Licensees of Public Mobile Services stations are responsible for resolving cases of blanketing interference in accordance with the provisions of this section.

(a) Except as provided in paragraph (c) of this section, licensees must resolve any cases of blanketing interference in their area of responsibility caused by operation of their transmitter(s) during a one-year period following commencement of service from new or modified transmitter(s). Interference must be resolved promptly at no cost to the complainant.

(b) The area of responsibility is that area in the immediate vicinity of the transmitting antenna of stations where the field strength of the electromagnetic radiation from such stations equals or exceeds 115 dBμV/m. To determine the radial distance to the boundary of this area, the following formula must be used:

$$d = 0.394 \times \sqrt{p}$$

where d is the radial distance to the boundary, in kilometers
p is the radial effective radiated power, in kilowatts

The maximum effective radiated power in the pertinent direction, without consideration of the antenna's vertical radiation pattern or height, must be used in the formula.

(c) Licensees are not required to resolve blanketing interference to mobile receivers or non-RF devices or blanketing interference occurring as a result of malfunctioning or mistuned receivers, improperly installed consumer antenna systems, or the use of high gain antennas or antenna booster amplifiers by consumers.

(d) Licensees that install transmitting antennas at a location where there are already one or more transmitting antennas are responsible for resolving any new cases of blanketing interference in accordance with this section.

(e) Two or more licensees that concurrently install transmitting antennas at the same location are jointly responsible for resolving blanketing interference cases, unless the FCC can readily determine which station is causing the interference, in which case the licensee of that station is held fully responsible.

(f) After the one year period of responsibility to resolve blanketing interference, licensees must provide upon request technical information to complainants on remedies for blanketing interference.

§22.355 Frequency tolerance.

Except as otherwise provided in this part, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table C–1 of this section.

TABLE C–1—FREQUENCY TOLERANCE FOR TRANSMITTERS IN THE PUBLIC MOBILE SERVICES

Frequency range (MHz)	Base, fixed (ppm)	Mobile >3 watts (ppm)	Mobile ≤3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929	5.0	n/a	n/a
929 to 960	1.5	n/a	n/a
2110 to 2220	10.0	n/a	n/a

[61 FR 54099, Oct. 17, 1996]

§ 22.357 Emission types.

Any authorized station in the Public Mobile Services may transmit emissions of any type(s) that comply with the applicable emission rule, *i.e.* § 22.359, § 22.861 or § 22.917.

[70 FR 19308, Apr. 13, 2005]

§ 22.359 Emission limitations.

The rules in this section govern the spectral characteristics of emissions in the Public Mobile Services, except for the Air-Ground Radiotelephone Service (see § 22.861, instead) and the Cellular Radiotelephone Service (see § 22.917, instead).

(a) *Out of band emissions.* The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

(b) *Measurement procedure.* Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 30 kHz or more. In the 60 kHz bands immediately outside and adjacent to the authorized frequency range or channel, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e., 30 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(c) *Alternative out of band emission limit.* Licensees in the Public Mobile Services may establish an alternative out of band emission limit to be used at specified frequencies (band edges) in specified geographical areas, in lieu of that set forth in this section, pursuant to a private contractual arrangement of all affected licensees and applicants. In this event, each party to such contract shall maintain a copy of the contract in their station files and disclose it to prospective assignees or transferees and, upon request, to the FCC.

(d) *Interference caused by out of band emissions.* If any emission from a transmitter operating in any of the Public Mobile Services results in interference to users of another radio service, the FCC may require a greater attenuation of that emission than specified in this section.

[70 FR 19308, Apr. 13, 2005]

§ 22.365 Antenna structures; air navigation safety.

Licensees that own their antenna structures must not allow these antenna structures to become a hazard to air navigation. In general, antenna structure owners are responsible for registering antenna structures with the FCC if required by part 17 of this chapter, and for installing and maintaining any required marking and lighting. However, in the event of default of this responsibility by an antenna structure owner, each FCC permittee or licensee authorized to use an affected antenna structure will be held responsible by the FCC for ensuring that the antenna structure continues to meet the requirements of part 17 of this chapter. See § 17.6 of this chapter.

(a) *Marking and lighting.* Antenna structures must be marked, lighted and maintained in accordance with part 17 of this chapter and all applicable rules and requirements of the Federal Aviation Administration.

(b) *Maintenance contracts.* Antenna structure owners (or licensees and permittees, in the event of default by an antenna structure owner) may enter into contracts with other entities to

monitor and carry out necessary maintenance of antenna structures. Antenna structure owners (or licensees and permittees, in the event of default by an antenna structure owner) that make such contractual arrangements continue to be responsible for the maintenance of antenna structures in regard to air navigation safety.

[61 FR 4365, Feb. 6, 1996]

§ 22.377 Certification of transmitters.

Transmitters used in the Public Mobile Services, including those used with signal boosters, in-building radiation systems and cellular repeaters, must be certificated for use in the radio services regulated under this part. Transmitters must be certificated when the station is ready for service, not necessarily at the time of filing an application. The FCC may list as certificated only transmitters that are capable of meeting all technical requirements of the rules governing the service in which they will operate. The procedure for obtaining certification is set forth in part 2 of this chapter.

[78 FR 25174, Apr. 29, 2013]

§ 22.383 In-building radiation systems.

Licensees may install and operate in-building radiation systems without applying for authorization or notifying the FCC, provided that the locations of the in-building radiation systems are within the protected service area of the licensee's authorized transmitter(s) on the same channel or channel block.

Subpart D [Reserved]

Subpart E—Paging and Radiotelephone Service

§ 22.501 Scope.

The rules in this subpart govern the licensing and operation of public mobile paging and radiotelephone stations. The licensing and operation of these stations are also subject to rules elsewhere in this part that apply generally to the Public Mobile Services. However, in case of conflict, the rules in this subpart govern.

§ 22.503 Paging geographic area authorizations.

The FCC considers applications for and issues paging geographic area authorizations in the Paging and Radiotelephone Service in accordance with the rules in this section. Each paging geographic area authorization contains conditions requiring compliance with paragraphs (h) and (i) of this section.

(a) *Channels.* The FCC may issue a paging geographic area authorization for any channel listed in § 22.531 of this part or for any channel pair listed in § 22.561 of this part.

(b) *Paging geographic areas.* The paging geographic areas are as follows:

(1) The Nationwide paging geographic area comprises the District of Columbia and all States, Territories and possessions of the United States of America.

(2) Major Economic Areas (MEAs) and Economic Areas (EAs) are defined below. EAs are defined by the Department of Commerce, Bureau of Economic Analysis. *See* Final Redefinition of the MEA Economic Areas, 60 FR 13114 (March 10, 1995). MEAs are based on EAs. In addition to the Department of Commerce's 172 EAs, the FCC shall separately license Guam and the Northern Mariana Islands, Puerto Rico and the United States Virgin Islands, and American Samoa, which have been assigned FCC-created EA numbers 173–175, respectively, and MEA numbers 49–51, respectively.

(3) The 51 MEAs are composed of one or more EAs as defined in the following table:

MEAs	EAs
1 (Boston)	1–3.
2 (New York City)	4–7, 10.
3 (Buffalo)	8.
4 (Philadelphia)	11–12.
5 (Washington)	13–14.
6 (Richmond)	15–17, 20.
7 (Charlotte-Greensboro-Greenville-Raleigh).	18–19, 21–26, 41–42, 46.
8 (Atlanta)	27–28, 37–40, 43.
9 (Jacksonville)	29, 35.
10 (Tampa-St. Petersburg-Orlando).	30, 33–34.
11 (Miami)	31–32.
12 (Pittsburgh)	9, 52–53.
13 (Cincinnati-Dayton)	48–50.
14 (Columbus)	51.
15 (Cleveland)	54–55.
16 (Detroit)	56–58, 61–62.
17 (Milwaukee)	59–60, 63, 104–105, 108.
18 (Chicago)	64–66, 68, 97, 101.

MEAs	EAs
19 (Indianapolis)	67.
20 (Minneapolis-St. Paul)	106–107, 109–114, 116.
21 (Des Moines-Quad Cities)	100, 102–103, 117.
22 (Knoxville)	44–45.
23 (Louisville-Lexington-Evansville).	47, 69–70, 72.
24 (Birmingham)	36, 74, 78–79.
25 (Nashville)	71.
26 (Memphis-Jackson)	73, 75–77.
27 (New Orleans-Baton Rouge).	80–85.
28 (Little Rock)	90–92, 95.
29 (Kansas City)	93, 99, 123.
30 (St. Louis)	94, 96, 98.
31 (Houston)	86–87, 131.
32 (Dallas-Fort Worth)	88–89, 127–130, 135, 137–138.
33 (Denver)	115, 140–143.
34 (Omaha)	118–121.
35 (Wichita)	122.
36 (Tulsa)	124.
37 (Oklahoma City)	125–126.
38 (San Antonio)	132–134.
39 (El Paso-Albuquerque)	136, 139, 155–157.
40 (Phoenix)	154, 158–159.
41 (Spokane-Billings)	144–147, 168.
42 (Salt Lake City)	148–150, 152.
43 (San Francisco-Oakland-San Jose).	151, 162–165.
44 (Los Angeles-San Diego)	153, 160–161.
45 (Portland)	166–167.
46 (Seattle)	169–170.
47 (Alaska)	171.
48 (Hawaii)	172.
49 (Guam and the Northern Mariana Islands).	173.
50 (Puerto Rico and U.S. Virgin Islands).	174.
51 (American Samoa)	175.

(c) *Availability*. The FCC may determine whether to issue a paging geographic area authorization for any specific channel or channel pair in any specific paging geographic area. The FCC may replace existing site specific authorizations for facilities on a channel or channel pair located in a paging geographic area with a paging geographic area authorization for that channel or channel pair, if in its sole discretion, the FCC determines that the public interest would be served by such replacement.

(d) *Filing windows*. The FCC accepts applications for paging geographic area authorizations only during filing windows. The FCC issues Public Notices announcing in advance the dates of the filing windows, and the specific paging geographic areas and channels for which applications may be accepted.

(e) *One grant per geographic area*. The FCC may grant one and only one application for a paging geographic area authorization for any specific channel or channel pair in any specific paging geographic area defined in paragraph (b) of this section. Selection from among mutually exclusive applications for a paging geographic area authorization will be made in accordance with the procedures in §§22.131 and 22.200 through 22.299. If after the selection process but prior to filing a ''long form'' application, a successful bidder decides to partition the paging geographic area, the FCC may require and accept multiple ''long form'' applications from the consortium members.

(f) *Exclusive right to expand*. During the term of a paging geographic area authorization, the FCC does not accept, from anyone other than the paging geographic area licensee, any major application for authorization to operate a facility that would serve unserved area within the paging geographic area specified in that paging geographic area authorization, on the channel specified in that paging geographic area authorization, unless any extension of the interfering contour of the proposed facility falls:

(1) Within the composite interfering contour of another licensee; or,

(2) Into unserved area and the paging geographic area licensee consents to such extension.

(g) *Subsequent applications not accepted*. During the term of a paging geographic area authorization, the FCC does not accept any application for authorization relating to a facility that is or would be located within the paging geographic area specified in that paging geographic area authorization, on the channel specified in that paging geographic area authorization, except in the following situations:

(1) FCC grant of an application authorizing the construction of the facility could have a significant environmental effect as defined by §1.1307 of this chapter. *See* §22.115(a)(5).

(2) Specific international coordination procedures are required, prior to assignment of a channel to the facility, pursuant to a treaty or other agreement between the United States government and the government of Canada or Mexico. *See* §22.169.

(3) The paging geographic area licensee or another licensee of a system

within the paging geographic area applies to assign its authorization or for FCC consent to a transfer of control.

(h) *Adjacent geographic area coordination required.* Before constructing a facility for which the interfering contour (as defined in § 22.537 or § 22.567 of this part, as appropriate for the channel involved) would extend into another paging geographic area, a paging geographic area licensee must obtain the consent of the relevant co-channel paging geographic area licensee, if any, into whose area the interfering contour would extend. Licensees are expected to cooperate fully and in good faith attempt to resolve potential interference problems before bringing matters to the FCC. In the event that there is no co-channel paging geographic area licensee from whom to obtain consent in the area into which the interfering contour would extend, the facility may be constructed and operated subject to the condition that, at such time as the FCC issues a paging geographic area authorization for that adjacent geographic area, either consent must be obtained or the facility modified or eliminated such that the interfering contour no longer extends into the adjacent geographic area.

(i) *Protection of existing service.* All facilities constructed and operated pursuant to a paging geographic area authorization must provide co-channel interference protection in accordance with § 22.537 or § 22.567, as appropriate for the channel involved, to all authorized co-channel facilities of exclusive licensees within the paging geographic area. Non-exclusive licensees on the thirty-five exclusive 929 MHz channels are not entitled to exclusive status, and will continue to operate under the sharing arrangements established with the exclusive licensees and other non-exclusive licensees that were in effect prior to February 19, 1997. MEA, EA, and nationwide geographic area licensees have the right to share with non-exclusive licensees on the thirty-five exclusive 929 MHz channels on a non-interfering basis.

(j) *Site location restriction.* The transmitting antenna of each facility constructed and operated pursuant to a paging geographic area authorization must be located within the paging geographic area specified in the authorization.

(k) *Coverage requirements.* Failure by an MEA or EA licensee to meet either the coverage requirements in paragraphs (k)(1) and (k)(2) of this section, or alternatively, the substantial service requirement in paragraph (k)(3) of this section, will result in automatic termination of authorizations for those facilities that were not authorized, constructed, and operating at the time the geographic area authorization was granted. MEA and EA licensees have the burden of showing when their facilities were authorized, constructed, and operating, and should retain necessary records of these sites until coverage requirements are fulfilled. For the purpose of this paragraph, to ''cover'' area means to include geographic area within the composite of the service contour(s) determined by the methods of § 22.537 or § 22.567 as appropriate for the particular channel involved. Licensees may determine the population of geographic areas included within their service contours using either the 1990 census or the 2000 census, but not both.

(1) No later than three years after the initial grant of an MEA or EA geographic area authorization, the licensee must construct or otherwise acquire and operate sufficient facilities to cover one third of the population in the paging geographic area. The licensee must notify the FCC at the end of the three-year period pursuant to § 1.946 of this chapter, either that it has satisfied this requirement or that it plans to satisfy the alternative requirement to provide substantial service in accordance with paragraph (k)(3) of this section.

(2) No later than five years after the initial grant of an MEA or EA geographic area authorization, the licensee must construct or otherwise acquire and operate sufficient facilities to cover two thirds of the population in the paging geographic area. The licensee must notify the FCC at the end of the five year period pursuant to § 1.946 of this chapter, either that it has satisfied this requirement or that it has satisfied the alternative requirement to provide substantial service in

accordance with paragraph (k)(3) of this section.

(3) As an alternative to the coverage requirements of paragraphs (k)(1) and (k)(2) of this section, the paging geographic area licensee may demonstrate that, no later than five years after the initial grant of its paging geographic area authorization, it provides substantial service to the paging geographic area. ''Substantial service'' means service that is sound, favorable, and substantially above a level of mediocre service that would barely warrant renewal.

[62 FR 11633, Mar. 12, 1997, as amended at 63 FR 68945, Dec. 14, 1998; 64 FR 33782, June 24, 1999]

§ 22.507 Number of transmitters per station.

This section concerns the number of transmitters licensed under each station authorization in the Paging and Radiotelephone Service, other than paging geographic area authorizations.

(a) *Operationally related transmitters.* Each station must have at least one transmitter. There is no limit to the number of transmitters that a station may comprise. However, transmitters within a station should be operationally related and/or should serve the same general geographical area. Operationally related transmitters are those that operate together as a system (*e.g.*, trunked systems, simulcast systems), rather than independently.

(b) *Split of large systems.* The FCC may split wide-area systems into two or more stations for administrative convenience. Except for nationwide paging and other operationally related transmitters, transmitters that are widely separated geographically are not licensed under a single authorization.

(c) *Consolidation of separate stations.* The FCC may consolidate site-specific contiguous authorizations upon request (FCC Form 601) of the licensee, if appropriate under paragraph (a) of this section. Paging licensees may include remote, stand-alone transmitters under the single system-wide authorization, if the remote, stand-alone transmitter is linked to the system via a control/repeater facility or by satellite. Including a remote, stand-alone transmitter in a system-wide authorization does not alter the limitations provided under § 22.503(f) on entities other than the paging geographic area licensee. In the alternative, paging licensees may maintain separate site-specific authorizations for stand-alone or remote transmitters. The earliest expiration date of the authorizations that make up the single system-wide authorization will determine the expiration date for the system-wide authorization. Licensees must file timely renewal applications for site-specific authorizations included in a single system-wide authorization request until the request is approved. Renewal of the system-wide authorization will be subject to § 1.949 of this chapter.

(d) *Replacement of site-by-site authorizations with single authorization.* After a paging geographic area authorization for a channel has been issued, the FCC may, on its own motion, replace the authorization(s) of any other licensee (for facilities located within that paging geographic area on that channel) with a single replacement authorization.

[62 FR 11634, Mar. 12, 1997, as amended at 63 FR 68945, Dec. 14, 1998; 64 FR 33784, June 24, 1999]

§ 22.509 Procedures for mutually exclusive applications in the Paging and Radiotelephone Service.

Mutually exclusive applications in the Paging and Radiotelephone Service, including those that are mutually exclusive with applications in the Rural Radiotelephone Service, are processed in accordance with § 22.131 and with this section.

(a) Applications in the Paging and Radiotelephone Service may be mutually exclusive with applications in the Rural Radiotelephone Service if they seek authorization to operate facilities on the same channel in the same area, or the technical proposals are otherwise in conflict. See § 22.567.

(b) A modification application in either service filed on the earliest filing date may cause all later-filed mutually exclusive applications of any type in either service to be ''cut off'' (excluded

from a same-day filing group) and dismissed, pursuant to § 22.131(c)(3)(ii) and § 22.131(c)(4).

[59 FR 59956, Nov. 21, 1994; as amended at 61 FR 54099, Oct. 17, 1996; 64 FR 33784, June 24, 1999]

§ 22.511 Construction period for the Paging and Radiotelephone Service.

The construction period for stations in the Paging and Radiotelephone Service is one year.

§ 22.513 Partitioning and disaggregation.

MEA and EA licensees may apply to partition their authorized geographic service area or disaggregate their authorized spectrum at any time following grant of their geographic area authorizations. Nationwide geographic area licensees may apply to partition their authorized geographic service area or disaggregate their authorized spectrum at any time as of August 23, 1999.

(a) *Application required.* Parties seeking approval for partitioning and/or disaggregation shall apply for partial assignment of a license pursuant to § 1.948 of this chapter.

(b) *Partitioning.* In the case of partitioning, requests for authorization for partial assignment of a license must include, as attachments, a description of the partitioned service area and a calculation of the population of the partitioned service area and the authorized geographic service area. The partitioned service area shall be defined by 120 sets of geographic coordinates at points at every 3 degrees azimuth from a point within the partitioned service area along the partitioned service area boundary unless either an FCC-recognized service area is used (e.g., MEA or EA) or county lines are followed. The geographical coordinates must be specified in degrees, minutes, and seconds to the nearest second latitude and longitude, and must be based upon the 1983 North American Datum (NAD83). In the case where FCC-recognized service areas or county lines are used, applicants need only list the specific area(s) through use of FCC designations or county names that constitute the partitioned area.

(c) *Disaggregation.* Spectrum may be disaggregated in any amount.

(d) *Combined partitioning and disaggregation.* Licensees may apply for partial assignment of authorizations that propose combinations of partitioning and disaggregation.

(e) *License term.* The license term for a partitioned license area and for disaggregated spectrum shall be the remainder of the original licensee's license term as provided for in § 1.955 of this chapter.

(f) *Coverage requirements for partitioning.* (1) Parties to a partitioning agreement must satisfy at least one of the following requirements:

(i) The partitionee must satisfy the applicable coverage requirements set forth in § 22.503(k)(1), (2) and (3) for the partitioned license area; or

(ii) The original licensee must meet the coverage requirements set forth in § 22.503(k)(1), (2) and (3) for the entire geographic area. In this case, the partitionee must meet only the requirements for renewal of its authorization for the partitioned license area.

(2) Parties seeking authority to partition must submit with their partial assignment application a certification signed by both parties stating which of the above options they select.

(3) Partitionees must submit supporting documents showing compliance with their coverage requirements as set forth in § 22.503(k)(1), (2) and (3).

(4) Failure by any partitionee to meet its coverage requirements will result in automatic cancellation of the partitioned authorization without further Commission action.

(g) *Coverage requirements for disaggregation.* (1) Parties to a disaggregation agreement must satisfy at least one of the following requirements:

(i) Either the disaggregator or disaggregatee must satisfy the coverage requirements set forth in § 22.503 (k)(1), (2) and (3) for the entire license area; or

(ii) Parties must agree to share responsibility for meeting the coverage requirements set forth in § 22.503 (k)(1), (2) and (3) for the entire license area.

(2) Parties seeking authority to disaggregate must submit with their

partial assignment application a certification signed by both parties stating which of the above requirements they meet.

(3) Disaggregatees must submit supporting documents showing compliance with their coverage requirements as set forth in § 22.503 (k)(1), (2) and (3).

(4) Parties that accept responsibility for meeting the coverage requirements and later fail to do so will be subject to automatic license cancellation without further Commission action.

[64 FR 33784, June 24, 1999]

§ 22.515 Permissible communications paths.

Mobile stations may communicate only with and through base stations. Base stations may communicate only with mobile stations and receivers on land or surface vessels.

§ 22.527 Signal boosters.

Licensees may install and operate signal boosters on channels listed in § 22.531 only in accordance with the provisions of § 22.165 governing additional transmitters for existing systems. Licensees must not allow any signal booster that they operate to cause interference to the service or operation of any other authorized stations or systems.

[61 FR 31051, June 19, 1996]

§ 22.529 Application requirements for the Paging and Radiotelephone Service.

In addition to information required by subparts B and D of this part, applications for authorization in the Paging and Radiotelephone Service contain required information as described in the instructions to the form. Site coordinates must be referenced to NAD83 and be correct to + -1 second.

(a) *Administrative information.* The following information, associated with Form 601, is required as indicated. Each application of any type, including applications for paging geographic area authorizations, must contain one and only one Schedule A.

(1) The purpose of the filing is required for each application of any type.

(2) The geographic area designator, channel and geographic area name are required only for each application for a paging geographic area authorization.

(3) The FCC control point number, if any, the location (street address, city or town, state), the telephone number and an indication of the desired database action are required only for each application proposing to add or delete a control point.

(4) The FCC location number, file number and location (street address, city or town, state) of authorized facilities that have not been constructed are required only for each application requesting an extension of time to construct those facilities.

(b) *Technical data.* The following data, associated with FCC Form 601, are required as indicated for each application. Applications for a paging geographic area authorization must not contain Schedule B. Other type of applications may contain as many Schedule Bs as are necessary for the intended purpose.

(1) For each transmitting antenna site to be added, deleted or modified, the following are required: an indication of the desired database action, the Commission location number, if any, the street address or other description of the transmitting antenna site, the city, county and state, the geographic coordinates (latitude and longitude), correct to ±1 second, of the transmitting antenna site (NAD83), and in the case of a proposed relocation of a transmitting antenna, the Commission location number and geographic coordinates, correct to ±1 second, of the transmitting antenna site (NAD83) to which the geographic coordinates of the current location are referenced.

(2) For each transmitting antenna site to be added, deleted or modified, the following supplementary information is required: An indication as to whether or not the transmitting antenna site is within 200 kilometers (124 miles) of the U.S.-Mexico border, and an indication as to whether or not the transmitting antenna site is North of Line A or East of Line C. Line A and Line C are defined in § 2.1 of this chapter. For each adjacent geographic area within 200 kilometers (124 miles) of each transmitting antenna site to be added, deleted or modified, the geographic area designator and name, and

the shortest distance (in kilometers) to the boundary of that geographic area.

(3) The height (in meters) above average terrain of the center of radiation of the antenna, the beamwidth of the main lobe of the horizontal radiation pattern of the electric field of the antenna, the height (in meters) to the tip of the antenna above ground level, a polar plot of the horizontal gain pattern of the antenna, the antenna gain in the maximum lobe and the electric field polarization of the wave emitted by the antenna when installed as proposed.

(i) The center frequency of the requested channel, the transmitter classification (e.g. base, fixed mobile), the designator for any non-standard emission type to be used, including bandwidth and modulation type, and the maximum effective radiated power.

(ii) For each of the eight cardinal radials, the antenna height above the average elevation along the radial, and the effective radiated power of each transmitter in the direction of the radial.

(iii) For each transmitter proposed to transmit on a channel reserved for point-to-multipoint operation involving transmission to four or more points of communications (i.e. base transmitters), the following is required for each point of communication: an indication of the desired database action, the location (city or town, state), and the geographical coordinates (latitude and longitude, NAD 83).

(c) Upon request by an applicant, licensee, or the Commission, a part 22 applicant or licensee of whom the request is made shall furnish the antenna type, model, and the name of the antenna manufacturer to the requesting party within ten (10) days of receiving written notification.

[62 FR 11635, Mar. 12, 1997, as amended at 63 FR 68945, Dec. 14, 1998; 64 FR 53240, Oct. 1, 1999]

PAGING OPERATION

§ 22.531 Channels for paging operation.

The following channels are allocated for assignment to base transmitters that provide paging service, either individually or collectively under a paging geographic area authorization. Unless otherwise indicated, all channels have a bandwidth of 20 kHz and are designated by their center frequencies in MegaHertz.

Low VHF Channels

35.20	35.46	43.20	43.46
35.22	35.50	43.22	43.50
35.24	35.54	43.24	43.54
35.26	35.56	43.26	43.56
35.30	35.58	43.30	43.58
35.34	35.60	43.34	43.60
35.38	35.62	43.38	43.62
35.42	35.66	43.42	43.66

High VHF Channels

152.24	152.84	158.10	158.70

UHF Channels

931.0125	931.2625	931.5125	931.7625
931.0375	931.2875	931.5375	931.7875
931.0625	931.3125	931.5625	931.8125
931.0875	931.3375	931.5875	931.8375
931.1125	931.3625	931.6125	931.8625
931.1375	931.3875	931.6375	931.8875
931.1625	931.4125	931.6625	931.9125
931.1875	931.4375	931.6875	931.9375
931.2125	931.4625	931.7125	931.9625
931.2375	931.4875	931.7375	931.9875

(a)–(b) [Reserved]

(c) Upon application using FCC Form 601, common carriers may be authorized to provide one-way paging service using the leased subcarrier facilities of broadcast stations licensed under part 73 of this chapter.

(d) Occasionally in case law and other formal and informal documents, the low VHF channels have been referred to as ''lowband'' channels, and the high VHF channels have been referred to as ''guardband'' channels.

(e) Pursuant to the U.S.-Canada Interim Coordination Considerations for 929–932 MHz, as amended, only the following UHF channels may be assigned in the continental United States North of Line A or in the State of Alaska East of Line C, within the indicated longitudes:

(1) From longitude W.73° to longitude W.75° and from longitude W.78° to longitude W.81°:

931.0125	931.1125	931.1875	931.2625
931.0375	931.1375	931.2125	931.8625
931.0625	931.1625	931.2375	

(2) From longitude W.81° to longitude W.85°:

931.0125	931.2125	931.3875	931.5875
931.0375	931.2375	931.4125	931.6125
931.0625	931.2625	931.4625	931.6375
931.1125	931.2875	931.4875	931.8625

931.1375	931.3125	931.5125	
931.1625	931.3375	931.5375	
931.1875	931.3625	931.5625	

(3) Longitudes other than specified in paragraphs (e)(1) and (e)(2) of this section:

931.0125	931.1625	931.2875	931.4125
931.0375	931.1875	931.3125	931.4625
931.0625	931.2125	931.3375	931.8625
931.1125	931.2375	931.3625	
931.1375	931.2625	931.3875	

(4) At any longitude, with authorization condition requiring coordinated, shared use and equal access by licensees in both countries:

931.4375	931.8875	931.9125	931.9375

(f) For the purpose of issuing paging geographic authorizations, the paging geographic areas used for UHF channels are the MEAs, and the paging geographic areas used for the low and high VHF channels are the EAs (see § 22.503(b)).

[59 FR 59507, Nov. 17, 1994, as amended at 59 FR 59954, Nov. 21, 1994; 62 FR 11635, Mar. 12, 1997; 63 FR 68945, Dec. 14, 1998; 64 FR 33784, June 24, 1999; 70 FR 19309, Apr. 13, 2005]

§ 22.535 Effective radiated power limits.

The effective radiated power (ERP) of transmitters operating on the channels listed in § 22.531 must not exceed the limits in this section.

(a) *Maximum ERP.* The ERP must not exceed the applicable limits in this paragraph under any circumstances.

Frequency range (MHz)	Maximum ERP (Watts)
35–36	600
43–44	500
152–159	1400
931–932	3500

(b) *Basic power limit.* Except as provided in paragraph (d) of this section, the ERP of transmitters on the VHF channels must not exceed 500 Watts.

(c) *Height-power limit.* Except as provided in paragraph (d) of this section, the ERP of transmitters on the VHF channels must not exceed the amount that would result in an average distance to the service contour of 32.2 kilometers (20 miles). The average distance to the service contour is calculated by taking the arithmetic mean of the distances determined using the procedures specified in § 22.537 for the eight cardinal radial directions, excluding cardinal radial directions for which 90% or more of the distance so calculated is over water.

(d) *Encompassed interfering contour areas.* Transmitters are exempt from the basic power and height-power limits of this section if the area within their interfering contours is totally encompassed by the interfering contours of operating co-channel base transmitters controlled by the same licensee. For the purpose of this paragraph, operating transmitters are authorized transmitters that are providing service to subscribers.

(e) *Adjacent channel protection.* The ERP of transmitters must not exceed 500 Watts if they:

(1) Transmit on a channel in the 152–159 MHz frequency range and are located less than 5 kilometers (3.1 miles) from any station licensed in the Private Radio Services that receives on an adjacent channel; or,

(2) Transmit on channel 158.10 or 158.70 MHz and are located less than 5 kilometers (3.1 miles) from any station licensed in the Public Mobile Services that receives on either of the following adjacent channels: 158.07 MHz or 158.67 MHz.

(f) *Signal boosters.* The effective radiated power of signal boosters must not exceed 5 watts ERP under any normal operating condition.

[59 FR 59507, Nov. 17, 1994, as amended at 61 FR 31051, June 19, 1996]

§ 22.537 Technical channel assignment criteria.

The rules in this section establish technical assignment criteria for the channels listed in § 22.531. These criteria permit channel assignments to be made in a manner such that reception by public paging receivers of signals from base transmitters, within the service area of such base transmitters, is protected from interference caused by the operation of independent co-channel base transmitters.

(a) *Contour overlap.* The FCC may grant an application requesting assignment of a channel to a proposed base transmitter only if:

(1) The interfering contour of the proposed transmitter does not overlap

the service contour of any protected co-channel transmitter controlled by a carrier other than the applicant, unless that carrier has agreed in writing to accept any interference that may result from operation of the proposed transmitter; and,

(2) The service contour of the proposed transmitter does not overlap the interfering contour of any protected co-channel transmitter controlled by a carrier other than the applicant, unless the applicant agrees to accept any interference that may result from operation of the protected co-channel transmitter; and,

(3) The area and/or population to which service would be provided by the proposed transmitter is substantial, and service gained would exceed that lost as a result of agreements to accept interference.

(b) *Protected transmitter.* For the purposes of this section, protected transmitters are authorized transmitters for which there is a current FCC public record and transmitters proposed in prior-filed pending applications.

(c) *VHF service contour.* For paging stations transmitting on the VHF channels, the distance from the transmitting antenna to the service contour along each cardinal radial is calculated as follows:

$$d = 1.243 \times h^{0.40} \times p^{0.20}$$

where d is the radial distance in kilometers
h is the radial antenna HAAT in meters
p is the radial ERP in Watts

(1) Whenever the actual HAAT is less than 30 meters (98 feet), 30 must be used as the value for h in the above formula.

(2) The value used for p in the above formula must not be less than 27 dB less than the maximum ERP in any direction or 0.1 Watt, whichever is more.

(3) The distance from the transmitting antenna to the service contour along any radial other than the eight cardinal radials is routinely calculated by linear interpolation of distance as a function of angle. However, in resolving petitions to deny, the FCC may calculate the distance to the service contour using the formula in paragraph (c) of this section with actual HAAT and ERP data for the inter-station radial and additional radials above and below the inter-station radial at 2.5° intervals.

(d) *VHF interfering contour.* For paging stations transmitting on the VHF channels, the distance from the transmitting antenna to the interfering contour along each cardinal radial is calculated as follows:

$$d = 6.509 \times h^{0.28} \times p^{0.17}$$

where d is the radial distance in kilometers
h is the radial antenna HAAT in meters
p is the radial ERP in Watts

(1) Whenever the actual HAAT is less than 30 meters (98 feet), 30 must be used as the value for h in the above formula.

(2) The value used for p in the above formula must not be less than 27 dB less than the maximum ERP in any direction or 0.1 Watt, whichever is more.

(3) The distance from the transmitting antenna to the interfering contour along any radial other than the eight cardinal radials is routinely calculated by linear interpolation of distance as a function of angle. In resolving petitions to deny, however, the FCC may calculate the distance to the interfering contour using the formula in paragraph (d) of this section with actual HAAT and ERP data for the inter-station radial and additional radials above and below the inter-station radial at 2.5° intervals.

(e) *931 MHz service contour.* For paging stations transmitting on the 931 MHz channels, the service contour is a circle, centered on the transmitting antenna, with a radius determined from Table E–1 of this section.

TABLE E—1–931 MHZ PAGING SERVICE RADII

Service radius km (miles)	Effective radiated power (Watts)					
Antenna HAAT meters (feet)	0–125	126–250	251–500	501–1000	1001–1860	1861–3500
0–177 (0–581)	32.2 (20)	32.2 (20)	32.2 (20)	32.2 (20)	32.2 (20)	32.2 (20)
178–305 (582–1001)	32.2 (20)	32.2 (20)	32.2 (20)	32.2 (20)	37.0 (23)	41.8 (26)

TABLE E—1–931 MHZ PAGING SERVICE RADII—Continued

Service radius km (miles)	Effective radiated power (Watts)					
Antenna HAAT meters (feet)	0–125	126–250	251–500	501–1000	1001–1860	1861–3500
306–427 (1002–1401)	32.2 (20)	32.2 (20)	37.0 (23)	41.8 (26)	56.3 (35)	56.3 (35)
428–610 (1402–2001)	32.2 (20)	37.0 (23)	41.8 (26)	56.3 (35)	56.3 (35)	56.3 (35)
611–861 (2002–2825)	37.0 (23)	41.8 (26)	41.8 (26)	56.3 (35)	83.7 (52)	83.7 (52)
862–1219 (2826–3999)	41.8 (26)	56.3 (35)	56.3 (35)	83.7 (52)	83.7 (52)	83.7 (52)
1220 + (4000 +)	56.3 (35)	56.3 (35)	83.7 (52)	83.7 (52)	83.7 (52)	83.7 (52)

(f) *931 MHz interfering contour.* For paging stations transmitting on the 931 MHz channels, the interfering contour is a circle, centered on the transmitting antenna, with a radius determined from Table E–2 of this section.

TABLE E—2–931 MHZ PAGING INTERFERING RADII

Interfering radius km (miles)	Effective radiated power (Watts)					
Antenna HAAT meters (feet)	0–125	126–250	251–500	501–1000	1001–1860	1861–3500
0–177 (0–581)	80.5 (50)	80.5 (50)	80.5 (50)	80.5 (50)	80.5 (50)	80.5 (50)
178–305 (582–1001)	80.5 (50)	80.5 (50)	80.5 (50)	80.5 (50)	88.5 (55)	96.6 (60)
306–427 (1002–1401)	80.5 (50)	80.5 (50)	88.5 (55)	96.6 (60)	130.4 (81)	130.4 (81)
428–610 (1402–2001)	80.5 (50)	88.5 (55)	96.6 (60)	130.4 (81)	130.4 (81)	130.4 (81)
611–861 (2002–2825)	88.5 (55)	96.6 (60)	96.6 (60)	130.4 (81)	191.5 (119)	191.5 (119)
862–1219 (2826–3999)	96.6 (60)	130.4 (81)	130.4 (81)	191.5 (119)	191.5 (119)	191.5 (119)
1220 + (4000 +)	130.4 (81)	130.4 (81)	191.5 (119)	191.5 (119)	191.5 (119)	191.5 (119)

(g) *In-building radiation systems.* The locations of in-building radiation systems must be within the service contour(s) of the licensee's authorized transmitter(s) on the same channel. In-building radiation systems are not protected facilities, and therefore do not have service or interfering contours.

(h) *Signal boosters on 931 MHz channels.* For the purpose of compliance with §22.165 and notwithstanding paragraphs (e) and (f) of this section, signal boosters operating on the 931 MHz channels with an antenna HAAT not exceeding 30 meters (98 feet) are deemed to have as a service contour a circle with a radius of 1.0 kilometer (0.6 mile) and as an interfering contour a circle with a radius of 10 kilometers (6.2 miles).

[59 FR 59507, Nov. 17, 1994, as amended at 61 FR 31051, June 19, 1996]

§22.559 Paging application requirements.

In addition to information required by subparts B and D and §22.529, applications for authorization to operate a paging transmitter on the channels listed in §22.531, other than applications for a paging geographic area authorization, must contain the applicable supplementary information described in this section.

(a) *Interference exhibit.* Except as provided in paragraph (b) of this section, an exhibit demonstrating compliance with §22.537 with regard to protected transmitters is required for applications to operate a transmitter on the VHF channels. This exhibit must:

(1) Identify each protected transmitter located within 109 kilometers (68 miles) of the proposed transmitter in directions in which the distance to

the interfering contour is 76.5 kilometers (47.5 miles) or less, and within 178 kilometers (111 miles) of the proposed transmitter in directions in which the distance to the interfering contour exceeds 76.5 kilometers (47.5 miles).

(2) For each protected transmitter identified, show the results of distance calculations indicating that there would be no overlap of service and interfering contours, or alternatively, indicate that the licensee of or applicant for the protected transmitter and/or the applicant, as required, have agreed in writing to accept any interference resulting from operation of the proposed transmitter.

(b) *Encompassment exhibit.* An exhibit showing that the area within the interfering contour of the proposed transmitter would be totally encompassed by interfering contours of operating co-channel base transmitters controlled by the applicant is required for applications to operate a transmitter with ERP exceeding the basic power and height-power limits of § 22.535. For VHF transmitters, this encompassment exhibit may substitute for the interference exhibit required in paragraph (a) of this section.

[59 FR 59507, Nov. 17, 1994, as amended at 62 FR 11636, Mar. 12, 1997]

One-way or Two-way Mobile Operation

§ 22.561 Channels for one-way or two-way mobile operation.

The following channels are allocated for paired assignment to transmitters that provide (or support other transmitters that provide) one-way or two-way public land mobile service, either individually or collectively under a paging geographic area authorization. The paging geographic areas used for these channels are the EAs (*see* § 22.503(b)(3)). These channels may be assigned for use by mobile or base transmitters as indicated, and or by fixed transmitters (including control, repeater or other fixed transmitters). The mobile channels may also be assigned for use by base or fixed transmitters under certain circumstances (*see* § 22.567(h)). Unless otherwise indicated, all channels have a bandwidth of 20 kHz and are designated by their center frequencies in MegaHertz.

Base	Mobile	Base	Mobile
VHF Channels			
152.03	158.49	152.57	157.83
152.06	158.52	152.60	157.86
152.09	158.55	152.63	157.89
152.12	158.58	152.66	157.92
152.15	158.61	152.69	157.95
152.18	158.64	152.72	157.98
152.21	158.67	152.75	158.01
152.51	157.77	152.78	158.04
152.54	157.80	152.81	158.07
UHF Channels			
454.025	459.025	454.350	459.350
454.050	459.050	454.375	459.375
454.075	459.075	454.400	459.400
454.100	459.100	454.425	459.425
454.125	459.125	454.450	459.450
454.150	459.150	454.475	459.475
454.175	459.175	454.500	459.500
454.200	459.200	454.525	459.525
454.225	459.225	454.550	459.550
454.250	459.250	454.575	459.575
454.275	459.275	454.600	459.600
454.300	459.300	454.625	459.625
454.325	459.325	454.650	459.650

[59 FR 59507, Nov. 17, 1994; 60 FR 9889, Feb. 22, 1995, as amended at 62 FR 11636, Mar. 12, 1997]

§ 22.565 Transmitting power limits.

The transmitting power of base, mobile and fixed transmitters operating on the channels listed in § 22.561 must not exceed the limits in this section.

(a) *Maximum ERP.* The effective radiated power (ERP) of base and fixed transmitters must not exceed the applicable limits in this paragraph under any circumstances.

Frequency range (MHz)	Maximum ERP (watts)
152–153	1400
157–159	150
454–455	3500
459–460	150

(b) *Basic power limit.* Except as provided in paragraph (d) of this section, the ERP of base transmitters must not exceed 500 Watts.

(c) *Height-power limits.* Except as provided in paragraph (d) of this section, the ERP of base transmitters must not exceed the amount that would result in

an average distance to the service contour of 41.6 kilometers (26 miles) for VHF channels or 30.7 kilometers (19 miles) for UHF channels. The average distance to the service contour is calculated by taking the arithmetic mean of the distances determined using the procedures specified in §22.567 for the eight cardinal radial directions, excluding cardinal radial directions for which 90% or more of the distance so calculated is over water.

(d) *Encompassed interfering contour areas.* Base transmitters are exempt from the basic power and height-power limits of this section if the area within their interfering contours is totally encompassed by the interfering contours of operating co-channel based transmitters controlled by the same licensee. For the purpose of this paragraph, operating transmitters are authorized transmitters that are providing service to subscribers.

(e) *Adjacent channel protection.* The ERP of base and fixed transmitters must not exceed 500 Watts if they transmit on channel 454.025 MHz and are located less than 7 kilometers (4.3 miles) from any Private Radio Services station receiving on adjacent channel 454.0000 MHz.

(f) *Mobile transmitters.* The transmitter output power of mobile transmitters must not exceed 60 watts.

[59 FR 59507, Nov. 17, 1994, as amended at 70 FR 19309, Apr. 13, 2005]

§22.567 Technical channel assignment criteria.

The rules in this section establish technical assignment criteria for the channels listed in §22.561. The criteria in paragraphs (a) through (f) of this section permit channel assignments to be made in a manner such that reception by public mobile receivers of signals from base transmitters, within the service area of such base transmitters, is protected from interference caused by the operation of independent co-channel base and fixed transmitters in the Paging and Radiotelephone Service and central office stations, including Basic Exchange Telephone Radio Systems (BETRS), in the Rural Radiotelephone Service. Additional criteria in paragraph (g) of this section permit channel assignments to be made in a manner such that BETRS communications are protected from interference caused by the operation of independent co-channel base and fixed transmitters in the Paging and Radiotelephone Service and other central office stations in the Rural Radiotelephone Service. Separate criteria in paragraph (h) of this section apply only to assignment of the channels designated in §22.561 as mobile channels to base and fixed transmitters, and permit these channel assignments to be made in a manner such that reception by public base and fixed receivers of signals from associated mobile and fixed transmitters is protected from interference caused by the operation of independent co-channel base and fixed transmitters.

(a) *Contour overlap.* The FCC may grant an application requesting assignment of a channel to a proposed base, fixed or central office station transmitter only if:

(1) The interfering contour of the proposed transmitter does not overlap the service contour of any protected co-channel transmitter controlled by a carrier other than the applicant, unless that carrier has agreed in writing to accept any interference that may result from operation of the proposed transmitter; and

(2) The service contour of the proposed transmitter does not overlap the interfering contour of any protected co-channel transmitter controlled by a carrier other than the applicant, unless the application contains a statement that the applicant agrees to accept any interference that may result from operation of the protected co-channel transmitter; and

(3) The area and/or population to which service would be provided by the proposed transmitter is substantial, and service gained would exceed that lost as a result of agreements to accept interference.

(b) *Protected transmitter.* For the purposes of this section, protected transmitters are authorized transmitters for which there is a current FCC public record and transmitters proposed in prior-filed pending applications, in the Paging and Radiotelephone Service and the Rural Radiotelephone Service.

(c) *VHF service contour.* For base stations transmitting on the VHF channels, the radial distance from the transmitting antenna to the service contour along each cardinal radial is calculated as follows:

$$d = 1.609 \times h^{0.40} \times p^{0.20}$$

where:

d is the radial distance in kilometers
h is the radial antenna HAAT in meters
p is the radial ERP in Watts

(1) Whenever the actual HAAT is less than 30 meters (98 feet), 30 must be used as the value for h in the above formula.

(2) The value used for p in the above formula must not be less than 27 dB less than the maximum ERP in any direction, or 0.1 Watt, whichever is more.

(3) The distance from the transmitting antenna to the service contour along any radial other than the eight cardinal radials is routinely calculated by linear interpolation of distance as a function of angle. However, in resolving petitions to deny, the FCC may calculate the distance to the service contour using the formula in paragraph (c) of this section with actual HAAT and ERP data for the inter-station radial and additional radials above and below the inter-station radial at 2.5° intervals.

(d) *VHF interfering contour.* For base and fixed stations transmitting on the VHF channels, the radial distance from the transmitting antenna to the interfering contour along each cardinal radial is calculated as follows:

(1) If the radial antenna HAAT is less than 150 meters:

$$d = 8.577 \times h^{0.24} \times p^{0.19}$$

where:

d is the radial distance in kilometers
h is the radial antenna HAAT in meters
p is the radial ERP in Watts

Whenever the actual HAAT is less than 30 meters (98 feet), 30 must be used as the value for h in the above formula.

(2) If the radial antenna HAAT is 150 meters or more:

$$d = 12.306 \times h^{0.23} \times p^{0.14}$$

where:

d is the radial distance in kilometers
h is the radial antenna HAAT in meters
p is the radial ERP in Watts

(3) The value used for p in the above formulas must not be less than 27 dB less than the maximum ERP in any direction, or 0.1 Watt, whichever is more.

(4) The distance from the transmitting antenna to the interfering contour along any radial other than the eight cardinal radials is routinely calculated by linear interpolation of distance as a function of angle. However, in resolving petitions to deny, the FCC may calculate the distance to the interfering contour using the appropriate formula in paragraph (d) of this section with actual HAAT and ERP data for the inter-station radial and additional radials above and below the inter-station radial at 2.5° intervals.

(e) *UHF service contour.* For base stations transmitting on the UHF channels, the radial distance from the transmitting antenna to the service contour along each cardinal radial is calculated as follows:

$$d = 1.726 \times h^{0.35} \times p^{0.18}$$

where:

d is the radial distance in kilometers
h is the radial antenna HAAT in meters
p is the radial ERP in Watts

(1) Whenever the actual HAAT is less than 30 meters (98 feet), 30 must be used as the value for h in the above formula.

(2) The value used for p in the above formula must not be less than 27 dB less than the maximum ERP in any direction, or 0.1 Watt, whichever is more.

(3) The distance from the transmitting antenna to the service contour along any radial other than the eight cardinal radials is routinely calculated by linear interpolation of distance as a function of angle. However, in resolving petitions to deny, the FCC may calculate the distance to the service contour using the formula in paragraph (e) of this section with actual HAAT and ERP data for the inter-station radial and addition radials above and below the below the inter-station radial at 2.5° intervals.

(f) *UHF interfering contour.* For base and fixed stations transmitting on the UHF channels, the radial distance from the transmitting antenna to the interfering contour along each cardinal radial is calculated as follows:

(1) If the radial antenna HAAT is less than 150 meters:

$$d = 9.471 \times h^{0.23} \times p^{0.15}$$

where:

d is the radial distance in kilometers
h is the radial antenna HAAT in meters
p is the radial ERP in Watts

Whenever the actual HAAT is less than 30 meters (98 feet), 30 must be used as the value for h in the above formula.

(2) If the radial antenna HAAT is 150 meters or more:

$$d = 6.336 \times h^{0.31} \times p^{0.15}$$

where:

d is the radial distance in kilometers
h is the radial antenna HAAT in meters
p is the radial ERP in Watts

(3) The value used for p in the above formula must not be less than 27 dB less than the maximum ERP in any direction, or 0.1 Watt, whichever is more.

(4) The distance from the transmitting antenna to the interfering contour along any radial other than the eight cardinal radials is routinely calculated by linear interpolation of distance as a function of angle. However, in resolving petitions to deny, the FCC may calculate the distance to the interfering contour using the appropriate formula in paragraph (f) of this section with actual HAAT and ERP data for the inter-station radial and additional radials above and below the inter-station radial at 2.5° intervals.

(g) *Protection for BETRS.* In applying the provisions of paragraph (a) of this section, if either or both of the transmitters involved is a BETRS central office station, the following contour substitutions must be used:

(1) The service contour of the BETRS central office station(s) is a circle, centered on the central office station antenna, with a radius of 40 kilometers (25 miles).

(2) The interfering contour of any station of any type, when determining whether it would overlap the service contour of a BETRS central office station, is calculated as follows:

$$d = 36.364 \times h^{0.2} \times p^{0.1}$$

where:

d is the radial distance in kilometers
h is the radial antenna HAAT in meters
p is the radial ERP in Watts

Whenever the actual HAAT is less than 30 meters (98 feet), 30 must be used as the value for h in the above formula. The value used for p in the above formula must not be less than 27 dB less than the maximum ERP in any direction, or 0.1 Watt, whichever is more.

(h) *Assignment of mobile channels to base or fixed transmitters.* Mobile channels may be assigned to base or fixed transmitters if the following criteria are met:

(1) The paired base channel, as designated in § 22.561, is assigned to base transmitters in the same geographical area operated by the same licensee.

(2) The authorization is granted subject to the condition that no interference be caused to fixed receivers in use on or prior to the date of the grant.

§ 22.571 Responsibility for mobile stations.

Mobile stations that are subscribers in good standing to a two-way service in the Paging and Radiotelephone Service, when receiving service from that station, are considered to be operating under the authorization of that station. Licensees are responsible for exercising effective operational control over mobile stations receiving service through their stations. Mobile stations that are subscribers in good standing to a two-way service in the Paging and Radiotelephone Service, while receiving service from a different station, are considered to be operating under the authorization of such different station. The licensee of such different station is responsible, during such temporary period, for exercising effective operational control over such mobile stations as if they were subscribers to it.

§ 22.573 Use of base transmitters as repeaters.

As an additional function, base transmitters may be used as repeaters. Licensees must be able to turn the base transmitter on or off from the control point regardless of whether a subscriber-operated transmitter is transmitting.

§ 22.575 Use of mobile channel for remote control of station functions.

Carriers may remotely control station functions (e.g. shut down or reactivate base transmitters, turn aviation obstruction warning lights on or off, etc.) using a control transmitter operating on a mobile channel, subject to the conditions in this section and in § 22.567(h).

(a) The control transmitter must be capable of overriding transmissions from subscriber-operated transmitters if necessary. Subscriber-operated transmitters must not be capable of being used to deliberately or accidentally prevent the licensee from controlling the station.

(b) The licensee must implement measures designed to prevent station functions from being controlled by persons not authorized by the licensee to control the station.

(c) The control transmitter location must be within the composite service contour of the licensee's authorized station on the paired base channel.

§ 22.579 Operation of mobile transmitters across U.S.-Canada border.

Mobile stations licensed by Canada may receive two-way service while in the United States from stations licensed under this part, after authorization has been granted by the FCC. Mobile stations that normally operate under the authority of base stations licensed under this part may receive two-way service while in Canada from stations licensed under this part or by Canada, upon authorization by Canada.

§ 22.589 One-way or two-way application requirements.

In addition to information required by subparts B and D and § 22.529, applications for authorization to operate a paging transmitter on the channels listed in § 22.531, other than applications for a paging geographic area authorization, must contain the applicable supplementary information described in this section.

(a) *Interference exhibit.* Except as provided in paragraph (b) of this section, an exhibit demonstrating compliance with § 22.567 with regard to protected transmitters is required. This exhibit must:

(1) For UHF channels, identify each protected transmitter located within 108 kilometers (67 miles) of the proposed transmitter in directions in which the distance to the interfering contour is 76.4 kilometers (47.5 miles) or less, and within 178 kilometers (111 miles) of the proposed transmitter in directions in which the distance to the interfering contour exceeds 76.4 kilometers (47.5 miles); and identify each protected Basic Exchange Telephone Radio System central office transmitter in the Rural Radiotelephone Service within 231 kilometers (144 miles),

(2) For VHF channels, identify each protected transmitter located within 135 kilometers (84 miles) of the proposed transmitter in directions in which the distance to the interfering contour is 93.3 kilometers (58 miles) or less, and within 178 kilometers (111 miles) of the proposed transmitter in directions in which the distance to the interfering contour exceeds 93.3 kilometers (58 miles).

(3) For each protected transmitter identified, show the results of distance calculations indicating that there would be no overlap of service and interfering contours, or alternatively, indicate that the licensee of or applicant for the protected transmitter and/or the applicant, as required, have agreed in writing to accept any interference resulting from operation of the proposed transmitter.

(b) *Encompassment exhibit.* An exhibit showing that the area within the interfering contour of the proposed transmitter would be totally encompassed by interfering contours of operating co-channel base transmitters controlled by the applicant is required for applications to operate a transmitter with ERP exceeding the basic power and height-power limits of § 22.565. This encompassment exhibit may substitute for the interference exhibit required in paragraph (a) of this section.

[59 FR 59507, Nov. 17, 1994, as amended at 62 FR 11636, Mar. 12, 1997]

POINT-TO-POINT OPERATION

§ 22.591 Channels for point-to-point operation.

The following channels are allocated for assignment to fixed transmitters that support other transmitters that provide public mobile service. Unless otherwise indicated, all channels have a bandwidth of 20 kHz and are designated by their center frequencies in MegaHertz.

VHF Channels

72.02	72.36	72.80	75.66
72.04	72.38	72.82	75.68
72.06	72.40	72.84	75.70
72.08	72.42	72.86	75.72
72.10	72.46	72.88	75.74
72.12	72.50	72.90	75.76
72.14	72.54	72.92	75.78
72.16	72.58	72.94	75.80
72.18	72.62	72.96	75.82
72.20	72.64	72.98	75.84
72.22	72.66	75.42	75.86
72.24	72.68	75.46	75.88
72.26	72.70	75.50	75.90
72.28	72.72	75.54	75.92
72.30	72.74	75.58	75.94
72.32	72.76	75.62	75.96
72.34	72.78	75.64	75.98
72.10	72.46	72.88	75.74
72.12	72.50	72.90	75.76
72.14	72.54	72.92	75.78
72.16	72.58	72.94	75.80
72.18	72.62	72.96	75.82
72.20	72.64	72.98	75.84
72.22	72.66	75.42	75.86
72.24	72.68	75.46	75.88
72.26	72.70	75.50	75.90
72.28	72.72	75.54	75.92
72.30	72.74	75.58	75.94
72.32	72.76	75.62	75.96
72.34	72.78	75.64	75.98

UHF Channels—State of Hawaii

488.250	491.250	489.750	492.750
488.750	491.750	490.250	493.250
489.250	492.250	490.750	493.750

(a) The 72–76 MHz channels may be used in point-to-multipoint configurations. The 72–76 MHz channels are also allocated for assignment in the Private Radio Services (see part 90 of this chapter).

(b) [Reserved]

(c) Channels in the frequency ranges 488.250–490.750 and 491.250–493.750 MHz may be assigned only to inter-island fixed stations located in the State of Hawaii.

[59 FR 59507, Nov. 17, 1994; 60 FR 9889, Feb. 22, 1995, as amended at 70 FR 19309, Apr. 13, 2005; 78 FR 25174, Apr. 29, 2013]

§ 22.593 Effective radiated power limits.

The effective radiated power of fixed stations operating on the channels listed in § 22.591 must not exceed 150 Watts. The equivalent isotropically radiated power of existing fixed microwave stations (2110–2130 and 2160–2180 MHz) licensed under this part (pursuant to former rules) must not exceed the applicable limits set forth in § 101.113 of this chapter.

[70 FR 19309, Apr. 13, 2005]

§ 22.601 Existing microwave stations licensed under this part.

Existing microwave stations (2110–2130 and 2160–2180 MHz) licensed under this part (pursuant to former rules) are subject to the transition rules in § 22.602. No new microwave systems will be authorized under this part.

(a) *Coordination required.* Before filing applications for authority to modify existing stations on these channels or major amendments to such applications, carriers must coordinate the planned channel usage, using the procedure outlined in § 22.150, with affected parties in this radio service and the Point-to-Point Microwave Service and the Multipoint Distribution Service. Affected parties are licensees and other applicants with previously filed pending applications whose stations could affect or be affected by the proposed modification of the existing station in terms of interference.

(b) *System parameters.* In designing a system modification, the applicant must select sites, equipment and channels that will avoid harmful interference to other users. All parties must cooperate fully and make reasonable efforts to resolve technical problems and conflicts that may inhibit the most effective and efficient use of the radio spectrum; however, a party receiving notification is not obligated to suggest changes or re-design a proposal in cases involving conflicts. The applicant must identify in the application all parties with which the technical proposal was coordinated. In the event that technical problems are not resolved or if an affected party does not respond to coordination efforts within

30 days after notification, an explanation must be contained in the application. Where technical conflicts are resolved by an agreement between the parties that requires special procedures to reduce the likelihood of harmful interference (such as the use of artificial site shielding), or would result in a reduction of quality or capacity of either system, the details thereof must be contained in the application.

(c) *Bandwidth.* Applicants must request the minimum emission bandwidth necessary. The FCC does not authorize bandwidths larger than 800 kHz under this part.

[59 FR 59507, Nov. 17, 1994, as amended at 70 FR 19309, Apr. 13, 2005]

§ 22.602 Transition of the 2110–2130 and 2160–2180 MHz channels to emerging technologies.

The 2110–2130 and 2160–2180 MHz microwave channels formerly listed in § 22.591 have been re-allocated for use by emerging technologies (ET) services. No new systems will be authorized under this part. The rules in this section provide for a transition period during which existing Paging and Radiotelephone Service (PARS) licensees using these channels may relocate operations to other media or to other fixed channels, including those in other microwave bands. For PARS licensees relocating operations to other microwave bands, authorization must be obtained under part 101 of this chapter.

(a) Licensees proposing to implement ET services may negotiate with PARS licensees authorized to use these channels, for the purpose of agreeing to terms under which the PARS licensees would—

(1) Relocate their operations to other fixed microwave bands or other media, or alternatively,

(2) Accept a sharing arrangement with the ET licensee that may result in an otherwise impermissible level of interference to the PARS operations.

(b) [Reserved]

(c) Relocation of fixed microwave licensees in the 2110–2130 MHz and 2160–2180 MHz bands will be subject to mandatory negotiations only. A separate mandatory negotiation period will commence for each fixed microwave licensee when an ET licensee informs that fixed microwave licensee in writing of its desire to negotiate. Mandatory negotiation periods are defined as follows:

(1) Non-public safety incumbents will have a two-year mandatory negotiation period; and

(2) Public safety incumbents will have a three-year mandatory negotiation period.

(d) The mandatory negotiation period is triggered at the option of the ET licensee. Once mandatory negotiations have begun, a PARS licensee may not refuse to negotiate and all parties are required to negotiate in good faith. Good faith requires each party to provide information to the other that is reasonably necessary to facilitate the relocation process. In evaluating claims that a party has not negotiated in good faith, the FCC will consider, *inter alia*, the following factors:

(1) Whether the ET licensee has made a *bona fide* offer to relocate the PARS licensee to comparable facilities in accordance with Section 101.75(b) of this chapter;

(2) If the PARS licensee has demanded a premium, the type of premium requested (*e.g.*, whether the premium is directly related to relocation, such as system-wide relocations and analog-to-digital conversions, versus other types of premiums), and whether the value of the premium as compared to the cost of providing comparable facilities is disproportionate (*i.e.*, whether there is a lack of proportion or relation between the two);

(3) What steps the parties have taken to determine the actual cost of relocation to comparable facilities;

(4) Whether either party has withheld information requested by the other party that is necessary to estimate relocation costs or to facilitate the relocation process. Any party alleging a violation of our good faith requirement must attach an independent estimate of the relocation costs in question to any documentation filed with the Commission in support of its claim. An independent cost estimate must include a specification for the comparable facility and a statement of the costs associated with providing that facility to the incumbent licensee.

(e) *Involuntary period.* After the end of the mandatory negotiation period, ET licensees may initiate involuntary relocation procedures under the Commission's rules. ET licensees are obligated to pay to relocate only the specific microwave links to which their systems pose an interference problem. Under involuntary relocation, a PARS licensee is required to relocate, provided that:

(1) The ET applicant, provider, licensee or representative guarantees payment of relocation costs, including all engineering, equipment, site and FCC fees, as well as any legitimate and prudent transaction expenses incurred by the PARS licensee that are directly attributable to an involuntary relocation, subject to a cap of two percent of the hard costs involved. Hard costs are defined as the actual costs associated with providing a replacement system, such as equipment and engineering expenses. ET licensees are not required to pay PARS licensees for internal resources devoted to the relocation process. ET licensees are not required to pay for transaction costs incurred by PARS licensees during the voluntary or mandatory periods once the involuntary period is initiated or for fees that cannot be legitimately tied to the provision of comparable facilities;

(2) The ET applicant, provider, licensee or representative completes all activities necessary for implementing the replacement facilities, including engineering and cost analysis of the relocation procedure and, if radio facilities are involved, identifying and obtaining, on the incumbents behalf, new channels and frequency coordination; and,

(3) The ET applicant, provider, licensee or representative builds the replacement system and tests it for comparability with the existing 2 GHz system.

(f) *Comparable Facilities.* The replacement system provided to an incumbent during an involuntary relocation must be at least equivalent to the existing PARS system with respect to the following three factors:

(1) *Throughput.* Communications throughput is the amount of information transferred within a system in a given amount of time. If analog facilities are being replaced with analog, the ET licensee is required to provide the PARS licensee with an equivalent number of 4 kHz voice channels. If digital facilities are being replaced with digital, the ET licensee must provide the PARS licensee with equivalent data loading bits per second (bps). ET licensees must provide PARS licensees with enough throughput to satisfy the PARS licensee's system use at the time of relocation, not match the total capacity of the PARS system.

(2) *Reliability.* System reliability is the degree to which information is transferred accurately within a system. ET licensees must provide PARS licensees with reliability equal to the overall reliability of their system. For digital data systems, reliability is measured by the percent of time the bit error rate (BER) exceeds a desired value, and for analog or digital voice transmissions, it is measured by the percent of time that audio signal quality meets an established threshold. If an analog voice system is replaced with a digital voice system, only the resulting frequency response, harmonic distortion, signal-to-noise ratio and its reliability will be considered in determining comparable reliability.

(3) *Operating Costs.* Operating costs are the cost to operate and maintain the PARS system. ET licensees must compensate PARS licensees for any increased recurring costs associated with the replacement facilities (e.g. additional rental payments, increased utility fees) for five years after relocation. ET licensees may satisfy this obligation by making a lump-sum payment based on present value using current interest rates. Additionally, the maintenance costs to the PARS licensee must be equivalent to the 2 GHz system in order for the replacement system to be considered comparable.

(g) The PARS licensee is not required to relocate until the alternative facilities are available to it for a reasonable time to make adjustments, determine comparability, and ensure a seamless handoff.

(h) [Reserved]

(i) After April 25, 1996, all major modifications and extensions to existing PARS systems operating on channels in the 2110–2130 and 2160–2180 MHz

bands will be authorized on a secondary basis to future ET operations. All other modifications will render the modified PARS license secondary to future ET operations unless the incumbent affirmatively justifies primary status and the incumbent PARS licensee establishes that the modification would not add to the relocation costs of ET licensees. Incumbent PARS licensees will maintain primary status for the following technical changes:

(1) Decreases in power;

(2) Minor changes (increases or decreases) in antenna height;

(3) Minor location changes (up to two seconds);

(4) Any data correction which does not involve a change in the location of an existing facility;

(5) Reductions in authorized bandwidth;

(6) Minor changes (increases or decreases) in structure height;

(7) Changes (increases or decreases) in ground elevation that do not affect centerline height;

(8) Minor equipment changes.

(j) *Sunset.* PARS licensees will maintain primary status in the 2110–2130 MHz and 2160–2180 MHz bands unless and until an ET licensee requires use of the spectrum. ET licensees are not required to pay relocation costs after the relocation rules sunset (*i.e.*, for the 2110–2130 MHz and 2160–2180 MHz bands, ten years after the first ET license is issued in the respective band). Once the relocation rules sunset, an ET licensee may require the incumbent to cease operations, provided that the ET licensee intends to turn on a system within interference range of the incumbent, as determined by TIA TSB 10–F or any standard successor. ET licensee notification to the affected PARS licensee must be in writing and must provide the incumbent with no less than six months to vacate the spectrum. After the six-month notice period has expired, the PARS licensee must turn its license back into the Commission, unless the parties have entered into an agreement which allows the PARS licensee to continue to operate on a mutually agreed upon basis. If the parties cannot agree on a schedule or an alternative arrangement, requests for extension will be accepted and reviewed on a case-by-case basis. The Commission will grant such extensions only if the incumbent can demonstrate that:

(1) It cannot relocate within the six-month period (*e.g.*, because no alternative spectrum or other reasonable option is available), and;

(2) The public interest would be harmed if the incumbent is forced to terminate operations (*e.g.*, if public safety communications services would be disrupted).

(k) *Reimbursement and relocation expenses in the 2110–2130 MHz and 2160–2180 MHz bands.* Whenever an ET licensee in the 2110–2130 MHz and 2160–2180 MHz band relocates a paired PARS link with one path in the 2110–2130 MHz band and the paired path in the 2160–2180 MHz band, the ET license will be entitled to reimbursement pursuant to the procedures described in §§ 27.1160 through 27.1174 of this chapter.

[61 FR 29689, June 12, 1996, as amended at 70 FR 19309, Apr. 13, 2005; 71 FR 29834, May 24, 2006]

§ 22.603 488–494 MHz fixed service in Hawaii.

Before filing applications for authorization of inter-island control and/or repeater stations, applicants must coordinate the planned channel usage with existing licensees and other applicants with previously filed applications, using the procedure outlined in § 22.150. Applicants and licensees shall cooperate fully and make reasonable efforts to resolve any channel usage conflicts. In situations where technical solutions to such conflicts cannot be devised, the FCC may select a channel or channels to assign or may designate the application(s) for hearing. To be acceptable for filing, applications and major technical amendments must contain a certification that coordination has been completed and an exhibit listing the name(s) of the licensees and applicants with which the planned channel usage has been coordinated.

POINT-TO-MULTIPOINT OPERATION

§ 22.621 Channels for point-to-multipoint operation.

The following channels are allocated for assignment to transmitters utilized within point-to-multipoint systems

that support transmitters that provide public mobile service. Unless otherwise indicated, all channels have a bandwidth of 20 kHz and are designated by their center frequencies in MegaHertz. No new licenses will be issued for any 900 MHz frequencies in this section. See part 101, subpart O of this chapter for treatment of incumbents and for new licensing procedures. Incumbents under part 22 are subject to the restrictions of part 101, subpart O of this chapter but may make permissible modifications, transfers, assignments, or renew their licenses using procedures, forms, fees, and filing requirements of part 22.

Public Mobile Pool

(25 kHz bandwidth)

928.8625	959.8625	928.9375	959.9375
928.8875	959.8875	928.9625	959.9625
928.9125	959.9125	928.9875	959.9875

(12.5 kHz bandwidth)

928.85625	959.85625	928.93125	959.93125
928.86875	959.86875	928.94375	959.94375
928.88125	959.88125	928.95625	959.95625
928.89375	959.89375	928.96875	959.96875
928.90625	959.90625	928.98125	959.98125
928.91875	959.91875	928.99375	959.99375

Private Radio General Access Pool

(25 kHz bandwidth)

956.2625	956.3125	956.3625	956.4125
956.2875	956.3375	956.3875	956.4375
928.0125	952.0125	928.1875	952.1875
928.0375	952.0375	928.2125	952.2125
928.0625	952.0625	928.2375	952.2375
928.0875	952.0875	928.2625	952.2625
928.1125	952.1125	928.2875	952.2875
928.1375	952.1375	928.3125	952.3125
928.1625	952.1625	928.3375	952.3375

(12.5 kHz bandwidth)

956.25625	956.30625	956.35625	956.40625
956.26875	956.31875	956.36875	956.41875
956.28125	956.33125	956.38125	956.43125
956.29375	956.34375	956.39375	956.44375
928.00625	952.00625	928.18125	952.18125
928.01875	952.01875	928.19375	952.19375
928.03125	952.03125	928.20625	952.20625
928.04375	952.04375	928.21875	952.21875
928.05625	952.05625	928.23125	952.23125
928.06875	952.06875	928.24375	952.24375
928.08125	952.08125	928.25625	952.25625
928.09375	952.09375	928.26875	952.26875
928.10625	952.10625	928.28125	952.28125
928.11875	952.11875	928.29375	952.29375
928.13125	952.13125	928.30625	952.30625
928.14375	952.14375	928.31875	952.31875
928.15625	952.15625	928.33125	952.33125
928.16875	952.16875	928.34375	952.34375

Private Radio Power Pool

(25 kHz bandwidth)

928.3625	952.3625	928.6125	952.6125
928.3875	952.3875	928.6375	952.6375
928.4125	952.4125	928.6625	952.6625
928.4375	952.4375	928.6875	952.6875
928.4625	952.4625	928.7125	952.7125
928.4875	952.4875	928.7375	952.7375
928.5125	952.5125	928.7625	952.7625
928.5375	952.5375	928.7875	952.7875
928.5625	952.5625	928.8125	952.8125
928.5875	952.5875	928.8375	952.8375

(12.5 kHz bandwidth)

928.35625	952.35625	928.60625	952.60625
928.36875	952.36875	928.61875	952.61875
928.38125	952.38125	928.63125	952.63125
928.39375	952.39375	928.64375	952.64375
928.40625	952.40625	928.65625	952.65625
928.41875	952.41875	928.66875	952.66875
928.43125	952.43125	928.68125	952.68125
928.44375	952.44375	928.69375	952.69375
928.45625	952.45625	928.70625	952.70625
928.46875	952.46875	928.71875	952.71875
928.48125	952.48125	928.73125	952.73125
928.49375	952.49375	928.74375	952.74375
928.50625	952.50625	928.75625	952.75625
928.51875	952.51875	928.76875	952.76875
928.53125	952.53125	928.78125	952.78125
928.54375	952.54375	928.79375	952.79375
928.55625	952.55625	928.80625	952.80625
928.56875	952.56875	928.81875	952.81875
928.58125	952.58125	928.83125	952.83125
928.59375	952.59375	928.84375	952.84375

Public, Private, Government Shared Pool

(12.5 kHz bandwidth)

932.00625	941.00625	932.25625	941.25625
932.01875	941.01875	932.26875	941.26875
932.03125	941.03125	932.28125	941.28125
932.04375	941.04375	932.29375	941.29375
932.05625	941.05625	932.30625	941.30625
932.06875	941.06875	932.31875	941.31875
932.08125	941.08125	932.33125	941.33125
932.09375	941.09375	932.34375	941.34375
932.10625	941.10625	932.35625	941.35625
932.11875	941.11875	932.36875	941.36875
932.13125	941.13125	932.38125	941.38125
932.14375	941.14375	932.39375	941.39375
932.15625	941.15625	932.40625	941.40625
932.16875	941.16875	932.41875	941.41875
932.18125	941.18125	932.43125	941.43125
932.19375	941.19375	932.44375	941.44375
932.20625	941.20625	932.45625	941.45625
932.21875	941.21875	932.46875	941.46875
932.23125	941.23125	932.48125	941.48125
932.24375	941.24375	932.49375	941.49375

UHF Channels in Specified Urban Areas

Boston

470.0125	473.0125	482.0125	485.0125
470.0375	473.0375	482.0375	485.0375
470.0625	473.0625	482.0625	485.0625
470.0875	473.0875	482.0875	485.0875
470.1125	473.1125	482.1125	485.1125
470.1375	473.1375	482.1375	485.1375
470.1625	473.1625	482.1625	485.1625
470.1875	473.1875	482.1875	485.1875
470.2125	473.2125	482.2125	485.2125
470.2375	473.2375	482.2375	485.2375
470.2625	473.2625	482.2625	485.2625
470.2875	473.2875	482.2875	485.2875

Chicago, Cleveland

470.0125	473.0125	476.0125	479.0125
470.0375	473.0375	476.0375	479.0375
470.0625	473.0625	476.0625	479.0625
470.0875	473.0875	476.0875	479.0875
470.1125	473.1125	476.1125	479.1125
470.1375	473.1375	476.1375	479.1375
470.1625	473.1625	476.1625	479.1625
470.1875	473.1875	476.1875	479.1875
470.2125	473.2125	476.2125	479.2125
470.2375	473.2375	476.2375	479.2375
470.2625	473.2625	476.2625	479.2625
470.2875	473.2875	476.2875	479.2875

New York-Northeastern New Jersey

470.0125	470.1625	476.0125	476.1625
470.0375	470.1875	476.0375	476.1875
470.0625	470.2125	476.0625	476.2125
470.0875	470.2375	476.0875	476.2375
470.1125	470.2625	476.1125	476.2625
470.1375	470.2875	476.1375	476.2875

Dallas-Forth Worth

482.0125	482.1625	485.0125	485.1625
482.0375	482.1875	485.0375	485.1875
482.0625	482.2125	485.0625	485.2125
482.0875	482.2375	485.0875	485.2375
482.1125	482.2625	485.1125	485.2625
482.1375	482.2875	485.1375	485.2875

Detroit

476.0125	479.0125	482.0125	485.0125
476.0375	479.0375	482.0375	485.0375
476.0625	479.0625	482.0625	485.0625
476.0875	479.0875	482.0875	485.0875
476.1125	479.1125	482.1125	485.1125
476.1375	479.1375	482.1375	485.1375
476.1625	479.1625	482.1625	485.1625
476.1875	479.1875	482.1875	485.1875
476.2125	479.2125	482.2125	485.2125
476.2375	479.2375	482.2375	485.2375
476.2625	479.2625	482.2625	485.2625
476.2875	479.2875	482.2875	485.2875

Houston

488.1625	491.1625	488.2375	491.2375
488.1875	491.1875	488.2625	491.2625
488.2125	491.2125	488.2875	491.2875

Los Angeles

470.0125	473.0125	506.0625	509.0625
470.0375	473.0375	506.0875	509.0875
506.0125	509.0125	506.1125	509.1125
506.0375	509.0375		

Miami

470.0125	470.1625	473.0125	473.1625
470.0375	470.1875	473.0375	473.1875
470.0625	470.2125	473.0625	473.2125
470.0875	470.2375	473.0875	473.2375
470.1125	470.2625	473.1125	473.2625
470.1375	470.2875	473.1375	473.2875

Philadelphia

500.0125	503.0125	506.0125	509.0125
500.0375	503.0375	506.0375	509.0375
500.0625	503.0625	506.0625	509.0625
500.0875	503.0875	506.0875	509.0875
500.1125	503.1125	506.1125	509.1125
500.1375	503.1375	506.1375	509.1375
500.1625	503.1625	506.1625	509.1625
500.1875	503.1875	506.1875	509.1875
500.2125	503.2125	506.2125	509.2125
500.2375	503.2375	506.2375	509.2375
500.2625	503.2625	506.2625	509.2625
500.2875	503.2875	506.2875	509.2875

Pittsburgh

470.0125	470.1625	473.0125	473.1625
470.0375	470.1875	473.0375	473.1875
470.0625	470.2125	473.0625	473.2125
470.0875	470.2375	473.0875	473.2375
470.1125	470.2625	473.1125	473.2625
470.1375	470.2875	473.1375	473.2875

San Francisco

482.0125	485.0125	488.0125	491.0125
482.0375	485.0375	488.0375	491.0375
482.0625	485.0625	488.0625	491.0625
482.0875	485.0875	488.0875	491.0875
482.1125	485.1125	488.1125	491.1125
482.1375	485.1375	488.1375	491.1375
482.1625	485.1625	488.1625	491.1625
482.1875	485.1875	488.1875	491.1875
482.2125	485.2125	488.2125	491.2125
482.2375	485.2375	488.2375	491.2375
482.2625	485.2625	488.2625	491.2625
482.2875	485.2875	488.2875	491.2875

Washington, DC

488.0125	491.0125	494.0125	497.0125
488.0375	491.0375	494.0375	497.0375
488.0625	491.0625	494.0625	497.0625
488.0875	491.0875	494.0875	497.0875
488.1125	491.1125	494.1125	497.1125
488.1375	491.1375	494.1375	497.1375
488.1625	491.1625	494.1625	497.1625
488.1875	491.1875	494.1875	497.1875
488.2125	491.2125	494.2125	497.2125
488.2375	491.2375	494.2375	497.2375
488.2625	491.2625	494.2625	497.2625
488.2875	491.2875	494.2875	497.2875

[59 FR 59507, Nov. 17, 1994; 60 FR 9890, Feb. 22, 1995, as amended at 61 FR 54099, Oct. 17, 1996; 65 FR 17448, Apr. 3, 2000]

§ 22.623 System configuration.

This section requires a minimum configuration for point-to-multipoint systems using the channels listed in § 22.621.

(a) *928–960 MHz.* The channels may be assigned, individually or paired, only to fixed transmitters in a system that controls at least four public mobile base transmitters that transmit on the same channel. If a 932–933 MHz channel and a 941–942 MHz channel are assigned as a pair, the 941–942 MHz channel must be assigned only to control transmitters; the 932–933 MHz channel may be assigned to control or fixed relay transmitters.

(b) *470–512 MHz.* These channels may be assigned only individually (unpaired), to control transmitters that directly control at least four public mobile base transmitters that transmit on the same channel. Fixed relay transmitters are not authorized.

(c) *Selection and assignment.* The FCC selects and assigns a channel when granting applications for authorization to operate a new station to transmit in the 470–512, 932–933 and 941–942 MHz frequency ranges. Applicants having a preference may request the assignment of a specific channel or channel pair, but the FCC may in some cases be unable to satisfy such requests.

§ 22.625 Transmitter locations.

This section governs where point-to-multipoint transmitters on the channels listed in § 22.621 may be located.

(a) *928–960 MHz.* In this frequency range, the required minimum distance separation between co-channel fixed transmitters is 113 kilometers (70 miles).

(b) *470–512 MHz.* The purpose of the rule in paragraph (b)(1) of this section is to define the areas in which the 470–512 MHz channels are allocated for public mobile use. The purpose of the rules in paragraphs (b)(2) and (b)(3) of this section is to reduce the likelihood that interference to television reception from public mobile operations on these channels will occur.

(1) *Control transmitter locations.* Control transmitter locations must be within 80 kilometers (50 miles) of the designated locations in this paragraph.

Urban area	N. latitude	W. longitude
Boston, MA	42°21′24.4″	71°03′22.2″
Chicago, IL	41°52′28.1″	87°38′22.2″
Cleveland, OH	41°29′51.2″	81°41′49.5″
Dallas, TX	32°47′09.5″	96°47′38.0″
Detroit, MI	42°19′48.1″	83°02′56.7″
Houston, TX	29°45′26.8″	95°21′37.8″
Los Angeles, CA	34°03′15.0″	18°14′31.3″
Miami, FL	25°46′38.6″	80°11′31.2″
New York, NY	40°45′6.4″	73°59′37.5″
Philadelphia, PA	39°56′58.4″	75°09′19.6″
Pittsburgh, PA	40°26′19.2″	79°59′59.2″
San Francisco-Oakland, CA	37°46′38.7″	122°24′43.9″
Washington, DC	38°53′51.4″	77°00′31.9″

NOTE: Coordinates are referenced to North American Datum 1983 (NAD 83).

(2) *Protection from intermodulation interference.* Control transmitter locations must be at least 1.6 kilometers (1 mile) from the main transmitter locations of all TV stations transmitting on TV channels separated by 2, 3, 4, 5, 7, or 8 TV channels from the TV channel containing the frequencies on which the control station will transmit. This requirement is intended to reduce the likelihood of intermodulation interference.

(3) *Co-channel protection from control transmitters with high antennas.* This paragraph applies only to control transmitters that utilize an antenna height of more than 152 meters (500 feet) above average terrain. The distance between the location of such a control transmitter and the applicable protected TV station location specified in this paragraph must equal or exceed the sum of the distance from the control transmitter location to the radio horizon in the direction of the specified location and 89 kilometers (55 miles—representing the distance from the main transmitter location of the TV station to its Grade B contour in the direction of the control transmitter). The protected TV station locations in this paragraph are the locations of record as of September 1974, and these do not change even though the TV stations may have been subsequently relocated.

(i) The protected TV station locations are as follows:

Control transmitter frequency range	Protected TV station location
470–476 MHz.	Washington, DC 38°57′17″ 77°00′17″
476–482 MHz.	Lancaster, PA 40°15′45″ 76°27′49″

(ii) The distance to the radio horizon is calculated using the following formula:

$$d = \sqrt{17 \times h}$$

where

d is the distance to the radio horizon in kilometers

h is the height of the antenna center of radiation above ground level in meters

[59 FR 59507, Nov. 17, 1994, as amended at 63 FR 68946, Dec. 14, 1998, 70 FR 19309, Apr. 13, 2005]

§ 22.627 Effective radiated power limits.

The effective radiated power (ERP) of transmitters operating on the channels listed in § 22.621 must not exceed the limits in this section.

(a) *Maximum ERP.* The ERP must not exceed the applicable limits in this paragraph under any circumstances.

Frequency range (MHz)	Maximum ERP (watts)
470–512	1000
928–929	50
932–933	30
941–942	600
952–960	150

(b) *470–512 MHz limits.* The purpose of the rules in paragraphs (b)(1) through (b)(3) of this section is to reduce the likelihood that interference to television receiption from public mobile operations on these channels will occur. The protected TV station locations specified in this section are the

locations of record as of September 1974, and these do not change even though the TV stations may have been subsequently relocated.

(1) *Co-channel protection.* The ERP of control transmitters must not exceed the limits in the tables in paragraphs (b)(1)(ii) and (b)(1)(iii) of this section. The limits depend upon the height above average terrain of the control transmitter antenna and the distance between the control transmitter and the nearest protected TV station location in paragraph (b)(1)(i) of this section.

(i) The protected TV station locations are as follows (all coordinates are referenced to North American Datum 1983 (NAD83)):

Control transmitter frequency range	Protected TV station location
470–476 MHz ..	Jacksonville, IL, 39°45′52.2″ N. Lat. 90°30′29.5″ W. Long.
	Mt. Pleasant, MI, 43°34′24.1″ N. Lat. 84°46′21.1″ W. Long.
476–482 MHz ..	Oxford, OH, 39°30′26.2″ N. Lat. 84°44′8.8″
482–488 MHz ..	W. Long.
488–494 MHz ..	Washington, DC, 38°57′17.4″ N. Lat.
494–500 MHz ..	77°00′15.9″ W. Long.
500–506 MHz ..	Champaign, IL, 40°04′11.1″ N. Lat.
506–512 MHz ..	87°54′45.1″ W. Long.
	Madison, WI, 43°03′01.0″ N. Lat. 89°29′15.4″ W. Long.
	Parkersburg, WV, 39°20′50.3″ N. Lat. 81°33′55.5″ W. Long.
	Fort Wayne, IN, 41°05′35.2″ N. Lat. 85°10′41.9″ W. Long.
	Lancaster, PA, 40°15′45.3″ N. Lat. 76°27′47.9″ W. Long.
	South Bend, IN, 41°36′26.2″ N. Lat. 86°27′48.1″ W. Long.
	Philadelphia, PA, 40°02′30.4″ N. Lat. 75°14′22.6″ W. Long.
	None.
	Johnstown, PA, 40°19′47.3″ N. Lat. 78°53′44.1″ W. Long.
	Washington, DC, 38°57′49.4″ N. Lat. 77°06′16.9″ W. Long.
	Waterbury, CT, 41°31′2.3″ N. Lat. 73°00′58.4″ W. Long.

(ii) Table E–3 and E–4 apply to control transmitters in the New York-Northeastern New Jersey and Cleveland urban areas that transmit on channels in the 476–482 MHz range and to control transmitters in the Detroit urban area that transmit on channels in the 482–488 MHz range.

(iii) Tables E–5 and E–6 apply to all control transmitters except those to which Tables E–3 and E–4 apply.

(2) *Adjacent channel protection.* The ERP of control transmitters must not exceed the limits in Table E–7. The limits depend upon the height above average terrain of the control transmitter antenna and the distance between the control transmitter and the nearest protected TV station location listed in this paragraph. The protected TV station locations are as follows (all coordinates are referenced to North American Datum 1983 (NAD83)):

Control transmitter frequency range	Protected TV station location	TV channel
470–476 MHz.	Hanover, NH, 43°42′30.3″ N. Lat. 72°09′14.3″ W. Long..	(15)
	Madison, WI, 43°03′01.0″ N. Lat. 89°29′15.4″ W. Long..	(15)
	Champaign, IL, 40°04′11.1″ N. Lat. 87°54′45.1″ W. Long..	(15)
	San Diego, CA, 32°41′48.2″ N. Lat. 116°56′13.1″ W. Long..	(15)
	Lancaster, PA, 40°15′45.3″ N. Lat. 76°27′47.9″ W. Long..	(15)
	Parkersburg, WV, 39°20′50.3″ N. Lat. 81°33′55.5″ W. Long..	(15)
476–482 MHz.	South Bend, IN, 41°36′26.2″ N. Lat. 86°27′48.1″ W. Long..	(16)
	Pittsburgh, PA, 40°26′46.2″ N. Lat. 79°57′50.2″ W. Long..	(16)
	Mt. Pleasant, MI, 43°34′24.1″ N. Lat. 84°46′21.1″ W. Long..	(14)
	Scranton, PA, 41°10′58.3″ N. Lat. 75°52′19.7″ W. Long..	(16)
482–488 MHz.	Hanover, NH, 43°42′30.3″ N. Lat. 72°09′14.3″ W. Long..	(15)
	Fort Wayne, IN, 41°05′35.2″ N. Lat. 85°10′41.9″ W. Long..	(15)
488–494 MHz.	Salisbury, MD, 38°24′15.4″ N. Lat. 75°34′43.7″ W. Long..	(16)
494–500 MHz.	Philadelphia, PA, 40°02′30.4″ N. Lat. 75°14′22.6″ W. Long..	(17)
500–506 MHz.	Washington, DC, 38°57′17.4″ N. Lat. 77°00′15.9″ W. Long..	(20)
506–512 MHz.	Harrisburg, PA, 40°20′44.3″ N. Lat. 76°52′07.9″ W. Long..	(21)

(c) *Los Angeles area.* This paragraph applies only to control transmitters in the Los Angeles urban area that utilize an antenna height of 457 or more meters (1500 or more feet) above mean sea level. The ERP of such transmitters must not exceed the following limits:

Antenna height	ERP
AMSL in meters (feet)	(Watts)
457 (1500) to 610 (2000)	155
611 (2001) to 762 (2500)	100
763 (2501) to 914 (3000)	70
915 (3001) to 1067 (3500)	50
1068 (3501) to 1219 (4000)	40
1220 (4001) to 1372 (4500)	30
1373 (4501) and above	25

TABLE E–3—MAXIMUM ERP (WATTS) FOR CONTROL TRANSMITTERS (HAAT 152 METERS OR LESS)

Distance to protected TV station in kilometers (miles)	Antenna height above average terrain in meters (feet)									
	15 (50)	30 (100)	46 (150)	61 (200)	76 (250)	91 (300)	107 (350)	122 (400)	137 (450)	152 (500)
209 (130)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
201 (125)	1000	1000	1000	1000	1000	1000	1000	850	750	725
193 (120)	1000	1000	1000	1000	900	750	675	600	550	500
185 (115)	1000	1000	800	725	600	525	475	425	375	350
177 (110)	850	700	600	500	425	375	325	300	275	225
169 (105)	600	475	400	325	275	250	225	200	175	150
161 (100)	400	325	275	225	175	150	140	125	110	100
153 (95)	275	225	175	125	110	95	80	70	60	50
145 (90)	175	125	100	75	50	.....	.....	.....	.....	.....

See § 22.627(b)(1)(ii). This table is for antenna heights of 152 meters (500 feet) or less above average terrain. For antenna heights between those in the table, use the next higher antenna height. For distances between those in the table, use the next lower distance.

TABLE E–4—MAXIMUM ERP (WATTS) FOR CONTROL TRANSMITTERS (HAAT MORE THAN 152 METERS)

Distance to protected TV station in kilometers (miles)	Antenna height above average terrain in meters (feet)					
	152 (500)	305 (1000)	457 (1500)	610 (2000)	762 (2500)	914 (3000)
209 (130)	1000	447	219	117	71	46
193 (120)	500	209	95	50	30	19
177 (110)	225	91	35	19	11	8
161 (100)	100	30	10	5	3	2
153 (95)	50	13	5	3	2	1

See § 22.627(b)(1)(ii). This table is for antenna heights of more than 152 meters (500 feet) above average terrain. For intermediate values of height and/or distance, use linear interpolation to obtain the maximum permitted ERP.

TABLE E–5—MAXIMUM ERP (WATTS) FOR CONTROL TRANSMITTERS (HAAT 152 METERS OR LESS)

Distance to protected TV station in kilometers (miles)	Antenna Height Above Average Terrain in meters (feet)									
	15 (50)	30 (100)	46 (150)	61 (200)	76 (250)	91 (300)	107 (350)	122 (400)	137 (450)	152 (500)
261 (162)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
257 (160)	1000	1000	1000	1000	1000	1000	1000	1000	1000	800
249 (155)	1000	1000	1000	1000	1000	875	775	700	625	575
241 (150)	1000	1000	950	775	725	625	550	500	450	400
233 (145)	850	750	650	575	500	440	400	350	320	300
225 (140)	600	575	465	400	350	300	275	250	230	225
217 (135)	450	400	335	300	255	240	200	185	165	150
209 (130)	350	300	245	200	185	160	145	125	120	100
201 (125)	225	200	170	150	125	110	100	90	80	75
193 (120)	175	150	125	105	90	80	70	60	55	50

See § 22.627(b)(1)(iii). This table applies for antenna heights of 152 meters (500 feet) or less above average terrain. For antenna heights between those in the table, use the next higher antenna height. For distances between those in the table, use the next lower distance.

TABLE E–6—MAXIMUM ERP (WATTS) FOR CONTROL TRANSMITTERS (HAAT MORE THAN 152 METERS)

Distance to protected TV station in kilometers (miles)	Antenna height above average terrain in meters (feet)					
	152 (500)	305 (1000)	457 (1500)	610 (2000)	762 (2500)	914 (3000)
261 (162)	1000	501	282	170	110	71
241 (150)	400	209	110	60	36	23
225 (140)	225	102	50	28	16	10
209 (130)	100	48	21	11	7	5
193 (120)	50	19	9	5	3	2

See § 22.627(b)(1)(iii). This table is for antenna heights of more than 152 meters (500 feet) above average terrain. For intermediate values of height and/or distance, use linear interpolation to obtain the maximum permitted ERP.

TABLE E–7—MAXIMUM ERP (WATTS) FOR CONTROL TRANSMITTERS

Distance to protected TV station in kilometers (miles)	Antenna height above average terrain in meters (feet)								
	30 (100)	46 (150)	61 (200)	76 (250)	91 (300)	107 (350)	122 (400)	137 (450)	152 (500)
108 (67)	1000	1000	1000	1000	1000	1000	1000	1000	1000
106 (66)	1000	1000	1000	1000	1000	1000	1000	1000	750
105 (65)	1000	1000	1000	1000	1000	1000	825	650	600
103 (64)	1000	1000	1000	1000	1000	775	625	500	400
101 (63)	1000	1000	1000	1000	440	400	350	320	300
100 (62)	1000	1000	1000	525	375	250	200	150	125
98 (61)	1000	700	450	250	200	125	100	75	50
97 (60)	1000	425	225	125	100	75	50	.....	.....

See § 22.627(b)(2). This table applies to control transmitters in the Boston, Chicago, Cleveland, Detroit, Los Angeles, New York-Northeastern New Jersey, Philadelphia, Pittsburgh and Washington, DC urban areas. This table is for antenna heights of 152 meters (500 feet) or less above average terrain. For antenna heights between those in the table, use the next higher antenna height. For distances between those in the table, use the next lower distance.

[59 FR 59507, Nov. 17, 1994; 60 FR 9890, Feb. 22, 1995; as amended at 63 FR 68946, Dec. 14, 1998]

470–512 MHz TRUNKED MOBILE OPERATION

§ 22.651 470–512 MHz channels for trunked mobile operation.

The following channels are allocated for assignment to transmitters providing trunked public mobile service within the specified urban areas. All channels have a bandwidth of 20 kHz and are designated by their center frequencies in MegaHertz.

Houston

488.0125	491.0125	488.0875	491.0875
488.0375	491.0375	488.1125	491.1125
488.0625	491.0625	488.1375	491.1375

New York-Northern New Jersey

473.0125	479.0125	473.1625	479.1625
473.0375	479.0375	473.1875	479.1875
473.0625	479.0625	473.2125	479.2125
473.0875	479.0875	473.2375	479.2375
473.1125	479.1125	473.2625	479.2625
473.1375	479.1375	473.2875	479.2875

[59 FR 59507, Nov. 17, 1994; 60 FR 9891, Feb. 22, 1995]

§ 22.653 Eligibility.

Only licensees already authorized to provide trunked mobile service or their successors in interest are eligible to apply for additional use of these channels for trunked mobile service, and then only in the urban areas already authorized.

§ 22.657 Transmitter locations.

The purpose of the rules in paragraphs (a) and (b) of this section is to define the areas in which the 470–512 MHz channels are allocated for public mobile use. The purpose of the rules in paragraphs (c) through (f) of this section is to reduce the likelihood that interference to television reception from public mobile operations on these channels will occur. The protected TV station locations specified in paragraphs (d), (e)(1) and (f) of this section are the locations of record as of September 1974, and these do not change even though the TV stations may have been subsequently relocated.

(a) *Base transmitter locations.* Base transmitter locations must be within 80 kilometers (50 miles) of the designated locations in this paragraph. Mobile transmitters must not be operated at locations more than 129 kilometers (80 miles) from the designated locations in this paragraph. Note: All coordinates are referenced to North American Datum 1983 (NAD83).

Urban area	N. latitude	W. longitude
Houston, TX	29°45′26.8″	95°21′37.8″
New York, NY-NE NJ	40°45′06.4″	73°59′37.5″

(b) *Mobile area of operation.* Mobile transmitters must not be operated at locations more than 48 kilometers (30 miles) from all associated base stations.

(c) *Protection from intermodulation interference.* Base transmitter locations must be at least 1.6 kilometers (1 mile) from the current main transmitter locations of all TV stations transmitting on TV channels separated by 2, 3, 4, 5, 7, or 8 TV channels from the TV channel containing the frequencies on which the base station will transmit. This requirement is intended to reduce

the likelihood of intermodulation interference.

(d) Adjacent channel protection from mobile transmitters. Base transmitter locations must be at least 145 kilometers (90 miles) from the applicable protected TV station locations specified in this paragraph. This requirement is intended to provide a 0 dB minimum desired to undesired signal strength ratio at the Grade B contour of an adjacent channel TV station. Note: All coordinates are referenced to North American Datum 1983 (NAD83).

Control transmitter frequency range	Protected TV station location	TV channel
470–476 MHz.	Lancaster, PA, 40°15′45.3″ N. Lat. 76°27′47.9″ W. Long..	(15)
476–482 MHz.	Scranton, PA, 41°10′58.3″ N. Lat. 75°52′19.7″ W. Long..	(16)

(e) *Co-channel protection from mobile transmitters.* Base transmitter locations must be at least the distance specified in paragraph (e)(2) of this section from the applicable protected TV station locations specified in paragraph (e)(1) of this section. This requirement is intended to provide a 40 dB minimum desired to undesired signal strength ratio at the Grade B contour of a co-channel TV station.

(1) The protected TV station locations are as follows (all coordinates are referenced to North American Datum 1983 (NAD83)):

Control transmitter frequency range	Protected TV station location
470–476 MHz.	Washington, DC, 38°57′17.4″ N. Lat. 77°00′15.9″ W. Long.
476–482 MHz.	Lancaster, PA, 40°15′45.3″ N. Lat. 76°27′47.9″ W. Long.

(2) The required minimum distance depends upon the effective radiated power (ERP) of the most powerful mobile transmitter(s) in the system:

Mobile unit ERP (watts)	Minimum distance	
	Kilometers	Miles
60	193	(120)
50	185	(115)
25	177	(110)
10	169	(105)
5	161	(100)

(f) *Co-channel protection from base transmitters with high antennas.* This paragraph applies only to base transmitter locations in the New York-Northeastern New Jersey urban area that utilize an antenna height of more than 152 meters (500 feet) above average terrain. The distance between the location of such a base transmitter and the applicable protected TV station location specified in this paragraph must equal or exceed the sum of the distance from the base transmitter location to the radio horizon in the direction of the specified location and 89 kilometers (55 miles—representing the distance from the main transmitter location of the TV station to its Grade B contour in the direction of the base transmitter). The distance to the radio horizon is calculated as follows:

$$d = \sqrt{17 \times h}$$

Where d is the distance to the radio horizon in kilometers h is the height of the antenna center of radiation above ground level in meters

NOTE: All coordinates are referenced to North American Datum 1983 (NAD83)):

Control transmitter frequency range	Protected TV station location
470–476 MHz.	Washington, DC, 38°57′17.4″ N. Lat. 77°00′15.9″ W. Long.
476–482 MHz.	Lancaster, PA, 40°15′45.3″ N. Lat. 76°27′47.9″ W. Long.

(g) The FCC may waive specific distance separation requirements of paragraphs (d) through (f) of this section if the applicant submits an engineering analysis which demonstrates that terrain effects and/or operation with less effective radiated power would satisfy the applicable minimum desired to undesired signal strength ratios at the Grade B contours of the protected TV stations. For this purpose, the Grade B contour of a TV station is deemed to be a circle with a 89 kilometer (55 mile) radius, centered on the protected TV station location, and along which the median TV signal field strength is 64 dBμV/m. In any showing intended to demonstrate compliance with the minimum desired to undesired signal ratio requirements of this section, all predicted field strengths must have been

determined using the UHF TV propagation curves contained in part 73 of this chapter.

[59 FR 59507, Nov. 17, 1994, as amended at 63 FR 68947, Dec. 14, 1998]

§ 22.659 Effective radiated power limits.

The purpose of the rules in this section, which limit effective radiated power (ERP), is to reduce the likelihood that interference to television reception from public mobile operations on these channels will occur. The protected TV station locations specified in this section are the locations of record as of September 1974, and these do not change even though the TV stations may have been subsequently relocated.

(a) *Maximum ERP.* The ERP of base transmitters must not exceed 100 Watts under any circumstances. The ERP of mobile transmitters must not exceed 60 Watts under any circumstances.

(b) *Co-channel protection from base transmitters.* The ERP of base transmitters in the New York-Northeastern New Jersey urban area must not exceed the limits in the tables referenced in paragraphs (b)(2) and (b)(3) of this section. The limits depend upon the height above average terrain of the base transmitter antenna and the distance between the base transmitter and the nearest protected TV station location in paragraph (b)(1) of this section.

(1) The protected TV station locations are as follows (all coordinates are referenced to North American Datum 1983 (NAD83)):

Control transmitter frequency range	Protected TV station location
470–476 MHz.	Washington, DC, 38°57′17.4″ N. Lat. 77°00′15.9″ W. Long.
476–482 MHz.	Lancaster, PA, 40°15′45.3″ N. Lat. 76°27′47.9″ W. Long.

(2) Tables E–8 and E–9 of this section apply to base transmitters in the New York-Northeastern New Jersey urban area that transmit on channels in the 476–482 MHz range.

(3) Tables E–10 and E–11 of this section apply to base transmitters in the New York-Northeastern New Jersey urban area that transmit on channels in the 470–476 MHz range.

(c) *Adjacent channel protection from base transmitters.* The ERP of base transmitters must not exceed the limits in Table E–12 of this section. The limits depend upon the height above average terrain of the base transmitter antenna and the distance between the base transmitter and the nearest protected TV station location specified in paragraph (c)(1) of this section.

(1) The protected TV station locations are as follows (all coordinates are referenced to North American Datum 1983 (NAD83)):

Control transmitter frequency range	Protected TV station location	TV channel
470–476 MHz	Hanover, NH, 43°42′30.3″ N. Lat. 72°09′14.3″ W. Long	(15)
476–482 MHz	Lancaster, PA, 40°15′45.3″ N. Lat. 76°27′47.9″ W. Long	(15)
482–488 MHz	Scranton, PA, 41°10′58.3″ N. Lat. 75°52′19.7″ W. Long	(16)
	Hanover, NH, 43°42′30.3″ N. Lat. 72°09′14.3″ W. Long	(15)

NOTE: Coordinates are referenced to North American Datum 1983 (NAD83).

(2) Table E–12 of this section applies to base transmitters in the New York-Northeastern New Jersey urban area.

TABLE E–8—MAXIMUM ERP (WATTS) FOR BASE TRANSMITTERS (HAAT 152 METERS OR LESS)

Distance to protected TV station in kilometers (miles)	Antenna height above average terrain in meters (feet)									
	15 (50)	30 (100)	46 (150)	61 (200)	76 (250)	91 (300)	107 (350)	122 (400)	137 (450)	152 (500)
209 (130)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
201 (125)	1000	1000	1000	1000	1000	1000	1000	850	750	725
193 (120)	1000	1000	1000	1000	900	750	675	600	550	500
185 (115)	1000	1000	800	725	600	525	475	425	375	350
177 (110)	850	700	600	500	425	375	325	300	275	225
169 (105)	600	475	400	325	275	250	225	200	175	150
161 (100)	400	325	275	225	175	150	140	125	110	100

TABLE E–8—MAXIMUM ERP (WATTS) FOR BASE TRANSMITTERS (HAAT 152 METERS OR LESS)—Continued

Distance to protected TV station in kilometers (miles)	Antenna height above average terrain in meters (feet)									
	15 (50)	30 (100)	46 (150)	61 (200)	76 (250)	91 (300)	107 (350)	122 (400)	137 (450)	152 (500)
153 (95)	275	225	175	125	110	95	80	70	60	50
145 (90)	175	125	100	75	50	.....	.....	.....	.....	.....

See § 22.659(b)(2). This table is for antenna heights of 152 meters (500 feet) or less above average terrain. For antenna heights between those in the table, use the next higher antenna height. For distances between those in the table, use the next lower distance.

TABLE E–9—MAXIMUM ERP (WATTS) FOR BASE TRANSMITTERS (HAAT MORE THAN 152 METERS)

Distance to protected TV station in kilometers (miles)	Antenna height above average terrain in meters (feet)					
	152 (500)	305 (1000)	457 (1500)	610 (2000)	762 (2500)	914 (3000)
209 (130)	1000	447	219	117	71	46
193 (120)	500	209	95	50	30	19
177 (110)	225	91	35	19	11	8
161 (100)	100	30	10	5	3	2
153 (95)	50	13	5	3	2	1

See § 22.659(b)(2). This table is for antenna heights of more than 152 meters (500 feet) above average terrain. For intermediate values of height and/or distance, use linear interpolation to obtain the maximum permitted ERP.

TABLE E–10—MAXIMUM ERP (WATTS) FOR BASE TRANSMITTERS (HAAT 152 METERS OR LESS)

Distance to protected TV station in kilometers (miles)	Antenna height above average terrain in meters (feet)									
	15 (50)	30 (100)	46 (150)	61 (200)	76 (250)	91 (300)	107 (350)	122 (400)	137 (450)	152 (500)
261 (162)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
257 (160)	1000	1000	1000	1000	1000	1000	1000	1000	1000	800
249 (155)	1000	1000	1000	1000	1000	875	775	700	625	575
241 (150)	1000	1000	950	775	725	625	550	500	450	400
233 (145)	850	750	650	575	500	440	400	350	320	300
225 (140)	600	575	465	400	350	300	275	250	230	225
217 (135)	450	400	335	300	255	240	200	185	165	150
209 (130)	350	300	245	200	185	160	145	125	120	100
201 (125)	225	200	170	150	125	110	100	90	80	75
193 (120)	175	150	125	105	90	80	70	60	55	50

See § 22.659(b)(3). This table applies for antenna heights of 152 meters (500 feet) or less above average terrain. For antenna heights between those in the table, use the next higher antenna height. For distances between those in the table, use the next lower distance.

TABLE E–11—MAXIMUM ERP (WATTS) FOR BASE TRANSMITTERS (HAAT MORE THAN 152 METERS)

Distance to protected TV station in kilometers (miles)	Antenna height above average terrain in meters (feet)					
	152 (500)	305 (1000)	457 (1500)	610 (2000)	762 (2500)	914 (3000)
261 (162)	1000	501	282	170	110	71
241 (150)	400	209	110	60	36	23
225 (140)	225	102	50	28	16	10
209 (130)	100	48	21	11	7	5
193 (120)	50	19	9	5	3	2

See § 22.659(b)(3). This table is for antenna heights of more than 152 meters (500 feet) above average terrain. For intermediate values of height and/or distance, use linear interpolation to obtain the maximum permitted ERP.

TABLE E–12—MAXIMUM ERP (WATTS) FOR BASE TRANSMITTERS

Distance to protected TV station in kilometers (miles)	Antenna height above average terrain in meters (feet)								
	30 (100)	46 (150)	61 (200)	76 (250)	91 (300)	107 (350)	122 (400)	137 (450)	152 (500)
108 (67)	1000	1000	1000	1000	1000	1000	1000	1000	1000
106 (66)	1000	1000	1000	1000	1000	1000	1000	1000	750
105 (65)	1000	1000	1000	1000	1000	1000	825	650	600
103 (64)	1000	1000	1000	1000	1000	775	625	500	400

TABLE E–12—MAXIMUM ERP (WATTS) FOR BASE TRANSMITTERS—Continued

Distance to protected TV station in kilometers (miles)	Antenna height above average terrain in meters (feet)								
	30 (100)	46 (150)	61 (200)	76 (250)	91 (300)	107 (350)	122 (400)	137 (450)	152 (500)
101 (63)	1000	1000	1000	1000	440	400	350	320	300
100 (62)	1000	1000	1000	525	375	250	200	150	125
98 (61)	1000	700	450	250	200	125	100	75	50
97 (60)	1000	425	225	125	100	75	50	.....	.....

See §22.659(c)(2). This table applies to base transmitters in the New York-Northeastern New Jersey urban areas. This table is for antenna heights of 152 meters (500 feet) or less above average terrain. For antenna heights between those in the table, use the next higher antenna height. For distances between those in the table, use the next lower distance.

[59 FR 59507, Nov. 17, 1994, as amended at 63 FR 68947, Dec. 14, 1998]

Subpart F—Rural Radiotelephone Service

§ 22.701 Scope.

The rules in this subpart govern the licensing and operation of stations and systems in the Rural Radiotelephone Service. The licensing and operation of these stations and systems is also subject to rules elsewhere in this part that apply generally to the Public Mobile Services. In case of conflict, however, the rules in this subpart govern.

§ 22.702 Eligibility.

Existing and proposed communications common carriers are eligible to hold authorizations to operate conventional central office, interoffice and rural stations in the Rural Radiotelephone Service. Subscribers are also eligible to hold authorizations to operate rural subscriber stations in the Rural Radiotelephone Service.

[69 FR 75170, Dec. 15, 2004]

§ 22.703 Separate rural subscriber station authorization not required.

A separate authorization is not required for rural subscriber stations for which the effective radiated power does not exceed 60 Watts and for which FAA notification of construction or alteration of the antenna structure is not required (see criteria in §17.7 of this chapter). Authority to operate such rural subscriber stations is conferred by the authorization of the central office or base station from which they receive service.

§ 22.705 Rural radiotelephone system configuration.

Stations in the Rural Radiotelephone Service are authorized to communicate as follows:

(a) Rural subscriber stations are authorized to communicate with and through the central office station(s) with which they are associated. However, where the establishment of a central office station in this service is not feasible, rural subscriber stations may be authorized to communicate with and through a base station in the Paging and Radiotelephone Service.

(b) Central office stations may communicate only with rural subscriber stations.

(c) Interoffice stations may communicate only with other interoffice stations.

§ 22.709 Rural radiotelephone service application requirements.

In addition to information required by Subparts B and D of this part, FCC Form 601 applications for authorization to operate a station in the Rural Radiotelephone Service must contain the applicable supplementary information described in this section.

(a) *Interoffice stations.* Applications for authority to operate a new interoffice station or to add transmitters or points of communications to an existing interoffice station must contain an exhibit demonstrating that the requested facilities would be used only for interconnecting central office stations and explaining why the use of alternative existing radio or wire facilities is not feasible.

(b) *Technical information required.* For each transmitter in the Rural Radiotelephone Service, the following information is required by FCC Form 601:

(1) Location description: city; county; state; geographic coordinates correct to ±1 second, the datum used (NAD83), site elevation above mean sea level, proximity to adjacent market boundaries and international borders;

(2) Antenna height to tip above ground level, the height of the center of radiation of the antenna above the average terrain, the height of the antenna center of radiation above the average elevation of the terrain along each of the 8 cardinal radials, antenna gain in the maximum lobe, the beamwidth of the maximum lobe of the antenna, a polar plot of the horizontal gain pattern of the antenna, the electric field polarization of the wave emitted by the antenna when installed as proposed;

(3) The center frequency of each channel requested, the maximum effective radiated power, the effective radiated power in each of the cardinal radial directions, any non-standard emission types to be used, including bandwidth and modulation type, the transmitter classification (e.g. central office), and the locations and call signs, if any, of any fixed points of communication.

(c) *No landline facilities.* Each application for a central office station must contain an exhibit showing that it is impracticable to provide the required communication service by means of landline facilities.

(d) *Interference exhibit.* Applications for central office, interoffice and relay stations must include an exhibit identifying co-channel facilities and demonstrating, in accordance with §22.715 that the proposed station, if authorized, would not cause interference to the service of those co-channel facilities. This exhibit must:

(1) For UHF channels, identify each protected transmitter located within 108 kilometers (67 miles) of the proposed transmitter in directions in which the distance to the interfering contour is 76.4 kilometers (47.5 miles) or less, and within 178 kilometers (111 miles) of the proposed transmitter in directions in which the distance to the interfering contour exceeds 76.4 kilometers (47.5 miles); and identify each protected Basic Exchange Telephone Radio System central office transmitter in the rural Radiotelephone Service within 231 kilometers (144 miles).

(2) For VHF channels, identify each protected transmitter located within 135 kilometers (84 miles) of the proposed transmitter in directions in which the distance to the interfering contour is 93.3 kilometers (58 miles) or less, and within 178 kilometers (111 miles) of the proposed transmitter in directions in which the distance to the interfering contour exceeds 93.3 kilometers (58 miles).

(3) For each protected transmitter identified, show the results of distance calculations indicating that there would be no overlap of service and interfering contours, or alternatively, indicate that the licensee of or applicant for the protected transmitter and/or the applicant, as required, have agreed in writing to accept any interference resulting from operation of the proposed transmitter.

(e) *Blocking probability.* Applications for authority to operate basic exchange telephone radio systems (BETRS) that request more than two channel pairs must include an exhibit containing calculations showing that the number of channels requested is the minimum necessary to achieve the required grade of service (in terms of blocking probability), and that there will be adequate spectrum available in the area to meet realistic estimates of current and future demand for paging, two-way mobile and rural radiotelephone services (see §22.719(c)). Applications for authority to operate new conventional rural radiotelephone systems that request more than two channel pairs must include a statement explaining why BETRS technology is not being proposed.

(f) *Antenna Information.* Upon request by an applicant, licensee, or the Commission, a part 22 applicant or licensee of whom the request is made shall furnish the antenna type, model, and the name of the antenna manufacturer to

the requesting party within ten (10) days of receiving written notification.

[59 FR 59507, Nov. 17, 1994, as amended at 59 FR 59954, Nov. 21, 1994; 63 FR 68948, Dec. 14, 1998; 64 FR 53240, Oct. 1, 1999]

§ 22.711 Provision of information to applicants.

Licensees in the Rural Radio Service must, upon request by a *bona-fide* prospective applicant, provide to such applicant the information required by § 22.709 regarding the portion of the licensee's operations that potentially could affect, or be affected by, the prospective applicant's proposed station, if such information is not already on file with the FCC. This information must be provided to the *bona-fide* prospective applicant no later than 30 days after receipt of the information request.

[59 FR 59954, Nov. 21, 1994]

§ 22.713 Construction period for rural radiotelephone stations.

The construction period for stations in the Rural Radiotelephone Service is 12 months.

§ 22.715 Technical channel assignment criteria for rural radiotelephone stations.

Channels are assigned in the Rural Radiotelephone Service using the procedures in § 22.567.

§ 22.717 Procedure for mutually exclusive applications in the Rural Radiotelephone Service.

Mutually exclusive applications in the Rural Radiotelephone Service, including those that are mutually exclusive with applications in the Paging and Radiotelephone Service, are processed in accordance with § 22.131 and with this section.

(a) Applications in the Rural Radiotelephone Service may be mutually exclusive with applications in the Paging and Radiotelephone Service if they seek authorization to operate facilities on the same channel in the same area, or the technical proposals are otherwise in conflict. See § 22.567.

(b) A modification application in either service filed on the earliest filing date may cause all later-filed mutually exclusive applications of any type in either service to be ''cut off'' (excluded from a same-day filing group) and dismissed, pursuant to § 22.131(c)(3)(ii) and § 22.131(c)(4).

[59 FR 59956, Nov. 21, 1994, as amended at 62 FR 11636, Mar. 12, 1997]

§ 22.719 Additional channel policy for rural radiotelephone stations.

The rules in this section govern the processing of applications for central office stations that request a rural radiotelephone channel pair when the applicant has applied for or been granted an authorization for other rural radiotelephone channel pairs in the same area. The general policy of the FCC is to promote effective use of the spectrum by encouraging the use of spectrum-efficient technologies (i.e. BETRS) and by assigning the minimum number of channels necessary to provide service.

(a) *Transmitters in same area.* Any central office station transmitter on any channel pair listed in § 22.725 is considered to be in the same area as another central office station transmitter on any other channel pair listed in § 22.725 if the transmitting antennas are located within 10 kilometers (6.2 miles) of each other.

(b) *Initial channel pairs.* The FCC does not assign more than two channel pairs for new central office stations, unless there are more than eight rural subscriber stations to be served. Stations are considered to be new if there are no authorized transmitters on any channel listed in § 22.725 controlled by the applicant in the same geographic area.

(c) *Additional channel pairs.* Applications for central office station transmitters to be located in the same area as an authorized central office station controlled by the applicant, but to operate on a different channel pair(s) are considered as requests for additional channel pair(s) for the authorized central office station. The FCC may grant applications for additional channel pairs provided that the need for each additional channel pair (after the first two) is established and fully justified in terms of achieving the required grade of service (blocking probability), and the applicant demonstrates that there will still be adequate spectrum available in the area to meet realistic

estimates of current and future demand for paging, two-way mobile and rural radiotelephone services. In the case of conventional rural radiotelephone central office stations, an explanation must be provided as to why BETRS technology is not being used instead of additional channel pairs.

CONVENTIONAL RURAL RADIOTELEPHONE STATIONS

§ 22.721 Geographic area authorizations.

Eligible persons may apply for a paging geographic area authorization in the Rural Radiotelephone Service, on the channel pairs listed in § 22.725, by following the procedures and requirements set forth in § 22.503 for paging geographic area authorizations.

[62 FR 11636, Mar. 12, 1997]

§ 22.723 Secondary site-by-site authorizations.

Authorizations for new facilities (including new sites and additional channel pairs for existing sites) in the Rural Radiotelephone Service (including BETRS facilities) may be granted after May 12, 1997 only on the condition that such authorizations shall be secondary to any existing or future co-channel paging geographic area authorization in the Paging and Radiotelephone Service or the Rural Radiotelephone Service. If the paging geographic area licensee notifies the Rural Radiotelephone Service licensee that operation of a co-channel secondary facility must be discontinued because it may cause interference to existing or planned facilities, the Rural Radiotelephone Service licensee must discontinue operation of that facility on the particular channel pair involved no later than six months after such notice.

[62 FR 11636, Mar. 12, 1997]

§ 22.725 Channels for conventional rural radiotelephone stations and basic exchange telephone radio systems.

The following channels are allocated for paired assignment to transmitters that provide conventional rural radiotelephone service and to transmitters in basic exchange telephone radio systems. These channels may be assigned for use by central office or rural subscriber stations as indicated, and interoffice stations. These channels may be assigned also for use by relay stations in systems where it would be impractical to provide rural radiotelephone service without the use of relay stations. All channels have a bandwidth of 20 kHz and are designated by their center frequencies in MegaHertz.

Central office	Rural subscriber	Central office	Rural subscriber
VHF Channels			
152.03	158.49	152.57	157.83
152.06	158.52	152.60	157.86
152.09	158.55	152.63	157.89
152.12	158.58	152.66	157.92
152.15	158.61	152.69	157.95
152.18	158.64	152.72	157.98
152.21	158.67	152.75	158.01
152.51	157.77	152.78	158.04
152.54	157.80	152.81	158.07
UHF Channels			
454.025	459.025	454.350	459.350
454.050	459.050	454.375	459.375
454.075	459.075	454.400	459.400
454.100	459.100	454.425	459.425
454.125	459.125	454.450	459.450
454.150	459.150	454.475	459.475
454.175	459.175	454.500	459.500
454.200	459.200	454.525	459.525
454.225	459.225	454.550	459.550
454.250	459.250	454.575	459.575
454.275	459.275	454.600	459.600
454.300	459.300	454.625	459.625
454.325	459.325	454.650	459.650

(a) The channels listed in this section are also allocated for assignment in the Paging and Radiotelephone Service.

(b) In Puerto Rico and the Virgin Islands, channels in the 154.04–154.46 MHz and 161.40–161.85 MHz frequency ranges may be assigned to transmitters providing rural radiotelephone service; channels in these ranges are also allocated for assignment in the International Fixed Public and Aeronautical Fixed radio services.

[59 FR 59507, Nov. 17, 1994; 60 FR 9891, Feb. 22, 1995, as amended at 70 FR 19309, Apr. 13, 2005]

§ 22.727 Power limits for conventional rural radiotelephone transmitters.

The transmitting power of transmitters operating on the channels listed in

§ 22.725 must not exceed the limits in this section.

(a) *Maximum ERP.* The effective radiated power (ERP) of central office and rural subscriber station transmitters must not exceed the applicable limits in this paragraph under any circumstances.

Frequency range (MHz)	Maximum ERP (watts)
152–153	1400
157–159	150
454–455	3500
459–460	150

(b) *Basic power limit.* Except as provided in paragraph (d) of this section, the ERP of central office station transmitters must not exceed 500 Watts.

(c) *Height-power limits.* Except as provided in paragraph (d) of this section, the ERP of central office station transmitters must not exceed the amount that would result in an average distance to the ''service contour'' of 41.6 kilometers (26 miles) for VHF channels or 30.7 kilometers (19 miles) for UHF channels. The average distance to the ''service contour'' is calculated by taking the arithmetic mean of the distances determined using the procedures specified in § 22.567 for the eight cardinal radial directions, excluding cardinal radial directions for which 90% or more of the distance so calculated is over water.

(d) *Encompassed interfering contour areas.* Central office station transmitters are exempt from the basic power and height-power limits of this section if the area within their interfering contours is totally encompassed by the interfering contours of operating co-channel central office station transmitters controlled by the same licensee. For the purpose of this paragraph, operating transmitters are authorized transmitters that are providing service to subscribers.

(e) *Adjacent channel protection.* The ERP of central office station transmitters must not exceed 500 Watts if they transmit on channel 454.025 MHz and are located less than 7 kilometers (4.3 miles) from any Private Radio Services station receiving on adjacent channel 454.000 MHz.

[59 FR 59507, Nov. 17, 1994, as amended at 70 FR 19309, Apr. 13, 2005]

§ 22.731 Emission limitations.

Upon application for multichannel operation, the FCC may authorize emission bandwidths wider than those specified in § 22.357, provided that spectrum utilization is equal to or better than that achieved by single channel operation.

§ 22.733 Priority of service.

Within the Rural Radiotelephone Service, the channels listed in § 22.725 are intended primarily for use in rendition of public message service between rural subscriber and central office stations and to provide radio trunking facilities between central offices. The channels may also be used, however, for the rendition of private leased-line communication service provided that such usage would not reduce or impair the extent or quality of communication service that would be available, in the absence of private leased-line service, to the general public receiving or subsequently requesting public message service from a central office.

§ 22.737 Temporary fixed stations.

The FCC may, upon proper application therefor, authorize the construction and operation of temporary fixed stations. Temporary fixed stations are to be used as rural subscriber, interoffice, or central office stations when those stations are unavailable or when service from those stations is disrupted by storms or emergencies.

(a) *Six month limitation.* If it is necessary for a temporary fixed station to remain at the same location for more than six months, the licensee of that station must apply for authorization to operate the station at the specific location at least 30 days before the end of the six month period.

(b) *International communications.* Communications between the United States and Canada or Mexico must not be carried using a temporary fixed station without prior authorization from the FCC. Licensees desiring to carry such communications should apply sufficiently in advance to allow for the time necessary to coordinate with Canada or Mexico.

BASIC EXCHANGE TELEPHONE RADIO SYSTEMS

§ 22.757 Channels for basic exchange telephone radio systems.

The channels listed in § 22.725 are also allocated for paired assignment to transmitters in basic exchange telephone radio systems.

[70 FR 19309, Apr. 13, 2005]

§ 22.759 Power limit for BETRS.

The effective radiated power of central office and rural subscriber station transmitters used in basic exchange telephone radio systems must not exceed the limits in this section.

(a) *Maximum ERP.* The effective radiated power (ERP) of central office and rural subscriber station transmitters in BETRS must not exceed the applicable limits in this paragraph under any circumstances.

Frequency range (MHz)	Maximum ERP (watts)
152–153	1400
157–159	150
454–455	3500
459–460	150

(b) *Height-power limit.* The ERP of central office stations in BETRS must not exceed the amount calculated as follows:

$ERP_w = 557{,}418 \div h_m2$

where ERP_w is the effective radiated power in Watts

h_m is the average (eight cardinal radial) antenna height above average terrain in meters

Subpart G—Air-Ground Radiotelephone Service

§ 22.801 Scope.

The rules in this subpart govern the licensing and operation of air-ground stations and systems. The licensing and operation of these stations and systems is also subject to rules elsewhere in this part and in part 1 of this chapter that generally apply to the Public Mobile Services. In case of conflict, however, the rules in this subpart govern.

[70 FR 19309, Apr. 13, 2005]

GENERAL AVIATION AIR-GROUND STATIONS

§ 22.805 Channels for general aviation air-ground service.

The following channels are allocated for the provision of radiotelephone service to airborne mobile subscribers in general aviation aircraft. These channels have a bandwidth of 20 kHz and are designated by their center frequencies in MegaHertz.

SIGNALLING CHANNEL PAIR

Ground	Airborne mobile
454.675	459.675

COMMUNICATION CHANNEL PAIRS

Ground	Airborne mobile
454.700	459.700
454.725	459.725
454.750	459.750
454.775	459.775
454.800	459.800
454.825	459.825
454.850	459.850
454.875	459.875
454.900	459.900
454.925	459.925
454.950	459.950
454.975	459.975

(a) Channel 454.675 MHz is assigned to each and every ground station, to be used only for automatically alerting airborne mobile stations of incoming calls.

(b) All airborne mobile channels are assigned for use by each and every airborne mobile station.

§ 22.807 General aviation air-ground application requirements.

In addition to the information required by subparts B and D of this part, FCC Form 601 applications for authorization to operate a general aviation air-ground station must contain the applicable supplementary information described in this section.

(a) *Administrative information.* The following information is required by FCC Form 601.

(1) The number of transmitter sites for which authorization is requested.

(2) The call sign(s) of other facilities in the same area that are ultimately controlled by the real party in interest to the application.

(b) *Technical information required.* For each transmitter in the Rural Radiotelephone Service, the following information is required by FCC Form 601:

(1) Location description, city, county, state, geographic coordinates (NAD83) correct to ±1 second, site elevation above mean sea level, proximity to adjacent market boundaries and international borders;

(2) Antenna height to tip above ground level, antenna gain in the maximum lobe, the electric field polarization of the wave emitted by the antenna when installed as proposed;

(3) The center frequency of each channel requested, the maximum effective radiated power, any non-standard emission types to be used, including bandwidth and modulation type and the transmitter classification (e.g. ground or signaling).

[59 FR 59507, Nov. 17, 1994, as amended at 59 FR 59954, Nov. 21, 1994; 63 FR 68948, Dec. 14, 1998; 64 FR 53240, Oct. 1, 1999. Redesignated and amended at 70 FR 19309, Apr. 13, 2005]

§ 22.809 Transmitting power limits.

The transmitting power of ground and airborne mobile transmitters operating on the channels listed in § 22.805 must not exceed the limits in this section.

(a) *Ground station transmitters.* The effective radiated power of ground stations must not exceed 100 Watts and must not be less than 50 Watts, except as provided in § 22.811.

(b) *Airborne mobile transmitters.* The transmitter power output of airborne mobile transmitters must not exceed 25 Watts and must not be less than 4 Watts.

§ 22.813 Technical channel pair assignment criteria.

The rules in this section establish technical assignment criteria for the channel pairs listed in § 22.805. These criteria are intended to provide substantial service volumes over areas that have significant local and regional general aviation activity, while maintaining the continuous nationwide in-route coverage of the original geographical layout.

(a) *Distance separation for co-channel ground stations.* The FCC may grant an application requesting assignment of a communication channel pair to a proposed ground transmitter only if the proposed antenna location is at least 800 kilometers (497 miles) from the antenna location of the nearest co-channel ground transmitter in the United States, its territories and possessions; and 1000 kilometers (621 miles) from the antenna location of the nearest co-channel ground transmitter in Canada.

(b) *Dispersion.* The FCC may grant an application requesting assignment of a communication channel pair to a proposed ground transmitter only if there are no more than five different communication channel pairs already assigned to ground transmitters with antenna locations within a 320 kilometer (199 mile) radius of the proposed antenna location.

§ 22.815 Construction period for general aviation ground stations.

The construction period (see § 1.946 of this chapter) for general aviation ground stations is 12 months.

[70 FR 19310, Apr. 13, 2005]

§ 22.817 Additional channel policies.

The rules in this section govern the processing of applications for authority to operate a ground station transmitter on any ground station communication channel listed in § 22.805 when the applicant has applied or been granted an authorization for other ground station communication channels in the same area. The general policy of the FCC is to assign one ground station communication channel in an area to a carrier per application cycle, up to a maximum of six ground station communication channels per area. That is, a carrier must apply for one ground station communication channel, receive the authorization, construct the station, and notify the FCC of commencement of service before applying for an additional ground station communication channel in that area.

(a) *Air-ground transmitters in same area.* Any transmitter on any of the ground station channels listed in § 22.805 is considered to be in the same area as another transmitter on any ground station channel listed in § 22.805 if it is located less than 350 kilometers (217 miles) from that transmitter.

(b) *Initial channel.* The FCC will not assign more than one ground station communication channel for new ground stations. Ground stations are considered to be new if there are no authorized ground station transmitters on any channel listed in § 22.805 controlled by the applicant in the same area.

(c) *Additional channel.* Applications for ground transmitters to be located in the same area as an authorized ground station controlled by the applicant, but to operate on a different ground station communication channel, are considered as requesting an additional channel for the authorized station.

(d) *Amendment of pending application.* If the FCC receives and accepts for filing an application for a ground station transmitter to be located in the same area as a ground station transmitter proposed in a pending application previously filed by the applicant, but on a different ground station communication channel, the subsequent application is treated as a major amendment to change the technical proposal of the prior application. The filing date of any application so amended is the date the FCC received the subsequent application.

(e) *Dismissal of premature applications for additional channel.* If the FCC receives an application requesting an additional ground station communication channel for an authorized ground station prior to receiving notification that the station is providing service to subscribers on the authorized channel(s), the FCC may dismiss that application without prejudice.

(f) *Dismissal of applications for seventh channel.* If the FCC receives an application requesting an additional ground station communication channel for an authorized ground station which would, if granted, result in that station being assigned more than six ground station communication channels in the same area, the FCC may dismiss that application without prejudice.

COMMERCIAL AVIATION AIR-GROUND SYSTEMS

§ 22.853 Eligibility to hold interest in licenses limited to 3 MHz of spectrum.

No individual or entity may hold, directly or indirectly, a controlling interest in licenses authorizing the use of more than three megahertz of spectrum (either shared or exclusive) in the 800 MHz commercial aviation Air-Ground Radiotelephone Service frequency bands (see § 22.857). Individuals and entities with either *de jure* or *de facto* control of a licensee in these bands will be considered to have a controlling interest in its license(s). For purposes of this rule, the definitions of ''controlling interests'' and ''affiliate'' set forth in paragraphs (c)(2) and (c)(5) of § 1.2110 of this chapter shall apply.

[70 FR 19310, Apr. 13, 2005]

§ 22.857 Channel plan for commercial aviation air-ground systems.

The 849–851 MHz and 894–896 MHz frequency bands are designated for paired nationwide exclusive assignment to the licensee or licensees of systems providing radio telecommunications service, including voice and/or data service, to persons on board aircraft. Air-ground systems operating in these frequency bands are referred to in this part as ''commercial aviation'' systems.

[70 FR 19310, Apr. 13, 2005]

§ 22.859 Incumbent commercial aviation air-ground systems.

This section contains rules concerning continued operation of commercial aviation air-ground systems that were originally authorized prior to January 1, 2004 to provide radiotelephone service using narrowband (6 kHz) channels, and that have been providing service continuously since the original commencement of service (hereinafter ''incumbent systems'').

(a) An incumbent system may continue to operate under its authorization, for the remaining term of such authorization, subject to the terms and conditions attached thereto. Wherever

such technical and operational conditions differ from technical and operational rules in this subpart, those conditions shall govern its operations.

(b) Notwithstanding any other provision in this chapter, the licensee of an incumbent system shall not be entitled to an expectation of renewal of said authorization.

(c) During the period that an incumbent system continues to operate and provide service pursuant to paragraph (a) of this section, air-ground systems of licensees holding a new authorization for the spectrum within which the incumbent system operates must not cause interference to the incumbent system. Protection from interference requires that the signals of the new systems must not exceed a ground station received power of −130 dBm within a 6 kHz receive bandwidth, calculated assuming a 0 dBi vertically polarized receive antenna.

[70 FR 19310, Apr. 13, 2005]

§ 22.861 Emission limitations.

The rules in this section govern the spectral characteristics of emissions for commercial aviation systems in the Air-Ground Radiotelephone Service. Commercial aviation air-ground systems may use any type of emission or technology that complies with the technical rules in this subpart.

(a) *Out of band emissions.* The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

(b) *Measurement procedure.* Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (*i.e.*, 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(c) *Alternative out of band emission limit.* The licensee(s) of commercial aviation air-ground systems, together with affected licensees of Cellular Radiotelephone Service systems operating in the spectrum immediately below and adjacent to the commercial aviation air-ground bands, may establish an alternative out of band emission limit to be used at the 849 MHz and 894 MHz band edge(s) in specified geographical areas, in lieu of that set forth in this section, pursuant to a private contractual arrangement of all affected licensees and applicants. In this event, each party to such contract shall maintain a copy of the contract in their station files and disclose it to prospective assignees or transferees and, upon request, to the FCC.

(d) *Interference caused by out of band emissions.* If any emission from a transmitter operating in this service results in interference to users of another radio service, the FCC may require a greater attenuation of that emission than specified in this section.

[70 FR 19310, Apr. 13, 2005]

§ 22.863 Frequency stability.

The frequency stability of equipment used under this subpart shall be sufficient to ensure that, after accounting for Doppler frequency shifts, the occupied bandwidth of the fundamental emissions remains within the authorized frequency bands of operation.

[70 FR 19310, Apr. 13, 2005]

§ 22.867 Effective radiated power limits.

The effective radiated power (ERP) of ground and airborne stations operating on the frequency ranges listed in § 22.857 must not exceed the limits in this section.

(a) The peak ERP of airborne mobile station transmitters must not exceed 12 Watts.

(b) The peak ERP of ground station transmitters must not exceed 500 Watts.

[70 FR 19310, Apr. 13, 2005]

§ 22.873 Construction requirements for commercial aviation air-ground systems.

Licensees authorized to use more than one megahertz (1 MHz) of the 800 MHz commercial aviation air-ground spectrum allocation (see § 22.857) must make a showing of ''substantial service'' as set forth in this section. Failure by any such licensee to meet this requirement will result in forfeiture of the license and the licensee will be ineligible to regain it. Licensees authorized to use one megahertz or less of the 800 MHz commercial aviation air-ground spectrum allocation are not subject to the requirements in this section.

(a) ''Substantial service'' is defined as service that is sound, favorable, and substantially above a level of mediocre service that just might minimally warrant renewal.

(b) Each commercial aviation air-ground system subject to the requirements of this section must demonstrate substantial service within 5 years after grant of the authorization. Substantial service may be demonstrated by, but is not limited to, either of the following ''safe harbor'' provisions:

(1) Construction and operation of 20 ground stations, with at least one ground station located in each of the 10 Federal Aviation Administration regions; or,

(2) Provision of service to the airspace of 25 of the 50 busiest airports (as measured by annual passenger boardings).

[70 FR 19310, Apr. 13, 2005]

§ 22.877 Unacceptable interference to part 90 non-cellular 800 MHz licensees from commercial aviation air-ground systems.

The definition of unacceptable interference to non-cellular part 90 licensees in the 800 MHz band from commercial aviation air-ground systems is the same as the definition set forth in § 22.970 which is applicable to Cellular Radiotelephone Service systems.

[70 FR 19311, Apr. 13, 2005]

§ 22.878 Obligation to abate unacceptable interference.

This section applies only to commercial aviation ground stations transmitting in the 849–851 MHz band, other than commercial aviation ground stations operating under the authority of a license originally granted prior to January 1, 2004.

(a) *Strict responsibility.* Any licensee who, knowingly or unknowingly, directly or indirectly, causes or contributes to causing unacceptable interference to a non-cellular part 90 licensee in the 800 MHz band, as defined in § 22.877, shall be strictly accountable to abate the interference, with full cooperation and utmost diligence, in the shortest time practicable. Interfering licensees shall consider all feasible interference abatement measures, including, but not limited to, the remedies specified in the interference resolution procedures set forth in § 22.879. This strict responsibility obligation applies to all forms of interference, including out-of-band emissions and intermodulation.

(b) *Joint and Several responsibility.* If two or more licensees, whether in the commercial aviation air-ground radiotelephone service or in the Cellular Radiotelephone Service (see § 22.971), knowingly or unknowingly, directly or indirectly, cause or contribute to causing unacceptable interference to a non-cellular part 90 licensee in the 800 MHz band, as defined in § 22.877, such licensees shall be jointly and severally responsible for abating interference, with full cooperation and utmost diligence, in the shortest practicable time.

(1) This joint and several responsibility rule requires interfering licensees to consider all feasible interference abatement measures, including, but not limited to, the remedies specified in the interference resolution procedures set forth in § 22.879(c). This joint and several responsibility rule applies to all forms of interference, including out-of-band emissions and intermodulation.

(2) Any licensee that can show that its signal does not directly or indirectly cause or contribute to causing unacceptable interference to a non-cellular part 90 licensee in the 800 MHz band, as defined in § 22.877, shall not be held responsible for resolving unacceptable interference. Notwithstanding, any licensee that receives an interference complaint from a public safety/CII licensee shall respond to such complaint consistent with the interference resolution procedures set forth in § 22.879.

[70 FR 19411, Apr. 13, 2005]

§ 22.879 Interference resolution procedures.

This section applies only to commercial aviation ground stations transmitting in the 849–851 MHz band, other than commercial aviation ground stations operating under the authority of a license originally granted prior to January 1, 2004.

(a) *Initial notification.* Commercial aviation air-ground system licensees may receive initial notification of interference from non-cellular part 90 licensees in the 800 MHz band pursuant to § 90.674(a) of this chapter.

(1) Commercial aviation air-ground system licensees shall join with part 90 ESMR licensees and Cellular Radiotelephone Service licensees in utilizing an electronic means of receiving the initial notification described in § 90.674(a) of this chapter. See § 22.972.

(2) Commercial aviation air-ground system licensees must respond to the initial notification described in § 90.674(a) of this chapter as soon as possible and no later than 24 hours after receipt of notification from a part 90 public safety/CII licensee. This response time may be extended to 48 hours after receipt from other part 90 non-cellular licensees provided affected communications on these systems are not safety related.

(b) *Interference analysis.* Commercial aviation air-ground system licensees—who receive an initial notification described in § 90.674(a) of this chapter—shall perform a timely analysis of the interference to identify the possible source. Immediate on-site visits may be conducted when necessary to complete timely analysis. Interference analysis must be completed and corrective action initiated within 48 hours of the initial complaint from a part 90 public safety/CII licensee. This response time may be extended to 96 hours after the initial complaint from other part 90 non-cellular licensees provided affected communications on these systems are not safety related. Corrective action may be delayed if the affected licensee agrees in writing (which may be, but is not required to be, recorded via e-mail or other electronic means) to a longer period.

(c) *Mitigation steps.* Any commercial aviation air-ground system that is responsible for causing unacceptable interference to non-cellular part 90 licensees in the 800 MHz band shall take affirmative measures to resolve such interference.

(1) Commercial aviation air-ground system licensees found to contribute to unacceptable interference, as defined in § 22.877, shall resolve such interference in the shortest time practicable. Commercial aviation air-ground system licensees must provide all necessary test apparatus and technical personnel skilled in the operation of such equipment as may be necessary to determine the most appropriate means of timely eliminating the interference. However, the means whereby interference is abated or the technical parameters that may need to be adjusted is left to the discretion of the commercial aviation air-ground system licensee, whose affirmative measures may include, but not be limited to, the following techniques:

(i) Increasing the desired power of the public safety/CII signal;

(ii) Decreasing the power of the commercial aviation air-ground system signal;

(iii) Modifying the commercial aviation air-ground system antenna height;

(iv) Modifying the commercial aviation air-ground system antenna characteristics;

(v) Incorporating filters into the commercial aviation air-ground system transmission equipment;

(vi) Changing commercial aviation air-ground system frequencies; and

(vii) Supplying interference-resistant receivers to the affected public safety/CII licensee(s). If this technique is

used, in all circumstances, commercial aviation air-ground system licensees shall be responsible for all costs thereof.

(2) Whenever short-term interference abatement measures prove inadequate, the affected part 90 non-cellular licensee shall, consistent with but not compromising safety, make all necessary concessions to accepting interference until a longer-term remedy can be implemented.

(3) When a part 90 public safety licensee determines that a continuing presence of interference constitutes a clear and imminent danger to life or property, the licensee causing the interference must discontinue the associated operation immediately, until a remedy can be identified and applied. The determination that a continuing presence exists that constitutes a clear and imminent danger to life or property, must be made by written statement that:

(i) Is in the form of a declaration, notarized affidavit, or statement under penalty or perjury, from an officer or executive of the affected public safety licensee;

(ii) Thoroughly describes the basis of the claim of clear and imminent danger;

(iii) Was formulated on the basis of either personal knowledge or belief after due diligence;

(iv) Is not proffered by a contractor or other third party; and,

(v) Has been approved by the Chief of the Public Safety and Homeland Security Bureau or other designated Commission official. Prior to the authorized official making a determination that a clear and imminent danger exists, the associated written statement must be served by hand-delivery or receipted fax on the applicable offending licensee, with a copy transmitted by the fastest available means to the Washington, DC office of the Commission's Public Safety and Homeland Security Bureau.

[70 FR 19311, Apr. 13, 2005, as amended at 71 FR 69038, Nov. 29, 2006]

§ 22.880 Information exchange.

(a) *Prior notification.* Public safety/CII licensees may notify a commercial aviation air-ground system licensee that they wish to receive prior notification of the activation or modification of a commercial aviation air-ground system ground station site in their area. Thereafter, the commercial aviation air-ground system licensee must provide the following information to the public safety/CII licensee at least 10 business days before a new ground station is activated or an existing ground station is modified:

(1) Location;

(2) Effective radiated power;

(3) Antenna manufacturer, model number, height above ground level and up tilt angle, as installed;

(4) Channels available for use.

(b) *Purpose of prior notification.* The prior notification of ground station activation or modification is for informational purposes only: public safety/CII licensees are not afforded the right to accept or reject the activation of a proposed ground station or to unilaterally require changes in its operating parameters. The principal purposes of prior notification are to:

(1) Allow a public safety licensee to advise the commercial aviation air-ground system licensee whether it believes a proposed ground station will generate unacceptable interference;

(2) Permit commercial aviation air-ground system licensee(s) to make voluntary changes in ground station parameters when a public safety licensee alerts them to possible interference; and

(3) Rapidly identify the source if interference is encountered when the ground station is activated.

[70 FR 19312, Apr. 13, 2005]

§ 22.881 Air-Ground Radiotelephone Service subject to competitive bidding.

Mutually exclusive initial applications for general aviation Air-Ground Radiotelephone Service licenses and mutually exclusive initial applications for commercial Air-Ground Radiotelephone Service licenses are subject to competitive bidding. The general competitive bidding procedures set forth in part 1, subpart Q, of this chapter will apply unless otherwise provided in this subpart.

[70 FR 76417, Dec. 27, 2005]

§ 22.882 Designated entities.

(a) Eligibility for small business provisions in the commercial Air-Ground Radiotelephone Service.

(1) A small business is an entity that, together with its affiliates, its controlling interests and the affiliates of its controlling interests, has average gross revenues that are not more than $40 million for the preceding three years.

(2) A very small business is an entity that, together with its affiliates, its controlling interests and the affiliates of its controlling interests, has average gross revenues that are not more than $15 million for the preceding three years.

(b) Bidding credits in the commercial Air-Ground Radiotelephone Service.

(1) A winning bidder that qualifies as a small business, as defined in this section, or a consortium of small businesses may use a bidding credit of 15 percent, as specified in § 1.2110(f)(2)(iii) of this chapter, to lower the cost of its winning bid on a commercial Air-Ground Radiotelephone Service license.

(2) A winning bidder that qualifies as a very small business, as defined in this section, or a consortium of very small businesses may use a bidding credit of 25 percent, as specified in § 1.2110(f)(2)(ii) of this chapter, to lower the cost of its winning bid on a commercial Air-Ground Radiotelephone Service license.

[70 FR 76417, Dec. 27, 2005]

Subpart H—Cellular Radiotelephone Service

§ 22.900 Scope.

The rules in this subpart govern the licensing and operation of cellular radiotelephone systems. Licensing and operation of these systems are also subject to rules elsewhere in this part that apply generally to the Public Mobile Services. In case of conflict, however, the rules in this subpart govern.

§ 22.901 Cellular service requirements and limitations.

The licensee of each Cellular system is responsible for ensuring that its Cellular system operates in compliance with this section. Each Cellular system must provide either mobile service, fixed service, or a combination of mobile and fixed service, subject to the requirements, limitations and exceptions in this section. Mobile service provided may be of any type, including two-way radiotelephone, dispatch, one-way or two-way paging, and personal communications services (as defined in part 24 of this chapter). Fixed service is considered to be primary service, as is mobile service. When both mobile and fixed services are provided, they are considered to be co-primary services. In providing Cellular service, each Cellular system may incorporate any technology that meets all applicable technical requirements in this part.

[79 FR 72151, Dec. 5, 2014]

§ 22.905 Channels for cellular service.

The following frequency bands are allocated for assignment to service providers in the Cellular Radiotelephone Service.

(a) Channel Block A: 869–880 MHz paired with 824–835 MHz, and 890–891.5 MHz paired with 845–846.5 MHz.

(b) Channel Block B: 880–890 MHz paired with 835–845 MHz, and 891.5–894 MHz paired with 846.5–849 MHz.

[67 FR 77191, Dec. 17, 2002]

§ 22.907 Coordination of channel usage.

Licensees in the Cellular Radiotelephone Service must coordinate, with the appropriate parties, channel usage at each transmitter location within 121 kilometers (75 miles) of any transmitter locations authorized to other licensees or proposed by tentative selectees or other applicants, except those with mutually exclusive applications.

(a) Licensees must cooperate and make reasonable efforts to resolve technical problems that may inhibit effective and efficient use of the cellular radio spectrum; however, licensees are not obligated to suggest extensive changes to or redesign other licensees' cellular systems. Licensees must make reasonable efforts to avoid blocking the growth of other cellular systems that are likely to need additional capacity in the future.

(b) If technical problems are addressed by an agreement or operating agreement between the licensees that would result in a reduction of quality or capacity of either system, the licensees must notify the Commission by updating FCC Form 601.

[59 FR 59507, Nov. 17, 1994, as amended at 63 FR 68951, Dec. 14, 1998]

§ 22.909 Cellular markets.

Cellular Market Areas (CMAs) are standard geographic areas used by the FCC for administrative convenience in the licensing of Cellular systems. CMAs comprise Metropolitan Statistical Areas (MSAs) and Rural Service Areas (RSAs). All CMAs and the counties they comprise are listed in: ''Common Carrier Public Mobile Services Information, Cellular MSA/RSA Markets and Counties,'' *Public Notice,* Rep. No. CL–92–40, 7 FCC Rcd 742 (1992).

(a) *MSAs.* Metropolitan Statistical Areas are 306 areas, including New England County Metropolitan Areas and the Gulf of Mexico Service Area (water area of the Gulf of Mexico, border is the coastline), defined by the Office of Management and Budget, as modified by the FCC.

(b) *RSAs.* Rural Service Areas are 428 areas, other than MSAs, established by the FCC.

[59 FR 59507, Nov. 17, 1994, as amended at 79 FR 72151, Dec. 5, 2014]

§ 22.911 Cellular geographic service area.

The Cellular Geographic Service Area (CGSA) of a cellular system is the geographic area considered by the FCC to be served by the cellular system. The CGSA is the area within which cellular systems are entitled to protection and within which adverse effects for the purpose of determining whether a petitioner has standing are recognized.

(a) *CGSA determination.* The CGSA is the composite of the service areas of all of the cells in the system, excluding any Unserved Area (even if it is served on a secondary basis) or area within the CGSA of another Cellular system. The service area of a cell is the area within its service area boundary (SAB). The distance to the SAB is calculated as a function of effective radiated power (ERP) and antenna center of radiation height above average terrain (HAAT), height above sea level (HASL), or height above mean sea level (HAMSL).

(1) Except as provided in paragraphs (a)(2) and (b) of this section, the distance from a cell transmitting antenna to its SAB along each cardinal radial is calculated as follows:

$$d = 2.531 \times h^{0.34} \times p^{0.17}$$

where:

d is the radial distance in kilometers
h is the radial antenna HAAT in meters
p is the radial ERP in Watts

(2) The distance from a cell transmitting antenna located in the Gulf of Mexico Service Area (GMSA) to its SAB along each cardinal radial is calculated as follows:

$$d = 6.895 \times h^{0.30} \times p^{0.15}$$

Where:

d is the radial distance in kilometers
h is the radial antenna HAAT in meters
p is the radial ERP in Watts

(3) The value used for h in the formula in paragraph (a)(2) of this section must not be less than 8 meters (26 feet) HASL (or HAMSL, as appropriate for the support structure). The value used for h in the formula in paragraph (a)(1) of this section must not be less than 30 meters (98 feet) HAAT, except that for unserved area applications proposing a cell with an ERP not exceeding 10 Watts, the value for h used in the formula in paragraph (a)(1) of this section to determine the service area boundary for that cell may be less than 30 meters (98 feet) HAAT, but not less than 3 meters (10 feet) HAAT.

(4) The value used for p in the formulas in paragraphs (a)(1) and (a)(2) of this section must not be less than 0.1 Watt or 27 dB less than (1/500 of) the maximum ERP in any direction, whichever is more.

(5) Whenever use of the formula in paragraph (a)(1) of this section pursuant to the exception contained in paragraph (a)(3) of this section results in a calculated distance that is less than 5.4 kilometers (3.4 miles), the radial distance to the service area boundary is deemed to be 5.4 kilometers (3.4 miles).

(6) The distance from a cell transmitting antenna to the SAB along any radial other than the eight cardinal radials is calculated by linear interpolation of distance as a function of angle.

(b) *Alternative CGSA determination.* If a carrier believes that the method described in paragraph (a) of this section produces a CGSA that departs significantly (±20% in the service area of any cell) from the geographic area where reliable cellular service is actually provided, the carrier may submit, as an exhibit to an application for modification of the CGSA using FCC Form 601, a depiction of what the carrier believes the CGSA should be. Such submissions must be accompanied by one or more supporting propagation studies using methods appropriate for the 800–900 MHz frequency range, including all supporting data and calculations, and/or by extensive field strength measurement data. For the purpose of such submissions, cellular service is considered to be provided in all areas, including ''dead spots'', between the transmitter location and the locus of points where the predicted or measured median field strength finally drops to 32 dBμV/m (i.e. does not exceed 32 dBμV/m further out). If, after consideration of such submissions, the FCC finds that adjustment to a CGSA is warranted, the FCC may grant the application.

(1) The alternative CGSA determination must define the CGSA in terms of distances from the cell sites to the 32 dBuV/m contour along the eight cardinal radials, with points in other azimuthal directions determined by the method given in paragraph (a)(6) of this section. The distances used for the cardinal radials must be representative of the coverage within the 45° sectors, as depicted by the alternative CGSA determination.

(2) If an uncalibrated predictive model is used to depict the CGSA, the alternative CGSA determination must identify factors (e.g. terrain roughness or features) that could plausibly account for the difference between actual coverage and that defined by the formula in paragraph (a)(1) of this section. If actual measurements or a measurement-calibrated predictive model are used to depict the CGSA, and this fact is disclosed in the alternative CGSA determination, it is not necessary to offer an explanation of the difference between actual coverage and that defined by the formula in paragraph (a)(1) of this section. If the formula in paragraph (a)(1) of this section is clearly inapplicable for the cell(s) in question (e.g. for microcells), this should be disclosed in the alternative CGSA determination.

(3) The provision for alternative CGSA determinations was made in recognition that the formula in paragraph (a)(1) of this section is a general model that provides a reasonable approximation of coverage in most land areas, but may under-predict or over-predict coverage in specific areas with unusual terrain roughness or features, and may be inapplicable for certain purposes, *e.g.*, cells with a coverage radius of less than 8 kilometers (5 miles). In such cases, alternative methods that utilize more specific models are appropriate. Accordingly, the FCC does not consider use of the formula in paragraph (a)(1) of this section with parameters outside of the limits in paragraphs (a)(3), (a)(4) and (a)(5) of this section or with data for radials other than the cardinal radials to be a valid alternative method for determining the CGSA of a cellular system.

(c) [Reserved]

(d) *Protection afforded.* Cellular systems are entitled to protection only within the CGSA (as determined in accordance with this section) from co-channel and first-adjacent channel interference and from capture of subscriber traffic by adjacent systems on the same channel block. Licensees must cooperate in resolving co-channel and first-adjacent channel interference by changing channels used at specific cells or by other technical means.

(e) *Unserved Area.* Unserved Area is area outside of all existing CGSAs on either of the channel blocks, to which the Communications Act of 1934, as amended, is applicable.

[59 FR 59507, Nov. 17, 1994, as amended at 59 FR 59954, Nov. 21, 1994; 63 FR 68951, Dec. 14, 1998; 67 FR 9609, Mar. 4, 2002; 67 FR 77191, Dec. 17, 2002; 68 FR 42295, July 17, 2003; 79 FR 72151, Dec. 5, 2014]

§ 22.912 Service area boundary extensions.

This section contains rules governing service area boundary (SAB) extensions. SAB extensions are areas (calculated using the methodology of § 22.911) that extend outside of the licensee's Cellular Geographic Service Area (CGSA) boundary into Unserved Area or into the CGSA of a neighboring co-channel licensee. Service within SAB extensions is not protected from interference or capture under § 22.911(d) unless and until the area within the SAB extension becomes part of the CGSA in compliance with all applicable rules.

(a) *Extensions into Unserved Area.* Subject to paragraph (c) of this section, the licensee of a Cellular system may, at any time, extend its SAB into Unserved Area and provide service on a secondary basis only, provided that the extension area comprises less than 130 contiguous square kilometers (50 contiguous square miles). If more than one licensee of a Cellular system extends into all or a portion of the same Unserved Area under this section, all such licensees may provide service in such Unserved Area on a shared secondary (unprotected) basis only.

(b) *Contract extensions.* The licensee of any Cellular system may, at any time, enter into a contract with an applicant for, or a licensee of, a Cellular system on the same channel block to allow one or more SAB extensions into its CGSA (not into Unserved Area).

(c) *Gulf of Mexico Service Area.* Land-based Cellular system licensees may not extend their SABs into the Gulf of Mexico Exclusive Zone (GMEZ) absent written contractual consent of the co-channel GMEZ licensee. GMEZ licensees may not extend their SABs into the CGSA of a licensee on the same channel block in an adjacent CMA or the Gulf of Mexico Coastal Zone absent written contractual consent of the co-channel licensee.

[79 FR 72151, Dec. 5, 2014]

§ 22.913 Effective radiated power limits.

The effective radiated power (ERP) of transmitters in the Cellular Radiotelephone Service must not exceed the limits in this section.

(a) *Maximum ERP.* In general, the effective radiated power (ERP) of base transmitters and cellular repeaters must not exceed 500 Watts. However, for those systems operating in areas more than 72 km (45 miles) from international borders that:

(1) Are located in counties with population densities of 100 persons or fewer per square mile, based upon the most recently available population statistics from the Bureau of the Census; or,

(2) Extend coverage on a secondary basis into cellular unserved areas, as those areas are defined in § 22.949, the ERP of base transmitters and cellular repeaters of such systems must not exceed 1000 Watts. The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

(b) *Height-power limit.* The ERP of base transmitters must not exceed the amount that would result in an average distance to the service area boundary of 79.1 kilometers (49 miles) for cellular systems authorized to serve the Gulf of Mexico MSA and 40.2 kilometers (25 miles) for all other cellular systems. The average distance to the service area boundary is calculated by taking the arithmetic mean of the distances determined using the procedures specified in § 22.911 for the eight cardinal radial directions.

(c) *Coordination exemption.* Licensees need not comply with the height-power limit in paragraph (b) of this section if the proposed operation is coordinated with the licensees of all affected cellular systems on the same channel block within 121 kilometers (75 miles) and concurrence is obtained.

[59 FR 59507, Nov. 17, 1994, as amended at 69 FR 75171, Dec. 15, 2004]

§ 22.917 Emission limitations for cellular equipment.

The rules in this section govern the spectral characteristics of emissions in the Cellular Radiotelephone Service.

(a) *Out of band emissions.* The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

(b) *Measurement procedure.* Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (*i.e.* 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(c) *Alternative out of band emission limit.* Licensees in this service may establish an alternative out of band emission limit to be used at specified band edge(s) in specified geographical areas, in lieu of that set forth in this section, pursuant to a private contractual arrangement of all affected licensees and applicants. In this event, each party to such contract shall maintain a copy of the contract in their station files and disclose it to prospective assignees or transferees and, upon request, to the FCC.

(d) *Interference caused by out of band emissions.* If any emission from a transmitter operating in this service results in interference to users of another radio service, the FCC may require a greater attenuation of that emission than specified in this section.

[67 FR 77191, Dec. 17, 2002]

§ 22.921 911 call processing procedures; 911-only calling mode.

Mobile telephones manufactured after February 13, 2000 that are capable of operating in the analog mode described in the standard document ANSI TIA/EIA–553–A–1999 Mobile Station—Base Station Compatibility Standard (approved October 14, 1999—available for purchase from Global Engineering Documents, 15 Inverness East, Englewood, CO 80112), must incorporate a special procedure for processing 911 calls. Such procedure must recognize when a 911 call is made and, at such time, must override any programming in the mobile unit that determines the handling of a non-911 call and permit the call to be transmitted through the analog systems of other carriers. This special procedure must incorporate one or more of the 911 call system selection processes endorsed or approved by the FCC.

[67 FR 77192, Dec. 17, 2002]

§ 22.923 Cellular system configuration.

Mobile stations communicate with and through base transmitters only. Base transmitters communicate with mobile stations directly or through cellular repeaters. Auxiliary test stations may communicate with base or mobile stations for the purpose of testing equipment.

§ 22.925 Prohibition on airborne operation of cellular telephones.

Cellular telephones installed in or carried aboard airplanes, balloons or any other type of aircraft must not be operated while such aircraft are airborne (not touching the ground). When any aircraft leaves the ground, all cellular telephones on board that aircraft must be turned off. The following notice must be posted on or near each cellular telephone installed in any aircraft:

''The use of cellular telephones while this aircraft is airborne is prohibited by FCC rules, and the violation of this rule could result in suspension of service and/or a fine. The use of cellular telephones while this aircraft is on the ground is subject to FAA regulations.''

§ 22.927 Responsibility for mobile stations.

Mobile stations that are subscribers in good standing to a cellular system, when receiving service from that cellular system, are considered to be operating under the authorization of that cellular system. Cellular system licensees are responsible for exercising effective operational control over mobile stations receiving service through their cellular systems. Mobile stations that are subscribers in good standing to a cellular system, while receiving

service from a different cellular system, are considered to be operating under the authorization of such different system. The licensee of such different system is responsible, during such temporary period, for exercising effective operational control over such mobile stations as if they were subscribers to it.

§ 22.929 [Reserved]

§ 22.935 Procedures for comparative renewal proceedings.

The procedures in this section apply to comparative renewal proceedings in the Cellular Radiotelephone Service.

(a) If one or more of the applications competing with an application for renewal of a cellular authorization are filed, the renewal applicant must file with the Commission its original renewal expectancy showing electronically via the ULS. This filing must be submitted no later than 60 days after the date of the Public Notice listing as acceptable for filing the renewal application and the competing applications.

(b) Interested parties may file petitions to deny any of the mutually exclusive applications. Any such petitions to deny must be filed no later than 30 days after the date that the renewal applicant submitted its renewal expectancy showing. Applicants may file replies to any petitions to deny applications that are filed. Any such replies must be filed no later than 15 days after the date that the petition(s) to deny was filed. No further pleadings will be accepted.

(c) In most instances, the renewal application and any competing applications will be designated for a two-step procedure. An Administrative Law Judge (Presiding Judge) will conduct a threshold hearing (step one), in which both the licensee and the competing applicants will be parties, to determine whether the renewal applicant deserves a renewal expectancy. If the order designating the applications for hearing specifies any basic qualifying issues against the licensee, those issues will be tried in this threshold hearing. If the Presiding Judge determines that the renewal applicant is basically qualified and due a renewal expectancy, the competing applicants will be found ineligible for further consideration and their applications will be denied. If the Presiding Judge determines that the renewal applicant does not merit a renewal expectancy but is otherwise qualified, then all of the applications will be considered in a comparative hearing (step two).

(d) Any competing applicant may request a waiver of the threshold hearing (step one), if such applicant demonstrates that its proposal so far exceeds the service already being provided that there would be no purpose in making a threshold determination as to whether the renewal applicant deserved a renewal expectancy vis-a-vis such a competing applicant. Any such waiver request must be filed at the time the requestor's application is filed. Petitions opposing such waiver requests may be filed. Any such petitions must be filed no later than 30 days after the date that the renewal applicant submitted its renewal expectancy showing. Replies to any petitions opposing such waiver requests may be filed. Any such replies must be filed no later than 15 days after the date that the petition(s) were filed. No further pleadings will be accepted. Any waiver request submitted pursuant to this paragraph will be acted upon prior to designating the applications for hearing. If a request to waive the threshold hearing (step one) is granted, the renewal expectancy issue will be designated as part of the comparative hearing (step two), and will remain the most important comparative factor in deciding the case, as provided in § 22.940(a).

(e) If the Presiding Judge issues a ruling in the threshold (step one) that denies the licensee a renewal expectancy, all of the applicants involved in the proceeding will be allowed to file direct cases no later than 90 days after the release date of the Presiding Judge's ruling. Rebuttal cases must be filed no later than 30 days after the date that the direct cases were filed.

(f) The Presiding Judge shall use the expedited hearing procedures delineated in this paragraph in both threshold (step one) and comparative (step two) hearings conducted in comparative cellular renewal proceedings.

(1) The Presiding Judge will schedule a first hearing session as soon as practicable after the date for filing rebuttal evidence. This first session will be an evidentiary admission session at which each applicant will identify and offer its previously circulated direct and rebuttal exhibits, and each party will have an opportunity to lodge objections.

(2) After accepting the exhibits into evidence, the Presiding Judge will entertain motions to cross-examine and rule whether any sponsoring witness needs to be produced for cross-examination.

Determination of what, if any, cross-examination is necessary is within the sound judicial discretion of the Presiding Judge, the prevailing standard being whether the person requesting cross-examination has persuasively demonstrated that written evidence is ineffectual to develop proof. If cross-examination is necessary, the Presiding Judge will specify a date for the appearance of all witnesses. In addition, if the designation order points out an area where additional underlying data is needed, the Presiding Judge will have the authority to permit the limited use of discovery procedures. Finally, the Presiding Judge may find that certain additional testimony or cross-examination is needed to provide a complete record for the FCC. If so, the Presiding Judge may schedule a further session.

(3) After the hearing record is closed, the Presiding Judge may request Proposed Findings of Fact and Conclusions of Law to be filed no later than 30 days after the final hearing session. Replies are not permitted except in unusual cases and then only with respect to the specific issues named by the Presiding Judge.

(4) The Presiding Judge will then issue an Initial Decision, preferably within 60 days of receipt of the last pleadings. If mutually exclusive applications are before the Presiding Judge, the Presiding Judge will determine which applicant is best qualified. The Presiding Judge may also rank the applicants in order of merit if there are more than two.

(5) Parties will have 30 days in which to file exceptions to the Initial Decision.

[59 FR 59507, Nov. 17, 1994, as amended at 62 FR 4172, Jan. 29, 1997; 63 FR 68951, Dec. 14, 1998]

§ 22.936 Dismissal of applications in cellular renewal proceedings.

Any applicant that has filed an application in the Cellular Radiotelephone Service that is mutually exclusive with an application for renewal of a cellular authorization (competing application), and seeks to resolve the mutual exclusivity by requesting dismissal of its application, must obtain the approval of the FCC.

(a) If a competing applicant seeks to dismiss its application prior to the Initial Decision stage of the hearing on its application, it must submit to the Commission a request for approval of the dismissal of its application. This request for approval of the dismissal of its application must be submitted and must also include a copy of any agreement related to the withdrawal or dismissal, and an affidavit setting forth:

(1) A certification that neither the petitioner nor its principals has received or will receive any money or other consideration in excess of legitimate and prudent expenses in exchange for the withdrawal or dismissal of the application, except that this provision does not apply to dismissal or withdrawal of applications pursuant to *bona fide* merger agreements;

(2) The exact nature and amount of any consideration received or promised;

(3) An itemized accounting of the expenses for which it seeks reimbursement; and

(4) The terms of any oral agreement related to the withdrawal or dismissal of the application.

(b) In addition, within 5 days of the filing date of the applicant or petitioner's request for approval, each remaining party to any written or oral agreement must submit an affidavit setting forth:

(1) A certification that neither the applicant nor its principals has paid or will pay money or other consideration in excess of the legitimate and prudent expenses of the petitioner in exchange

for withdrawing or dismissing the application; and

(2) The terms of any oral agreement relating to the withdrawal or dismissal of the application.

(c) For the purposes of this section:

(1) Affidavits filed pursuant to this section must be executed by the filing party, if an individual, a partner having personal knowledge of the facts, if a partnership, or an officer having personal knowledge of the facts, if a corporation or association.

(2) Applications are deemed to be pending before the FCC from the time the application is filed with the FCC until such time as an order of the FCC granting, denying or dismissing the application is no longer subject to reconsideration by the FCC or to review by any court.

(3) ''Legitimate and prudent expenses'' are those expenses reasonably incurred by a party in preparing to file, filing, prosecuting and/or settling its application for which reimbursement is sought.

(4) ''Other consideration'' consists of financial concessions, including, but not limited to, the transfer of assets or the provision of tangible pecuniary benefit, as well as non-financial concessions that confer any type of benefit on the recipient.

[59 FR 59507, Nov. 17, 1994, as amended at 63 FR 68951, Dec. 14, 1998]

§ 22.939 Site availability requirements for applications competing with cellular renewal applications.

In addition to the other requirements set forth in this part for initial cellular applications, any application competing against a cellular renewal application must contain, when initially filed, appropriate documentation demonstrating that its proposed antenna site(s) will be available. Competing applications that do not include such documentation will be dismissed. If the competing applicant does not own a particular site, it must, at a minimum demonstrate that the site is available to it by providing a letter from the owner of the proposed antenna site expressing the owner's intent to sell or lease the proposed site to the applicant. If any proposed antenna site is under U.S. Government control, the applicant must submit written confirmation of the site's availability from the appropriate Government agency. Applicants which file competing applications against incumbent cellular licensees may not rely on the assumption that an incumbent licensee's antenna sites are available for their use.

§ 22.940 Criteria for comparative cellular renewal proceedings.

This section sets forth criteria to be used in comparative cellular renewal proceedings. The ultimate issue in comparative renewal proceedings will be to determine, in light of the evidence adduced in the proceeding, what disposition of the applications would best serve the public interest, convenience and necessity.

(a) *Renewal expectancies.* The most important comparative factor to be considered in a comparative cellular renewal proceeding is a major preference, commonly referred to as a ''renewal expectancy.''

(1) The cellular renewal applicant involved in a comparative renewal proceeding will receive a renewal expectancy, if its past record for the relevant license period demonstrates that:

(i) The renewal applicant has provided ''substantial'' service during its past license term. ''Substantial'' service is defined as service which is sound, favorable, and substantially above a level of mediocre service which just might minimally warrant renewal; and

(ii) The renewal applicant has substantially compiled with applicable FCC rules, policies and the Communications Act of 1934, as amended.

(2) In order to establish its right to a renewal expectancy, a cellular renewal applicant involved in a comparative renewal proceeding must submit a showing explaining why it should receive a renewal expectancy. At a minimum, this showing must include.

(i) A description of its current service in terms of geographic coverage and population served, as well as the system's ability to accommodate the needs of roamers;

(ii) An explanation of its record of expansion, including a timetable of the construction of new cell sites to meet changes in demand for cellular service;

(iii) A description of its investments in its cellular system; and

(iv) Copies of all FCC orders finding the licensee to have violated the Communications Act or any FCC rule or policy; and a list of any pending proceedings that relate to any matter described in this paragraph.

(3) In making its showing of entitlement to a renewal expectancy, a renewal applicant may claim credit for any system modification applications that were pending on the date it filed its renewal application. Such credit will not be allowed if the modification application is dismissed or denied.

(b) *Additional comparative issues.* The following additional comparative issues will be included in comparative cellular renewal proceedings, if a full comparative hearing is conducted pursuant to §22.935(c).

(1) To determine on a comparative basis the geographic areas and population that each applicant proposes to serve; to determine and compare the relative demand for the services proposed in said areas; and to determine and compare the ability of each applicant's cellular system to accommodate the anticipated demand for both local and roamer service;

(2) To determine on a comparative basis each applicant's proposal for expanding its system capacity in a coordinated manner in order to meet anticipated increasing demand for *both* local and roamer service;

(3) To determine on a comparative basis the nature and extent of the service proposed by each applicant, including each applicant's proposed rates, charges, maintenance, personnel, practices, classifications, regulations and facilities (including switching capabilities); and

(4) To determine on a comparative basis each applicant's past performance in the cellular industry or another business of comparable type and size.

(c) *Additional showings for competing applications.* With respect to evidence introduced pursuant to paragraph (b)(3) of this section, any applicant filing a competing application against a cellular renewal application (competing applicant) who claims a preference for offering any service not currently offered by the incumbent licensee must demonstrate that there is demand for that new service and also present a business plan showing that the competing applicant can operate the system economically. Any competing applicant who proposes to replace analog technology with digital technology will receive no credit for its proposal unless it submits a business plan showing how it will operate its system economically and how it will provide more comprehensive service than does the incumbent licensee with existing and implemented cellular technology.

§22.943 Limitations on transfer of control and assignment for authorizations issued as a result of a comparative renewal proceeding.

Except as otherwise provided in this section, the FCC does not accept applications for consent to transfer of control or for assignment of the authorization of a cellular system that has been acquired by the current licensee for the first time as a result of a comparative renewal proceeding until the system has provided service to subscribers for at least three years.

(a) The FCC may accept and grant applications for consent to transfer of control or for assignment of the authorization of a cellular system that is to be transferred as a part of a bona fide sale of an on-going business to which the cellular operation is incidental.

(b) The FCC may accept and grant applications for consent to transfer of control or for assignment of the authorization of a cellular system that is to be transferred as a result of the death of the licensee.

(c) The FCC may accept and grant applications for consent to transfer of control or for assignment of authorization if the transfer or assignment is pro forma and does not involve a change in ownership.

[67 FR 77192, Dec. 17, 2002]

§22.946 Construction period for Unserved Area authorizations.

The construction period applicable to new or modified Cellular facilities for which an authorization is granted pursuant to the Unserved Area process is

one year, beginning on the date the authorization is granted. To satisfy this requirement, a Cellular system must be providing service to mobile stations operated by subscribers and roamers. The licensee must notify the FCC (FCC Form 601) after the requirements of this section are met. *See* §1.946 of this chapter. *See also* §22.949.

[79 FR 72151, Dec. 5, 2014]

§ 22.947 [Reserved]

§ 22.948 Geographic partitioning and spectrum disaggregation; spectrum leasing.

Cellular licensees may apply to partition any portion of their licensed Cellular Geographic Service Area (CGSA) or to disaggregate their licensed spectrum at any time following the grant of their authorization(s). Parties seeking approval for partitioning and disaggregation shall request from the FCC an authorization for partial assignment of a license pursuant to §1.948 of this chapter. See also paragraph (d) of this section regarding spectrum leasing.

(a) *Partitioning, disaggregation, or combined partitioning and disaggregation.* Applicants must file FCC Form 603 (''Assignment of Authorization and Transfer of Control'') pursuant to §1.948 of this chapter, as well as GIS map files and a reduced-size PDF map pursuant to §22.953 for both the assignor and assignee.

(b) *Field strength limit.* For purposes of partitioning and disaggregation, Cellular systems must be designed so as to comply with §22.983.

(c) *License term.* The license term for a partitioned license area and for disaggregated spectrum will be the remainder of the original license term.

(d) *Spectrum leasing.* Cellular spectrum leasing is subject to all applicable provisions of subpart X of part 1 of this chapter as well as the provisions of paragraph (a) of this section, except that applicants must file FCC Form 608 (''Application or Notification for Spectrum Leasing Arrangement or Private Commons Arrangement''), not FCC Form 603.

[79 FR 72152, Dec. 5, 2014]

§ 22.949 Unserved Area licensing; minimum coverage requirements.

(a) The Unserved Area licensing process described in this section is on-going and applications may be filed at any time, subject to the following coverage requirements:

(1) Applicants for authority to operate a new Cellular system or expand an existing Cellular Geographic Service Area (CGSA) in Unserved Area must propose a CGSA or CGSA expansion of at least 130 contiguous square kilometers (50 contiguous square miles) using the methodology of §22.911.

(2) Applicants for authority to operate a new Cellular system must not propose coverage of water areas only (or water areas and uninhabited islands or reefs only), except for Unserved Area in the Gulf of Mexico Service Area.

(b) There is no limit to the number of Unserved Area applications that may be granted on each channel block of each CMA that is subject to the procedures of this section. Consequently, Unserved Area applications are mutually exclusive only if the proposed CGSAs would overlap. Mutually exclusive applications are processed using the general procedures under §22.131.

(c) Unserved Area applications under this section may propose a CGSA covering more than one CMA. Each Unserved Area application must request authorization for only one CGSA and must not propose a CGSA overlap with an existing CGSA.

(d) Settlements among some, but not all, applicants with mutually exclusive applications for Unserved Area (partial settlements) under this section are prohibited. Settlements among all applicants with mutually exclusive applications under this section (full settlements) are allowed and must be filed no later than the date that the FCC Form 175 (short-form) is filed.

[79 FR 72152, Dec. 5, 2014]

§ 22.950 Provision of service in the Gulf of Mexico Service Area (GMSA).

The GMSA has been divided into two areas for licensing purposes, the Gulf of Mexico Exclusive Zone (GMEZ) and the Gulf of Mexico Coastal Zone (GMCZ). This section describes these areas and

sets forth the process for licensing facilities in these two respective areas within the GMSA.

(a) The GMEZ and GMCZ are defined as follows:

(1) *Gulf of Mexico Exclusive Zone*. The geographical area within the Gulf of Mexico Service Area that lies between the coastline line and the southern demarcation line of the Gulf of Mexico Service Area, excluding the area comprising the Gulf of Mexico Coastal Zone.

(2) *Gulf of Mexico Coastal Zone*. The geographical area within the Gulf of Mexico Service Area that lies between the coast line of Florida and a line extending approximately twelve nautical miles due south from the coastline boundary of the States of Florida and Alabama, and continuing along the west coast of Florida at a distance of twelve nautical miles from the shoreline. The line is defined by Great Circle arcs connecting the following points (geographical coordinates listed as North Latitude, West Longitude) consecutively in the order listed:

(i) 30°16′49″ N 87°31′06″ W
(ii) 30°04′35″ N 87°31′06″ W
(iii) 30°10′56″ N 86°26′53″ W
(iv) 30°03′00″ N 86°00′29″ W
(v) 29°33′00″ N 85°32′49″ W
(vi) 29°23′21″ N 85°02′06″ W
(vii) 29°49′44″ N 83°59′02″ W
(viii) 28°54′00″ N 83°05′33″ W
(ix) 28°34′41″ N 82°53′38″ W
(x) 27°50′39″ N 83°04′27″ W
(xi) 26°24′22″ N 82°23′22″ W
(xii) 25°41′39″ N 81°49′40″ W
(xiii) 24°59′02″ N 81°15′04″ W
(xiv) 24°44′23″ N 81°57′04″ W
(xv) 24°32′37″ N 82°02′01″ W

(b) *Service Area Boundary Calculation*. The service area boundary of a cell site located within the Gulf of Mexico Service Area is calculated pursuant to § 22.911(a)(2). Otherwise, the service area boundary is calculated pursuant to § 22.911(a)(1) or § 22.911(b).

(c) *Gulf of Mexico Exclusive Zone (GMEZ)*. GMEZ licensees have an exclusive right to provide Cellular service in the GMEZ, and may add, modify, or remove facilities anywhere within the GMEZ without prior FCC approval. There is no Unserved Area licensing procedure for the GMEZ.

(d) *Gulf of Mexico Coastal Zone (GMCZ)*. The GMCZ is subject to the Unserved Area licensing procedures set forth in § 22.949.

[67 FR 9610, Mar. 4, 2002, as amended at 79 FR 72152, Dec. 5, 2014]

§ 22.951 [Reserved]

§ 22.953 Content and form of applications for Cellular Unserved Area authorizations.

Applications for authority to operate a new Cellular system or to modify an existing Cellular system must comply with the specifications in this section.

(a) *New Systems*. In addition to information required by subpart B of this part and by FCC Form 601, applications for an Unserved Area authorization to operate a Cellular system must comply with all applicable requirements set forth in part 1 of this chapter, including the requirements specified in §§ 1.913, 1.923, and 1.924, and must include the information listed below. Geographical coordinates must be correct to ±1 second using the NAD 83 datum.

(1) *Exhibit I—Geographic Information System (GIS) map files*. Geographic Information System (GIS) map files must be submitted showing the entire proposed CGSA, the new cell sites (transmitting antenna locations), and the service area boundaries of additional and modified cell sites that extend into Unserved Area being claimed as CGSA. *See* § 22.911. The FCC will specify the file format required for the GIS map files, which are to be submitted electronically via the Universal Licensing System (ULS).

(2) *Exhibit II—Reduced-size PDF map*. This map must be 8½ × 11 inches (if possible, a proportional reduction of a 1:500,000 scale map). The map must have a legend, a distance scale, and correctly labeled latitude and longitude lines. The map must be clear and legible. The map must accurately show the entire proposed CGSA, the new cell sites (transmitting antenna locations), the service area boundaries of additional and modified cell sites that extend beyond the CGSA, and the relevant portions of the CMA boundary. *See* § 22.911.

(3) *Exhibit III—Technical Information.* In addition, upon request by an applicant, licensee, or the FCC, a Cellular applicant or licensee of whom the request is made shall furnish the antenna type, model, the name of the antenna manufacturer, antenna gain in the maximum lobe, the beam width of the maximum lobe of the antenna, a polar plot of the horizontal gain pattern of the antenna, antenna height to tip above ground level, the height of the center of radiation of the antenna above the average terrain, the maximum effective radiated power, and the electric field polarization of the wave emitted by the antenna when installed as proposed to the requesting party within ten (10) days of receiving written notification.

(4)–(10) [Reserved]

(11) *Additional information.* The FCC may request information not specified in FCC Form 601 or in paragraphs (a)(1) through (a)(3) of this section as necessary to process an application.

(b) *Existing systems—major modifications.* Licensees making major modifications pursuant to §1.929(a) and (b) of this chapter must file FCC Form 601 and comply with the requirements of paragraph (a) of this section.

(c) *Existing systems—minor modifications.* Licensees making minor modifications pursuant to §1.929(k) of this chapter, must file FCC Form 601 or FCC Form 603. *See also* §22.169. If the modification involves a contract SAB extension into or from the Gulf of Mexico Exclusive Zone, it must include a certification that the required written consent has been obtained. *See* §22.912(c).

[79 FR 72152, Dec. 5, 2014]

§ 22.955 Canadian condition.

Pursuant to an agreement between the FCC and the Department of Communications in Canada, authorizations for cellular systems within 72 kilometers (45 miles) of the U.S.-Canadian border must have the following condition attached:

This authorization is subject to the condition that, in the event that cellular systems using the same channel block as granted herein are authorized in adjacent territory in Canada, coordination of any of your transmitter installations which are within 72 kilometers (45 miles) of the U.S.-Canadian border shall be required to eliminate any harmful interference that might otherwise exist and to insure continuance of equal access to the channel block by both countries.

§ 22.957 Mexican condition.

Pursuant to an agreement between the United States and Mexico, FCC authorizations for cellular systems within 72 kilometers (45 miles) of the United States-Mexican border must have the following condition attached:

This authorization is subject to the condition that, in the event cellular systems using the same frequencies granted herein are authorized in adjacent territory in Mexico, coordination of your transmitter installations which are within 72 kilometers (45 miles) of the United States-Mexico border shall be required to eliminate any harmful interference that might otherwise exist and to ensure continuance of equal access to the frequencies by both countries. The operator of this system shall not contract with customers in Mexico, and further, users of the system must be advised that operation of a mobile unit in Mexico is not permitted at this time without the express permission of the Mexican government. The above conditions are subject to modification pending further notice from the FCC.

§ 22.959 Rules governing processing of applications for initial systems.

Pending applications for authority to operate the first cellular system on a channel block in an MSA or RSA market continue to be processed under the rules governing the processing of such applications that were in effect when those applications were filed, unless the Commission determines otherwise in a particular case.

§ 22.960 Cellular operations in the Chambers, TX CMA (CMA672–A).

This section applies only to Cellular systems operating on channel block A of the Chambers, Texas CMA (CMA672–A).

(a) The geographic boundary of CMA672–A is deemed to be the Cellular Geographic Service Area (CGSA) boundary. This CGSA boundary is not determined using the methodology of §22.911. The licensee of CMA672–A may not propose an expansion of this CGSA into another CMA unless and until it meets the construction requirement

set forth in paragraph (b)(2) of this section.

(b) A licensee that holds the license for CMA672–A must be providing signal coverage and offering service as follows (and in applying these geographic construction benchmarks, the licensee is to count total land area):

(1) To at least 35% of the geographic area of CMA672–A within four years of the grant of such authorization; and

(2) To at least 70% of the geographic area of its license authorization by the end of the license term.

(c) After it has met each of the requirements of paragraphs (b)(1) and (b)(2), respectively, of this section, the licensee that holds the license for CMA672–A must notify the FCC that it has met the requirement by submitting FCC Form 601, including GIS map files and other supporting documents showing compliance with the requirement. *See* §1.946 of this chapter. *See also* §22.953.

(d) Failure to meet the construction requirements set forth in paragraphs (b)(1) and (b)(2) of this section by each of the applicable deadlines will result in automatic termination of the license for CMA672–A and its return to the Commission for future re-licensing subject to competitive bidding procedures. The licensee that fails to meet each requirement of this section by the applicable deadline set forth in paragraphs (b)(1) and (b)(2) shall be ineligible to regain the license for CMA672–A.

[79 FR 72153, Dec. 5, 2014]

§22.961 Cellular licenses subject to competitive bidding.

(a) The following applications for Cellular licensed area authorizations are subject to competitive bidding:

(1) Mutually exclusive applications for Unserved Area filed after July 26, 1993; and

(2) Mutually exclusive applications for the initial authorization for CMA672–A (Chambers, TX).

(b) The competitive bidding procedures set forth in §22.229 and the general competitive bidding procedures set forth in subpart Q of part 1 of this chapter will apply.

[79 FR 72153, Dec. 5, 2014]

§§22.962–22.969 [Reserved]

§22.970 Unacceptable interference to part 90 non-cellular 800 MHz licensees from cellular radiotelephone or part 90–800 MHz cellular systems.

(a) *Definition*. Except as provided in 47 CFR 90.617(k), unacceptable interference to non-cellular part 90 licensees in the 800 MHz band from cellular radiotelephone or part 90–800 MHz cellular systems will be deemed to occur when the below conditions are met:

(1) A transceiver at a site at which interference is encountered:

(i) Is in good repair and operating condition, and is receiving:

(A) A median desired signal of −104 dBm or higher, as measured at the R.F. input of the receiver of a mobile unit; or

(B) A median desired signal of −101 dBm or higher, as measured at the R.F. input of the receiver of a portable *i.e.* hand-held unit; and, either

(ii) Is a voice transceiver:

(A) With manufacturer published performance specifications for the receiver section of the transceiver equal to, or exceeding, the minimum standards set out in paragraph (b) of this section, below; and;

(B) Receiving an undesired signal or signals which cause the measured Carrier to Noise plus interference (C/(I + N)) ratio of the receiver section of said transceiver to be less than 20 dB, or,

(iii) Is a non-voice transceiver receiving an undesired signal or signals which cause the measured bit error rate (BER) (or some comparable specification) of the receiver section of said transceiver to be more than the value reasonably designated by the manufacturer.

(2) Provided, however, that if the receiver section of the mobile or portable voice transceiver does not conform to the standards set out in paragraph (b) of this section, then that transceiver shall be deemed subject to unacceptable interference only at sites where the median desired signal satisfies the applicable threshold measured signal power in paragraph (a)(1)(i) of this section after an upward adjustment to account for the difference in receiver section performance. The upward adjustment shall be equal to the increase in

the desired signal required to restore the receiver section of the subject transceiver to the 20 dB C/(I + N) ratio of paragraph (a)(1)(ii)(B) of this section. The adjusted threshold levels shall then define the minimum measured signal power(s) in lieu of paragraphs (a)(1)(i) of this section at which the licensee using such non-compliant transceiver is entitled to interference protection.

(b) *Minimum receiver requirements.* Voice transceivers capable of operating in the 806–824 MHz portion of the 800 MHz band shall have the following minimum performance specifications in order for the system in which such transceivers are used to claim entitlement to full protection against unacceptable interference (See paragraph (a) (2) of this section).

(1) Voice units intended for mobile use: 75 dB intermodulation rejection ratio; 75 dB adjacent channel rejection ratio; −116 dBm reference sensitivity.

(2) Voice units intended for portable use: 70 dB intermodulation rejection ratio; 70 dB adjacent channel rejection ratio; −116 dBm reference sensitivity.

[69 FR 67834, Nov. 22, 2004, as amended at 70 FR 76707, Dec. 28, 2005]

§ 22.971 Obligation to abate unacceptable interference.

(a) *Strict Responsibility.* Any licensee who, knowingly or unknowingly, directly or indirectly, causes or contributes to causing unacceptable interference to a non-cellular part 90 of this chapter licensee in the 800 MHz band, as defined in § 22.970, shall be strictly accountable to abate the interference, with full cooperation and utmost diligence, in the shortest time practicable. Interfering licensees shall consider all feasible interference abatement measures, including, but not limited to, the remedies specified in the interference resolution procedures set forth in § 22.972(c). This strict responsibility obligation applies to all forms of interference, including out-of-band emissions and intermodulation.

(b) *Joint and several responsibility.* If two or more licensees knowingly or unknowingly, directly or indirectly, cause or contribute to causing unacceptable interference to a non-cellular part 90 of this chapter licensee in the 800 MHz band, as defined in § 22.970, such licensees shall be jointly and severally responsible for abating interference, with full cooperation and utmost diligence, in the shortest practicable time.

(1) This joint and several responsibility rule requires interfering licensees to consider all feasible interference abatement measures, including, but not limited to, the remedies specified in the interference resolution procedures set forth in § 22.972(c). This joint and several responsibility rule applies to all forms of interference, including out-of-band emissions and intermodulation.

(2) Any licensee that can show that its signal does not directly or indirectly, cause or contribute to causing unacceptable interference to a non-cellular part 90 of this chapter licensee in the 800 MHz band, as defined in this chapter, shall not be held responsible for resolving unacceptable interference. Notwithstanding, any licensee that receives an interference complaint from a public safety/CII licensee shall respond to such complaint consistent with the interference resolution procedures set forth in this chapter.

[69 FR 67834, Nov. 22, 2004, as amended at 70 FR 76707, Dec. 28, 2005]

§ 22.972 Interference resolution procedures.

(a) *Initial notification.* (1) Cellular Radiotelephone licensees may receive initial notification of interference from non-cellular part 90 of this chapter licensees in the 800 MHz band pursuant to § 90.674(a) of this chapter.

(2) Cellular Radiotelephone licensees, in conjunction with part 90 ESMR licensees, shall establish an electronic means of receiving the initial notification described in § 90.674(a) of this chapter. The electronic system must be designed so that all appropriate Cellular Radiotelephone licensees and part 90 ESMR licensees can be contacted about the interference incident with a single notification. The electronic system for receipt of initial notification of interference complaints must be operating no later than February 22, 2005.

(3) Cellular Radiotelephone licensees must respond to the initial notification described in § 90.674(a) of this chapter,

as soon as possible and no later than 24 hours after receipt of notification from a part 90 public safety/CII licensee. This response time may be extended to 48 hours after receipt from other part 90 non-cellular licensees provided affected communications on these systems are not safety related.

(b) *Interference analysis.* Cellular Radiotelephone licensees—who receive an initial notification described in §90.674(a) of this chapter—shall perform a timely analysis of the interference to identify the possible source. Immediate on-site visits may be conducted when necessary to complete timely analysis. Interference analysis must be completed and corrective action initiated within 48 hours of the initial complaint from a part 90 of this chapter public safety/CII licensee. This response time may be extended to 96 hours after the initial complaint from other part 90 of this chapter non-cellular licensees provided affected communications on these systems are not safety related. Corrective action may be delayed if the affected licensee agrees in writing (which may be, but is not required to be, recorded via e-mail or other electronic means) to a longer period.

(c) *Mitigation steps.* (1) All Cellular Radiotelephone and part 90 of this chapter—800 MHz cellular system licensees who are responsible for causing unacceptable interference shall take all affirmative measures to resolve such interference. Cellular Radiotelephone licensees found to contribute to unacceptable interference, as defined in §22.970, shall resolve such interference in the shortest time practicable. Cellular Radiotelephone licensees and part 90 of this chapter—800 MHz cellular system licensees must provide all necessary test apparatus and technical personnel skilled in the operation of such equipment as may be necessary to determine the most appropriate means of timely eliminating the interference. However, the means whereby interference is abated or the cell parameters that may need to be adjusted is left to the discretion of the Cellular Radiotelephone and/or part 90 of this chapter—800 MHz cellular system licensees, whose affirmative measures may include, but not be limited to, the following techniques:

(i) Increasing the desired power of the public safety/CII signal;

(ii) Decreasing the power of the part 90 ESMR and/or Cellular Radiotelephone system signal;

(iii) Modifying the part 90 ESMR and/or Cellular Radiotelephone system antenna height;

(iv) Modifying the part 90 ESMR and/or Cellular Radiotelephone system antenna characteristics;

(v) Incorporating filters into part 90 ESMR and/or Cellular Radiotelephone transmission equipment;

(vi) Permanently changing part 90 ESMR and/or Cellular Radiotelephone frequencies; and

(vii) Supplying interference-resistant receivers to the affected public safety/CII licensee(s). If this technique is used, in all circumstances, Cellular Radiotelephone and/or part 90 of this chapter ESMR licensees shall be responsible for all costs thereof.

(2) Whenever short-term interference abatement measures prove inadequate, the affected part 90 of this chapter non-cellular licensee shall, consistent with but not compromising safety, make all necessary concessions to accepting interference until a longer-term remedy can be implemented.

(3) *Discontinuing operations when clear imminent danger exists.* When a part 90 of this chapter public safety licensee determines that a continuing presence of interference constitutes a clear and imminent danger to life or property, the licensee causing the interference must discontinue the associated operation immediately, until a remedy can be identified and applied. The determination that a continuing presence exists that constitutes a clear and imminent danger to life or property, must be made by written statement that:

(i) Is in the form of a declaration, notarized affidavit, or statement under penalty or perjury, from an officer or executive of the affected public safety licensee;

(ii) Thoroughly describes the basis of the claim of clear and imminent danger;

(iii) Was formulated on the basis of either personal knowledge or belief after due diligence;

(iv) Is not proffered by a contractor or other third party; and

(v) Has been approved by the Chief of the Public Safety and Homeland Security Bureau or other designated Commission official. Prior to the authorized official making a determination that a clear and imminent danger exists, the associated written statement must be served by hand-delivery or receipted fax on the applicable offending licensee, with a copy transmitted by the fastest available means to the Washington, DC office of the Commission's Public Safety and Homeland Security Bureau.

[69 FR 67834, Nov. 22, 2004, as amended at 70 FR 76707, Dec. 28, 2005; 71 FR 69038, Nov. 29, 2006]

§ 22.973 Information exchange.

(a) *Prior notification.* Public safety/CII licensees may notify a part 90 ESMR or cellular radiotelephone licensee that they wish to receive prior notification of the activation or modification of part 90 ESMR or cellular radiotelephone cell sites in their area. Thereafter, the part 90 ESMR or cellular radiotelephone licensee must provide the following information to the public safety/CII licensee at least 10 business days before a new cell site is activated or an existing cell site is modified:

(1) Location;

(2) Effective radiated power;

(3) Antenna height;

(4) Channels available for use.

(b) *Purpose of prior notification.* The prior coordination of cell sites is for informational purposes only. Public safety/CII licensees are not afforded the right to accept or reject the activation of a proposed cell or to unilaterally require changes in its operating parameters. The principal purposes of notification are to:

(1) Allow a public safety licensee to advise the part 90 of this chapter ESMR or Cellular Radiotelephone licensee whether it believes a proposed cell will generate unacceptable interference;

(2) Permit Cellular Radiotelephone or part 90 of this chapter ESMR licensees to make voluntary changes in cell parameters when a public safety licensee alerts them to possible interference; and

(3) Rapidly identify the source if interference is encountered when the cell is activated.

[69 FR 67834, Nov. 22, 2004]

§ 22.983 Field strength limit.

(a) Subject to paragraphs (b) and (c) of this section, a licensee's predicted or measured median field strength limit must not exceed 40 dBμV/m at any given point along the Cellular Geographic Service Area (CGSA) boundary of a neighboring licensee on the same channel block, unless the affected licensee of the neighboring CGSA on the same channel block agrees to a different field strength. This also applies to CGSAs partitioned pursuant to § 22.948.

(b) *Gulf of Mexico Service Area.* Notwithstanding the field strength limit provision set forth in paragraph (a) of this section, licensees in or adjacent to the Gulf of Mexico Exclusive Zone are subject to § 22.912(c) regarding service area boundary extensions. *See* § 22.912(c).

(c) Cellular licensees shall be subject to all applicable provisions and requirements of treaties and other international agreements between the United States government and the governments of Canada and Mexico, notwithstanding paragraphs (a) and (b) of this section.

[79 FR 72153, Dec. 5, 2014]

Subpart I—Offshore Radiotelephone Service

§ 22.1001 Scope.

The rules in this subpart govern the licensing and operation of offshore radiotelephone stations. The licensing and operation of these stations and systems is also subject to rules elsewhere in this part that apply generally to the public mobile services. However, in case of conflict, the rules in this subpart govern.

§ 22.1003 Eligibility.

Any eligible entity (see § 22.7) may apply for central station license(s) and/

or offshore subscriber licenses under this subpart.

[70 FR 19312, Apr. 13, 2005]

§ 22.1005 Priority of service.

Facilities in the Offshore Radiotelephone Service are intended primarily for rendition of public message service between offshore subscriber and central stations. However, they may also be used to render private leased line communication service, provided that such usage does not reduce or impair the extent or quality of communication service which would be available, in the absence of private leased line service, to the general public receiving or subsequently requesting public message service from an offshore central station.

§ 22.1007 Channels for offshore radiotelephone systems.

The channels listed in this section are allocated for paired assignment to transmitters located in the specified geographical zones that provide offshore radiotelephone service. All channels have a bandwidth of 20 kHz and are designated by their center frequencies in MegaHertz.

(a) *Zone A—Southern Louisiana*. The geographical area in Zone A is bounded as follows:

From longitude W.87°45′ on the East to longitude W.94°00′ on the West and from the 4.8 kilometer (3 mile) limit along the Gulf of Mexico shoreline on the North to the limit of the Outer Continental Shelf on the South.

(1) These channels may be assigned for use by offshore central (base/fixed) or subscriber stations (fixed, temporary fixed, surface and/or airborne mobile) as indicated, for voice-grade general communications:

Central	Subscriber	Central	Subscriber
488.025	491.025	488.225	491.225
488.050	491.050	488.250	491.250
488.075	491.075	488.275	491.275
488.100	491.100	488.300	491.300
488.125	491.125	488.325	491.325
488.150	491.150	488.350	491.350
488.175	491.175	488.375	491.375
488.200	491.200	488.400	491.400

(2) These channels may be assigned for use by offshore central (base/fixed) or subscriber stations (fixed, temporary fixed, surface and/or airborne mobile) as indicated, for voice-grade general communications and private line service:

Central	Subscriber	Central	Subscriber
488.425	491.425	488.575	491.575
488.450	491.450	488.600	491.600
488.475	491.475	488.625	491.625
488.500	491.500	488.650	491.650
488.525	491.525	488.675	491.675
488.550	491.550	488.700	491.700

(3) These channels may be assigned for use by relay stations in systems where it would be impractical to provide offshore radiotelephone service without the use of relay stations.

Central	Subscriber	Central	Subscriber
488.725	491.725	488.775	491.775
488.750	491.750	488.800	491.800

(4) These channels may be assigned for use by offshore central (base/fixed) or subscriber stations (fixed, temporary fixed, surface and/or airborne mobile) as indicated, for emergency communications involving protection of life and property.

Central	Subscriber	Central	Subscriber
488.825	491.825	488.875	491.875
488.850	491.850	488.900	491.900

(5) These channels may be assigned for use by offshore central (base/fixed) or subscriber stations (fixed, temporary fixed, surface and/or airborne mobile) as indicated, for emergency auto alarm and voice transmission pertaining to emergency conditions only.

Central	Subscriber
488.950	491.950

(6) These channels may be assigned for use by offshore central (base/fixed) or subscriber stations (fixed, temporary fixed, surface and/or airborne mobile) as indicated, for emergency shut-off remote control telemetry, environmental data acquisition and disseminations, or facsimile transmissions.

Central	Subscriber	Central	Subscriber
489.000	492.000	489.200	492.200
489.025	492.025	489.225	492.225
489.050	492.050	489.250	492.250
489.075	492.075	489.275	492.275
489.100	492.100	489.300	492.300
489.125	492.125	489.325	492.325

Central	Subscriber	Central	Subscriber
489.150	492.150	489.350	492.350
489.175	492.175	489.375	492.375

(7) These channels may be assigned for use by offshore central (base/fixed) or subscriber stations (fixed, temporary fixed, surface and/or airborne mobile) as indicated, for private line service:

Central	Subscriber	Central	Subscriber
489.400	492.400	489.725	492.725
489.425	492.425	489.750	492.750
489.450	492.450	489.775	492.775
489.475	492.475	489.800	492.800
489.500	492.500	489.825	492.825
489.525	492.525	489.850	492.850
489.550	492.550	489.875	492.875
489.575	492.575	489.900	492.900
489.600	492.600	489.925	492.925
489.625	492.625	489.950	492.950
489.650	492.650	489.975	492.975
489.675	492.675	490.000	493.000
489.700	492.700		

(8) *Interstitial channels.* Interstitial channels are those with center frequencies offset by ±12.5 kHz from the listed center frequencies. The FCC may assign interstitial channels to offshore stations in Zone A subject to the following conditions:

(i) Offshore stations transmitting on interstitial channels must be located east of W.92° longitude.

(ii) Operations on interstitial channels are considered to be secondary to operations on channels with the listed center frequencies.

(iii) Offshore stations operating on interstitial channels must be used only for voice grade general communications or to provide for private line service.

NOTE TO PARAGRAPH (a) OF §22.1007: These channels are contained in UHF TV Channel 17.

(b) *Zone B—Southern Louisiana—Texas.* (1) The geographical area in Zone B is bounded as follows:

From longitude W.87°45′ on the East to longitude W.95°00′ on the West and from the 4.8 kilometer (3 mile) limit along the Gulf of Mexico shoreline on the North to the limit of the Outer Continental Shelf on the South.

(2) These channels may be assigned for use by offshore central (base/fixed) or subscriber stations (fixed, temporary fixed, surface and/or airborne mobile) as indicated, for voice-grade general communications and private line service:

Central	Subscriber	Central	Subscriber
485.025	482.025	486.025	483.025
485.050	482.050	486.050	483.050
485.075	482.075	486.075	483.075
485.100	482.100	486.100	483.100
485.125	482.125	486.125	483.125
485.150	482.150	485.150	483.150
485.175	482.175	486.175	483.175
485.200	482.200	486.200	483.200
485.225	482.225	486.225	483.225
485.250	482.250	486.250	483.250
485.275	482.275	486.275	483.275
485.300	482.300	486.300	483.300
485.325	482.325	486.325	483.325
485.350	482.350	486.350	483.350
485.375	482.375	486.375	483.375
485.400	482.400	486.400	483.400
485.425	482.425	486.425	483.425
485.450	482.450	486.450	483.450
485.475	482.475	486.475	483.475
485.500	482.500	486.500	483.500
485.525	482.525	486.525	483.525
485.550	482.550	484.550	483.550
485.575	482.575	486.575	483.575
485.600	482.600	486.600	483.600
485.625	482.625	486.625	483.625
485.650	482.650	486.650	483.650
485.675	482.675	486.675	483.675
485.700	482.700	486.700	483.700
485.725	482.725	486.725	483.725
485.750	482.750	486.750	483.750
485.775	482.775	486.775	483.775
485.800	482.800	486.800	483.800
485.825	482.825	486.825	483.825
485.850	482.850	486.850	483.850
485.875	482.875	486.875	483.875
485.900	482.900	486.900	483.900
485.925	482.925	486.925	483.925
485.950	482.950	486.950	483.950
485.975	482.975	486.975	483.975
486.000	483.000	487.050	480.050

NOTE TO PARAGRAPH (b) OF §22.1007: These channels are contained in UHF TV Channel 16.

(c) *Zone C—Southern Texas.* The geographical area in Zone C is bounded as follows:

Longitude W.94°00′ on the East, the 4.8 kilometer (3 mile) limit on the North and West, a 282 kilometer (175 mile) radius from the reference point at Linares, N.L., Mexico on the Southwest, latitude N.26°00′ on the South, and the limits of the outer continental shelf on the Southeast.

(1) These channels may be assigned for use by offshore central (base/fixed) or subscriber stations (fixed, temporary fixed, surface and/or airborne mobile) as indicated, for emergency auto alarm and voice transmission pertaining to emergency conditions only.

Central	Subscriber
476.950	479.950

(2) These channels may be assigned for use by offshore central (base/fixed) or subscriber stations (fixed, temporary fixed, surface and/or airborne mobile) as indicated, for voice-grade general communications and private line service:

476.025	479.025
476.050	479.050
476.075	479.075
476.100	479.100
476.125	479.125
476.150	479.150
476.175	479.175
476.200	479.200
476.225	479.225
476.250	479.250
476.275	479.275
476.300	479.300
476.325	479.325
476.350	479.350
476.375	479.375
476.400	479.400
476.425	479.425
476.450	479.450
476.475	479.475
476.500	479.500
476.525	479.525
476.550	479.550
476.575	479.575
476.600	479.600
476.625	479.625
476.650	479.650
476.675	479.675
476.700	479.700
476.725	479.725
476.750	479.750
476.775	479.775
476.800	479.800
476.825	479.825
476.850	479.850
476.875	479.875
476.900	479.900
477.000	480.000
477.025	480.025
477.075	480.075
477.100	480.100
477.125	480.125
477.150	480.150
477.175	480.175
477.200	480.200
477.225	480.225
477.250	480.250
477.275	480.275
477.300	480.300
477.325	480.325
477.350	480.350
477.375	480.375
477.400	480.400
477.425	480.425
477.450	480.450
477.475	480.475
477.500	480.500
477.525	480.525
477.550	480.550
477.575	480.575
477.600	480.600
477.625	480.625
477.650	480.650
477.675	480.675
477.700	480.700
477.725	480.725
477.750	480.750
477.775	480.775
477.800	480.800
477.825	480.825
477.850	480.850
477.875	480.875
477.900	480.900
477.925	480.925
477.950	480.950
477.975	480.975

[59 FR 59507, Nov. 17, 1994; 60 FR 9891, Feb. 22, 1995]

§ 22.1009 Transmitter locations.

The rules in this section establish limitations on the locations from which stations in the Offshore Radiotelephone Service may transmit.

(a) *All stations.* Offshore stations must not transmit from locations outside the boundaries of the appropriate zones specified in § 22.1007. Offshore stations must not transmit from locations within 241 kilometers (150 miles) of any full-service television station that transmits on the TV channel containing the channel on which the offshore station transmits.

(b) *Airborne subscriber stations.* Airborne subscriber stations must not transmit from altitudes exceeding 305 meters (1000 feet) above mean sea level. Airborne mobile stations in Zone A must not transmit from locations within 129 kilometers (80 miles) of Lake Charles, Louisiana. Airborne mobile stations in Zone B must not transmit from locations within 129 kilometers (80 miles) of Lafayette, Louisiana. Airborne mobile stations in Zone C must not transmit from locations within 129 kilometers (80 miles) of Corpus Christi or locations within 129 kilometers (80 miles) of Houston, Texas.

§ 22.1011 Antenna height limitations.

The antenna height of offshore stations must not exceed 61 meters (200 feet) above mean sea level. The antenna height of offshore surface mobile stations must not exceed 10 meters (30 feet) above the waterline.

§ 22.1013 Effective radiated power limitations.

The effective radiated power (ERP) of transmitters in the Offshore Radiotelephone Service must not exceed the limits in this section.

(a) *Maximum power.* The ERP of transmitters in this service must not exceed 1000 Watts under any circumstances.

(b) *Mobile transmitters.* The ERP of mobile transmitters must not exceed 100 Watts. The ERP of mobile transmitters, when located within 32 kilometers (20 miles) of the 4.8 kilometer (3 mile) limit, must not exceed 25 Watts. The ERP of airborne mobile stations must not exceed 1 Watt.

(c) *Protection for TV Reception.* The ERP limitations in this paragraph are intended to reduce the likelihood that interference to television reception from offshore radiotelephone operations will occur.

(1) *Co-channel protection.* The ERP of offshore stations must not exceed the limits in Table I–1 of this section. The limits depend upon the height above mean sea level of the offshore transmitting antenna and the distance between the antenna location of the offshore transmitter and the antenna location of the main transmitter of the nearest full-service television station that transmits on the TV channel containing the channel on which the offshore station transmits.

(2) *Adjacent channel protection.* The ERP of offshore stations located within 128.8 kilometers (80 miles) of the main transmitter antenna of a full service TV station that transmits on a TV channel adjacent to the TV channel which contains the channel on which the offshore station transmits must not exceed the limits in the Table I–2 of § 22.1015. The limits depend upon the height above mean sea level of the offshore transmitting antenna and the distance between the location of the offshore transmitter and the 4.8 kilometer (3 mile) limit.

TABLE I–1—MAXIMUM ERP (WATTS)

Distance	30 meters (100 feet)	45 meters (150 feet)	61 meters (200 feet)
338 km (210 mi)	1000	1000	1000
330 km (205 mi)	1000	900	800
2 km (200 mi)	800	710	630
314 km (195 mi)	590	520	450
306 km (190 mi)	450	400	330
298 km (185 mi)	320	280	240
290 km (180 mi)	250	210	175
282 km (175 mi)	180	150	130
274 km (170 mi)	175	110	100
266 km (165 mi)	95	80	70
258 km (160 mi)	65	55	50
249 km (155 mi)	50	40	35
241 km (150 mi)	35	30	25

§ 22.1015 Repeater operation.

Offshore central stations may be used as repeater stations provided that the licensee is able to maintain control of the station, and in particular, to turn the transmitter off, regardless of whether associated subscriber stations are transmitting at the time.

TABLE I–2—MAXIMUM ERP (WATTS)

Distance from the 4.8 km (3 mi) limit	30 meters (100 feet)	61 meters (200 feet)
6.4 km (4 mi)	25	6
8.0 km (5 mi)	40	10
9.7 km (6 mi)	65	15
11.3 km (7 mi)	100	25
12.9 km (8 mi)	150	35
14.5 km (9 mi)	215	50
16.1 km (10 mi)	295	70
17.7 km (11 mi)	400	100
19.3 km (12 mi)	530	130
20.9 km (13 mi)	685	170
22.5 km (14 mi)	870	215
24.1 km (15 mi)	1000	270
25.7 km (16 mi)	1000	415
27.4 km (17 mi)	1000	505
29.0 km (18 mi)	1000	610
30.6 km (19 mi)	1000	730
32.2 km (20 mi)	1000	865
33.8 km (21 mi)	1000	1000

§ 22.1025 Permissible communications.

Offshore central stations must communicate only with subscriber stations (fixed, temporary-fixed, mobile and airborne). Offshore subscriber stations must normally communicate only with and through offshore central stations. Stations in the Offshore Radiotelephone Service may communicate through relay stations authorized in this service.

§ 22.1031 Temporary fixed stations.

The FCC may, upon proper application therefor, authorize the construction and operation of temporary fixed stations in the Offshore Radiotelephone service to be used only when the service of permanent fixed stations is disrupted by storms or emergencies or is otherwise unavailable.

(a) *Six month limitation.* If it is necessary for a temporary fixed station to remain at the same location for more than six months, the licensee of that station must apply for authorization to operate the station at the specific location at least 30 days before the end of the six month period.

(b) *International communications.* Communications between the United States and Mexico must not be carried using a temporary fixed station without prior authorization from the FCC. Licensees desiring to carry such communications should apply sufficiently in advance to allow for the time necessary to coordinate with Canada or Mexico.

§ 22.1035 Construction period.

The construction period (see § 22.142) for offshore stations is 18 months.

§ 22.1037 Application requirements for offshore stations.

Applications for new Offshore Radiotelephone Service stations must contain an exhibit showing that:

(a) The applicant has notified all licensees of offshore stations located within 321.8 kilometers (200 miles) of the proposed offshore station, by providing the following data, at least 30 days before filing the application:

(1) The name, business address, channel coordinator, and telephone number of the applicant;

(2) The location and geographical coordinates of the proposed station;

(3) The channel and type of emission;

(4) The height and type of antenna;

(5) The bearing of the main lobe of the antenna; and,

(6) The effective radiated power.

(b) The proposed station will not interfere with the primary ORS channels by compliance with the following separations:

(1) Co-channel to a distance of 241.4 kilometers (150 miles).

(2) If interstitial channels are used, adjacent channels (±12.5 kHz) to a distance of 80.5 kilometers (50 miles).

(3) Third order intermodulation channels (±12.5 kHz) to a distance of 32.2 kilometers (20 miles).

(4) If the proposed transmitting antenna site is located west of longitude W.93°40′, and within 32.2 kilometers (20 miles) of the shoreline, and proposed use of the channels listed in § 22.1007(b), no third-order intermodulation interference would be caused to any base or mobile station using the channels between 488 and 494 MHz.

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AUTHORITY: 47 U.S.C. 154, 301, 302, 303, 309 and 332.

SOURCE: 58 FR 59183, Nov. 8, 1993, unless otherwise noted. Redesignated at 59 FR 18499, Apr. 19, 1994.

Subpart A—General Information

§ 24.1 Basis and purpose.

This section contains the statutory basis for this part of the rules and provides the purpose for which this part is issued.

(a) *Basis.* The rules for the personal communications services (PCS) in this part are promulgated under the provisions of the Communications Act of 1934, as amended, that vests authority in the Federal Communications Commission to regulate radio transmission and to issue licenses for radio stations.

(b) *Purpose.* This part states the conditions under which portions of the radio spectrum are made available and licensed for PCS.

(c) *Scope.* The rules in this part apply only to stations authorized under this part. Rules in subparts D and E apply

only to stations authorized under those subparts.

[58 FR 59183, Nov. 8, 1993. Redesignated at 59 FR 18499, Apr. 19, 1994, and amended at 59 FR 32854, June 24, 1994]

§ 24.2 Other applicable rule parts.

Other FCC rule parts applicable to licensees in the personal communications services include the following:

(a) *Part 0.* This part describes the Commission's organization and delegations of authority. Part 0 of this chapter also lists available Commission publications, standards and procedures for access to Commission records, and location of Commission Field Offices.

(b) *Part 1.* This part includes rules of practice and procedure for license applications, adjudicatory proceedings, procedures for reconsideration and review of the Commission's actions; provisions concerning violation notices and forfeiture proceedings; and the environmental requirements that, together with the procedures specified in §17.4(c) of this chapter, if applicable, must be complied with prior to the initiation of construction. Subpart F includes the rules for the Wireless Telecommunications Services and the procedures for filing electronically via the ULS.

(c) *Part 2.* This part contains the Table of Frequency Allocations and special requirements in international regulations, recommendations, agreements, and treaties. This part also contains standards and procedures concerning the marketing and importation of radio frequency devices, and for obtaining equipment authorization.

(d) *Part 5.* This part contains rules prescribing the manner in which parts of the radio frequency spectrum may be made available for experimentation.

(e) *Part 15.* This part contains rules setting out the regulations under which an intentional, unintentional, or incidental radiator may be operated without an individual license. It also contains the technical specifications, administrative requirements and other conditions relating to the marketing of part 15 devices. Unlicensed PCS devices operate under subpart D of part 15.

(f) *Part 17.* This part contains requirements for the construction, marking and lighting of antenna towers, and the environmental notification process that must be completed before filing certain antenna structure registration applications.

(g) Part 20 of this chapter governs commercial mobile radio services.

(h) *Part 21.* This part contains rules concerning multipoint distribution service and multichannel multipoint distribution service.

(i) *Part 68.* This part contains technical standards for connection of terminal equipment to the telephone network.

(j) *Part 101.* This part contains rules concerning common carrier and private services relating to fixed point-to-point and point-to-multipoint microwave systems.

[58 FR 59183, Nov. 8, 1993. Redesignated and amended at 59 FR 18499, Apr. 19, 1994, as amended at 63 FR 68952, Dec. 14, 1998; 65 FR 38325, June 20, 2000; 77 FR 3954, Jan. 26, 2012]

§ 24.3 Permissible communications.

PCS licensees may provide any mobile communications service on their assigned spectrum. Fixed services may be provided on a co-primary basis with mobile operations. Broadcasting as defined in the Communications Act is prohibited.

[61 FR 45356, Aug. 29, 1996]

§ 24.5 Terms and definitions.

Assigned Frequency. The center of the frequency band assigned to a station.

Authorized Bandwidth. The maximum width of the band of frequencies permitted to be used by a station. This is normally considered to be the necessary or occupied bandwidth, whichever is greater.

Average Terrain. The average elevation of terrain between 3 and 16 kilometers from the antenna site.

Base Station. A land station in the land mobile service.

Broadband PCS. PCS services operating in the 1850–1890 MHz, 1930–1970 MHz, 2130–2150 MHz, and 2180–2200 MHz bands.

Effective Radiated Power (e.r.p.) (*in a given direction*). The product of the power supplied to the antenna and its gain relative to a half-wave dipole in a given direction.

Equivalent Isotropically Radiated Power (e.i.r.p.). The product of the

power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.

Fixed Service. A radiocommunication service between specified fixed points.

Fixed Station. A station in the fixed service.

Land Mobile Service. A mobile service between base stations and land mobile stations, or between land mobile stations.

Land Mobile Station. A mobile station in the land mobile service capable of surface movement within the geographic limits of a country or continent.

Land Station. A station in the mobile service not intended to be used while in motion.

Mobile Service. A radiocommunication service between mobile and land stations, or between mobile stations.

Mobile Station. A station in the mobile service intended to be used while in motion or during halts at unspecified points.

Narrowband PCS. PCS services operating in the 901–902 MHz, 930–931 MHz, and 940–941 MHz bands.

National Geodetic Reference System (NGRS): The name given to all geodetic control data contained in the National Geodetic Survey (NGS) data base. (Source: National Geodetic Survey, U.S. Department of Commerce)

PCS Relocator. A PCS entity that pays to relocate a fixed microwave link from its existing 2 GHz facility to other media or other fixed channels.

Personal Communications Services (PCS). Radio communications that encompass mobile and ancillary fixed communication that provide services to individuals and businesses and can be integrated with a variety of competing networks.

Universal Licensing System. The Universal Licensing System (ULS) is the consolidated database, application filing system, and processing system for all Wireless Radio Services. ULS supports electronic filing of all applications and related documents by applicants and licensees in the Wireless Radio Services, and provides public access to licensing information.

UTAM. The Unlicensed PCS Ad Hoc Committee for 2 GHz Microwave Transition and Management, which coordinates relocation in the 1910–1930 MHz band.

Voluntarily Relocating Microwave Incumbent A microwave incumbent that voluntarily relocates its licensed facilities to other media or fixed channels.

[58 FR 59183, Nov. 8, 1993. Redesignated at 59 FR 18499, Apr. 19, 1994, and amended at 61 FR 29691, June 12, 1996; 62 FR 12757, Mar. 18, 1997; 63 FR 68952, Dec. 14, 1998]

§ 24.9 Operation of certificated signal boosters.

Individuals and non-individuals may operate certificated Consumer Signal Boosters on frequencies regulated under this part provided that such operation complies with all applicable rules under this part and § 20.21 of this chapter. Failure to comply with all applicable rules voids the authority to operate a signal booster.

[78 FR 21564, Apr. 11, 2013]

Subpart B—Applications and Licenses

GENERAL FILING REQUIREMENTS

§ 24.10 Scope.

This subpart contains some of the procedures and requirements for filing applications for licenses in the personal communications services. One also should consult subparts F and G of this part. Other Commission rule parts of importance that may be referred to with respect to licensing and operation of radio services governed under this part include 47 CFR parts 0, 1, 2, 5, 15, 17 and 20.

[59 FR 32854, June 24, 1994]

§ 24.11 Initial authorization.

(a) An applicant must file a single application for an initial authorization for all markets won and frequency blocks desired.

(b) Blanket licenses are granted for each market and frequency block. Applications for individual sites are not required and will not be accepted.

[59 FR 32854, June 24, 1994, as amended at 63 FR 68952, Dec. 14, 1998]

§ 24.12 Eligibility.

Any entity, other than those precluded by section 310 of the Communications Act of 1934, as amended, 47 U.S.C. 310, is eligible to hold a license under this part.

[70 FR 61059, Oct. 20, 3005]

§ 24.15 License period.

Licenses for service areas will be granted for ten year terms from the date of original issuance or renewal.

§ 24.16 Criteria for comparative renewal proceedings.

A renewal applicant involved in a comparative renewal proceeding shall receive a preference, commonly referred to as a renewal expectancy, which is the most important comparative factor to be considered in the proceeding, if its past record for the relevant license period demonstrates that the renewal applicant:

(a) Has provided ''substantial'' service during its past license term. ''Substantial'' service is defined as service which is sound, favorable, and substantially above a level of mediocre service which might just minimally warrant renewal; and

(b) Has substantially complied with applicable Commission rules, policies and the Communications Act.

Subpart C—Technical Standards

§ 24.50 Scope.

This subpart sets forth the technical requirements for use of the spectrum and equipment in the personal communications services.

§ 24.51 Equipment authorization.

(a) Each transmitter utilized for operation under this part and each transmitter marketed, as set forth in § 2.803 of this chapter, must be of a type that has been authorized by the Commission under its certification procedure for use under this part.

(b) Any manufacturer of radio transmitting equipment to be used in these services may request equipment authorization following the procedures set forth in subpart J of part 2 of this chapter. Equipment authorization for an individual transmitter may be requested by an applicant for a station authorization by following the procedures set forth in part 2 of this chapter.

(c) Applicants for certification of transmitters that operate in these services must determine that the equipment complies with IEEE C95.1–1991, ''IEEE Standards for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz'' as measured using methods specified in IEEE C95.3–1991, ''Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields—RF and Microwave.'' The applicant for certification is required to submit a statement affirming that the equipment complies with these standards as measured by an approved method and to maintain a record showing the basis for the statement of compliance with IEEE C.95.1–1991.

[58 FR 59183, Nov. 8, 1993. Redesignated at 59 FR 18499, Apr. 19, 1994, as amended at 63 FR 36604, July 7, 1998]

§ 24.52 RF hazards.

Licensees and manufacturers are subject to the radiofrequency radiation exposure requirements specified in §§ 1.1307(b), 2.1091 and 2.1093 of this chapter, as appropriate. Applications for equipment authorization of mobile or portable devices operating under this section must contain a statement confirming compliance with these requirements for both fundamental emissions and unwanted emissions. Technical information showing the basis for this statement must be submitted to the Commission upon request.

[61 FR 41018, Aug. 7, 1996]

§ 24.53 Calculation of height above average terrain (HAAT).

(a) HAAT is determined by subtracting average terrain elevation from antenna height above mean sea level.

(b) Average terrain elevation shall be calculated using elevation data from a 30 arc second or better Digital Elevation Models (DEMs). DEM data is available from United States Geological Survey (USGS). The data file shall be identified. If 30 arc second data is

used, the elevation data must be processed for intermediate points using interpolation techniques; otherwise, the nearest point may be used. If DEM data is not available, elevation data from the Defense Mapping Agency's Digital Chart of the World (DCW) may be used.

(c) Radial average terrain elevation is calculated as the average of the elevation along a straight line path from 3 to 16 kilometers extending radially from the antenna site. At least 50 evenly spaced data points for each radial shall be used in the computation.

(d) Average terrain elevation is the average of the eight radial average terrain elevations (for the eight cardinal radials).

(e) The position location of the antenna site shall be determined to an accuracy of no less than ±5 meters in both the horizontal (latitude and longitude) and vertical (ground elevation) dimensions with respect to the National Geodetic Reference System.

[58 FR 59183, Nov. 8, 1993; 59 FR 15269, Mar. 31, 1994]

§ 24.55 Antenna structures; air navigation safety.

Licensees that own their antenna structures must not allow these antenna structures to become a hazard to air navigation. In general, antenna structure owners are responsible for registering antenna structures with the FCC if required by part 17 of this chapter, and for installing and maintaining any required marking and lighting. However, in the event of default of this responsibility by an antenna structure owner, each FCC permittee or licensee authorized to use an affected antenna structure will be held responsible by the FCC for ensuring that the antenna structure continues to meet the requirements of part 17 of this chapter. *See* § 17.6 of this chapter.

(a) *Marking and lighting.* Antenna structures must be marked, lighted and maintained in accordance with part 17 of this chapter and all applicable rules and requirements of the Federal Aviation Administration.

(b) *Maintenance contracts.* Antenna structure owners (or licensees and permittees, in the event of default by an antenna structure owner) may enter into contracts with other entities to monitor and carry out necessary maintenance of antenna structures. Antenna structure owners (or licensees and permittees, in the event of default by an antenna structure owner) that make such contractual arrangements continue to be responsible for the maintenance of antenna structures in regard to air navigation safety.

[61 FR 4366, Feb. 6, 1996]

Subpart D—Narrowband PCS

§ 24.100 Scope.

This subpart sets out the regulations governing the licensing and operations of personal communications services authorized in the 901–902, 930–931, and 940–941 MHz bands (900 MHz band).

§ 24.101 [Reserved]

§ 24.102 Service areas.

Narrowband PCS service areas are nationwide, regional, and Major Trading Areas (MTAs), as defined in this section. MTAs are based on the Rand McNally 1992 Commercial Atlas & Marketing Guide, 123rd Edition, at pages 38–39 (MTA Map). Rand McNally organizes the 50 States and the District of Columbia into 47 MTAs. The MTA Map is available for public inspection in the FCC's Library, Room TW-B505, 445 12th Street SW, Washington, D.C.

(a) The nationwide service area consists of the fifty states, the District of Columbia, American Samoa, Guam, Northern Mariana Islands, Puerto Rico, and United States Virgin Islands.

(b) The regional service areas are defined as follows:

(1) Region 1 (Northeast): The Northeast Region consists of the following MTAs: Boston-Providence, Buffalo-Rochester, New York, Philadelphia, and Pittsburgh.

(2) Region 2 (South): The South Region consists of the following MTAs: Atlanta, Charlotte-Greensboro-Greenville-Raleigh, Jacksonville, Knoxville, Louisville-Lexington-Evansville, Nashville, Miami-Fort Lauderdale, Richmond-Norfolk, Tampa-St. Petersburg-Orlando, and Washington-Baltimore; and, Puerto Rico and United States Virgin Islands.

(3) Region 3 (Midwest): The Midwest Region consists of the following MTAs:

Chicago, Cincinnati-Dayton, Cleveland, Columbus, Des Moines-Quad Cities, Detroit, Indianapolis, Milwaukee, Minneapolis-St. Paul, and Omaha.

(4) Region 4 (Central): The Central Region consists of the following MTAs: Birmingham, Dallas-Fort Worth, Denver, El Paso-Albuquerque, Houston, Kansas City, Little Rock, Memphis-Jackson, New Orleans-Baton Rouge, Oklahoma City, San Antonio, St. Louis, Tulsa, and Wichita.

(5) Region 5 (West): The West Region consists of the following MTAs: Honolulu, Los Angeles-San Diego, Phoenix, Portland, Salt Lake City, San Francisco-Oakland-San Jose, Seattle (including Alaska), and Spokane-Billings; and, American Samoa, Guam, and the Northern Mariana Islands.

(c) The MTA service areas are based on the Rand McNally *1992 Commercial Atlas & Marketing Guide*, 123rd Edition, at pages 38–39, with the following exceptions and additions:

(1) Alaska is separated from the Seattle MTA and is licensed separately.

(2) Guam and the Northern Mariana Islands are licensed as a single MTA-like area.

(3) Puerto Rico and the United States Virgin Islands are licensed as a single MTA-like area.

(4) American Samoa is licensed as a single MTA-like area.

[59 FR 14118, Mar. 25, 1994, as amended at 59 FR 46199, Sept. 7, 1994; 65 FR 35852, June 6, 2000]

§ 24.103 Construction requirements.

(a) Nationwide narrowband PCS licensees shall construct base stations that provide coverage to a composite area of 750,000 square kilometers or serve 37.5 percent of the U.S. population within five years of initial license grant date; and, shall construct base stations that provide coverage to a composite area of 1,500,000 square kilometers or serve 75 percent of the U.S. population within ten years of initial license grant date. Licensees may, in the alternative, provide substantial service to the licensed area as provided in paragraph (d) of this section.

(b) Regional narrowband PCS licensees shall construct base stations that provide coverage to a composite area of 150,000 square kilometers or serve 37.5 percent of the population of the service area within five years of initial license grant date; and, shall construct base stations that provide coverage to a composite area of 300,000 square kilometers or serve 75 percent of the service area population within ten years of initial license grant date. Licensees may, in the alternative, provide substantial service to the licensed area as provided in paragraph (d) of this section.

(c) MTA narrowband PCS licensees shall construct base stations that provide coverage to a composite area of 75,000 square kilometers or 25 percent of the geographic area, or serve 37.5 percent of the population of the service area within five years of initial license grant date; and, shall construct base stations that provide coverage to a composite area of 150,000 square kilometers or 50 percent of the geographic area, or serve 75 percent of the population of the service area within ten years of initial license grant date. Licensees may, in the alternative, provide substantial service to the licensed area as provided in paragraph (d) of this section.

(d) As an alternative to the requirements of paragraphs (a), (b), and (c) of this section, narrowband PCS licensees may demonstrate that, no later than ten years after the initial grant of their license, they provide substantial service to their licensed area. Licensees choosing this option must notify the FCC by filing FCC Form 601, no later than 15 days after the end of the five year period following the initial grant of their license, that they plan to satisfy the alternative requirement to provide substantial service. ''Substantial service'' is defined as service that is sound, favorable, and substantially above a level of mediocre service that would barely warrant renewal.

(e) In demonstrating compliance with the construction requirements set forth in this section, licensees must base their calculations on signal field strengths that ensure reliable service for the technology utilized. Licensees may determine the population of geographic areas included within their service contours using either the 1990 census or the 2000 census, but not both.

(1) For the purpose of this section, the service radius of a base station may be calculated using the following formula:

$$d_{km} = 2.53 \times h_m 0.34 \times p^{0.17}$$

where d_{km} is the radial distance in kilometers,
h_m is the antenna HAAT of the base station in meters, and
p is the e.r.p. of the base station in watts.

(2) Alternatively, licensees may use any service radius contour formula developed or generally used by industry, provided that such formula is based on the technical characteristics of their system.

(f) Upon meeting the five and ten year benchmarks in paragraphs (a), (b), and (c) of this section, or upon meeting the substantial service alternative in paragraph (d), licensees shall notify the Commission by filing FCC Form 601 and including a map and other supporting documentation that demonstrate the required geographic area coverage, population coverage, or substantial service to the licensed area. The notification must be filed with the Commission within 15 days of the expiration of the relevant period.

(g) If the sale of a license is approved, the new licensee is held to the original build-out requirement.

(h) Failure by a licensee to meet the above construction requirements shall result in forfeiture of the license and ineligibility to regain it.

[59 FR 14118, Mar. 25, 1994, as amended at 65 FR 35852, June 6, 2000]

§ 24.104 Partitioning and disaggregation.

Nationwide, regional, and MTA licensees may apply to partition their authorized geographic service area or disaggregate their authorized spectrum at any time following grant of their geographic area authorizations.

(a) *Application required.* Parties seeking approval for partitioning and/or disaggregation shall apply for partial assignment of a license pursuant to §1.948 of this chapter.

(b) *Partitioning.* In the case of partitioning, applicants and licensees must file FCC Form 603 pursuant to §1.948 of this chapter and describe the partitioned service area on a schedule to the application. The partitioned service area shall be defined by up to 120 sets of geographic coordinates at points at every 3 degrees azimuth from a point within the partitioned service area along the partitioned service area boundary unless either an FCC-recognized service area is used (*e.g.*, MEA or EA) or county lines are followed. The geographical coordinates must be specified in degrees, minutes, and seconds to the nearest second latitude and longitude, and must be based upon the 1983 North American Datum (NAD83). In the case where FCC-recognized service areas or county lines are used, applicants need only list the specific area(s) through use of FCC designations or county names that constitute the partitioned area.

(c) *Disaggregation.* Spectrum may be disaggregated in any amount.

(d) *Combined partitioning and disaggregation.* Licensees may apply for partial assignment of authorizations that propose combinations of partitioning and disaggregation.

(e) *License term.* The license term for a partitioned license area and for disaggregated spectrum shall be the remainder of the original licensee's license term as provided for in §1.955 of this chapter.

(f) *Coverage requirements for partitioning.* (1) Parties to a partitioning agreement must satisfy at least one of the following requirements:

(i) The partitionee must satisfy the applicable coverage requirements set forth in §24.103 for the partitioned license area; or

(ii) The original licensee must meet the coverage requirements set forth in §24.103 for the entire geographic area. In this case, the partitionee must meet only the requirements for renewal of its authorization for the partitioned license area.

(2) Parties seeking authority to partition must submit with their partial assignment application a certification signed by both parties stating which of the options they select.

(3) Partitionees must submit supporting documents showing compliance with their coverage requirements as set forth in §24.103.

(4) Failure by any partitionee to meet its coverage requirements will result in automatic cancellation of the partitioned authorization without further Commission action.

(g) *Coverage requirements for disaggregation.* (1) Parties to a disaggregation agreement must satisfy at least one of the following requirements:

(i) Either the disaggregator or disaggregatee must satisfy the coverage requirements set forth in § 24.103 for the entire license area; or

(ii) Parties must agree to share responsibility for meeting the coverage requirements set forth in § 24.103 for the entire license area.

(2) Parties seeking authority to disaggregate must submit with their partial assignment application a certification signed by both parties stating which of the requirements they select.

(3) Disaggregatees must submit supporting documents showing compliance with their coverage requirements as set forth in § 24.103.

(4) Parties that accept responsibility for meeting the coverage requirements and later fail to do so will be subject to automatic license cancellation without further Commission action.

[65 FR 35853, June 6, 2000]

EFFECTIVE DATE NOTE: At 65 FR 35853, June 6, 2000, § 24.104 was added. This section contains information collection and recordkeeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

§ 24.129 Frequencies.

The following frequencies are available for narrowband PCS:

(a) Eighteen frequencies are available for assignment on a nationwide basis as follows:

(1) Seven 50 kHz channels paired with 50 kHz channels:

Channel 1: 940.00–940.05 and 901.00–901.05 MHz;
Channel 2: 940.05–940.10 and 901.05–901.10 MHz;
Channel 3: 940.10–940.15 and 901.10–901.15 MHz;
Channel 4: 940.15–940.20 and 901.15–901.20 MHz;
Channel 5: 940.20–940.25 and 901.20–901.25 MHz;
Channel 19: 930.50–930.55 and 901.30–901.35 MHz; and
Channel 20: 930.75–930.80 and 901.90–901.95 MHz.

(2) Three 50 kHz channels paired with 12.5 kHz channels:

Channel 6: 930.40–930.45 and 901.7500–901.7625 MHz;
Channel 7: 930.45–930.50 and 901.7625–901.7750 MHz; and
Channel 8: 940.75–940.80 and 901.7750–901.7875 MHz;

(3) Two 50 kHz unpaired channels:

Channel 9: RESERVED;
Channel 10: 940.80–940.85 MHz; and
Channel 11: 940.85–940.90 MHz.

(4) One 100 kHz unpaired channel:

Channel 18: 940.65–940.75 MHz.

(5) Two 150 kHz channels paired with 50 kHz channels:

Channel 21: 930.00–930.15 and 901.50–901.55 MHz; and
Channel 22: 930.15–930.30 and 901.60–901.65 MHz.

(6) Three 100 kHz channels paired with 50 kHz channels:

Channel 23: 940.55–940.65 and 901.45–901.50 MHz;
Channel 24: 940.30–940.40 and 901.55–901.60 MHz; and
Channel 25: 940.45–940.55 and 901.85–901.90 MHz.

(b) Five frequencies are available for assignment on a regional basis as follows:

(1) One 50 kHz channel paired with 50 kHz channel:

Channel 12: 940.25–940.30 and 901.25–901.30 MHz.
Channel 13: RESERVED.

(2) Four 50 kHz channels paired with 12.5 kHz channels:

Channel 14: 930.55–930.60 and 901.7875–901.8000 MHz;
Channel 15: 930.60–930.65 and 901.8000–901.8125 MHz;
Channel 16: 930.65–930.70 and 901.8125–901.8250 MHz; and
Channel 17: 930.70–930.75 and 901.8250–901.8375 MHz.

(c) Seven frequencies are available for assignment on an MTA basis as follows:

(1) Three 50 kHz unpaired channels:

Channel 26: 901.35–901.40 MHz;
Channel 27: 901.40–901.45 MHz; and
Channel 28: 940.40–940.45 MHz.

(2) One 50 kHz channel paired with 50 kHz channel:

Channel 29: 930.80–930.85 and 901.95–902.00 MHz.

(3) One 100 kHz channel paired with 50 kHz channel:

Channel 30: 930.30–930.40 and 901.65–901.70 MHz.

(4) One 150 kHz channel paired with 50 kHz channel:

Channel 31: 930.85–931.00 and 901.7–901.75 MHz.

(5) One 100 kHz channel paired with 12.5 kHz channel:

Channel 32: 940.90–941 and 901.8375–901.85 MHz.

NOTE TO § 24.129: Operations in markets or portions of markets which border other countries, such as Canada and Mexico, will be subject to on-going coordination arrangements with neighboring countries.

[66 FR 29920, June 4, 2001]

§ 24.130 [Reserved]

§ 24.131 Authorized bandwidth.

The authorized bandwidth of narrowband PCS channels will be 10 kHz for 12.5 kHz channels and 45 kHz for 50 kHz channels. For aggregated adjacent channels, a maximum authorized bandwidth of 5 kHz less than the total aggregated channel width is permitted.

§ 24.132 Power and antenna height limits.

(a) Stations transmitting in the 901–902 MHz band are limited to 7 watts e.r.p.

(b) Mobile stations transmitting in the 930–931 MHz and 940–941 MHz bands are limited to 7 watts e.r.p.

(c) Base stations transmitting in the 930–931 MHz and 940–941 MHz bands are limited to 3500 watts e.r.p. per authorized channel and are unlimited in antenna height except as provided in paragraph (d) of this section.

(d)(1) MTA and regional base stations located between 200 kilometers (124 miles) and 80 kilometers (50 miles) from their licensed service area border are limited to the power levels in the following table:

Antenna HAAT in meters (feet) (see § 24.53 for HAAT HAAT calculation method)	Effective radiated power (e.r.p.) (watts)
183 (600) and below	3500
183 (600) to 208 (682)	3500 to 2584
208 (682) to 236 (775)	2584 to 1883
236 (775) to 268 (880)	1883 to 1372
268 (880) to 305 (1000)	1372 to 1000
305 (1000) to 346 (1137)	1000 to 729
346 (1137) to 394 (1292)	729 to 531
394 (1292) to 447 (1468)	531 to 387
447 (1468) to 508 (1668)	387 to 282
508 (1668) to 578 (1895)	282 to 206
578 (1895) to 656 (2154)	206 to 150
656 (2154) to 746 (2447)	150 to 109
746 (2447) to 848 (2781)	109 to 80
848 (2781) to 963 (3160)	80 to 58
963 (3160) to 1094 (3590)	58 to 42
1094 (3590) to 1244 (4080)	42 to 31
1244 (4080) to 1413 (4636)	31 to 22
Above 1413 (4636)	16

(2) For heights between the values listed in the table, linear interpolation shall be used to determine maximum e.r.p.

(e) MTA and regional base stations located less than 80 kilometers (50 miles) from the licensed service area border must limit their effective radiated power in accordance with the following formula:

$$PW = 0.0175 \times dkm^{**} 6.6666 \times x\ hm^{**} - 3.1997$$

PW is effective radiated power in watts
dkm is distance in kilometers
hm is antenna HAAT in meters; see § 24.53 for HAAT calculation method

(f) All power levels specified in this section are expressed in terms of the maximum power, averaged over a 100 millisecond interval, when measured with instrumentation calibrated in terms of an rms-equivalent voltage with a resolution bandwidth equal to or greater than the authorized bandwidth.

(g) Additionally, PCS stations will be subject to any power limits imposed by international agreements.

[58 FR 59183, Nov. 8, 1993; 59 FR 15269, Mar. 31, 1994, as amended at 62 FR 27511, May 20, 1997; 65 FR 35853, June 6, 2000]

§ 24.133 Emission limits.

(a) The power of any emission shall be attenuated below the transmitter power (P), as measured in accordance with § 24.132(f), in accordance with the following schedule:

(1) For transmitters authorized a bandwidth greater than 10 kHz:

(i) On any frequency outside the authorized bandwidth and removed from

the edge of the authorized bandwidth by a displacement frequency (f_d in kHz) of up to and including 40 kHz: at least 116 Log_{10} ((f_d + 10)/6.1) decibels or 50 plus 10 Log_{10} (P) decibels or 70 decibels, whichever is the lesser attenuation;

(ii) On any frequency outside the authorized bandwidth and removed from the edge of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 40 kHz: at least 43 + 10 Log_{10} (P) decibels or 80 decibels, whichever is the lesser attenuation.

(2) For transmitters authorized a bandwidth of 10 kHz:

(i) On any frequency outside the authorized bandwidth and removed from the edge of the authorized bandwidth by a displacement frequency (f_d in kHz) of up to and including 20 kHz: at least 116 × Log_{10} ((f_d + 5)/3.05) decibels or 50 + 10 × Log_{10} (P) decibels or 70 decibels, whichever is the lesser attenuation;

(ii) On any frequency outside the authorized bandwidth and removed from the edge of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 20 kHz: at least 43 + 10 Log_{10} (P) decibels or 80 decibels, whichever is the lesser attenuation.

(b) The measurements of emission power can be expressed in peak or average values provided they are expressed in the same parameters as the transmitter power.

(c) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

(d) The following minimum spectrum analyzer resolution bandwidth settings will be used: 300 Hz when showing compliance with paragraphs (a)(1)(i) and (a)(2)(i) of this section; and 30 kHz when showing compliance with paragraphs (a)(1)(ii) and (a)(2)(ii) of this section.

[58 FR 59183, Nov. 8, 1993. Redesignated at 59 FR 18499, Apr. 19, 1994, as amended at 59 FR 14119, Mar. 25, 1994; 66 FR 10968, Feb. 21, 2001]

§ 24.134 Co-channel separation criteria.

The minimum co-channel separation distance between base stations in different service areas is 113 kilometers (70 miles). A co-channel separation distance is not required for the base stations of the same licensee or when the affected parties have agreed to other co-channel separation distances.

§ 24.135 Frequency stability.

(a) The frequency stability of the transmitter shall be maintained within ±0.0001 percent (±1 ppm) of the center frequency over a temperature variation of −30 °Celsius to + 50 °Celsius at normal supply voltage, and over a variation in the primary supply voltage of 85 percent to 115 percent of the rated supply voltage at a temperature of 20 °Celsius.

(b) For battery operated equipment, the equipment tests shall be performed using a new battery without any further requirement to vary supply voltage.

(c) It is acceptable for a transmitter to meet this frequency stability requirement over a narrower temperature range provided the transmitter ceases to function before it exceeds these frequency stability limits.

Subpart E—Broadband PCS

SOURCE: 59 FR 32854, June 24, 1994, unless otherwise noted.

§ 24.200 Scope.

This subpart sets out the regulations governing the licensing and operations of personal communications services authorized in the 1850–1910 and 1930–1990 MHz bands.

§ 24.202 Service areas.

Broadband PCS service areas are Major Trading Areas (MTAs) and Basic Trading Areas (BTAs) as defined in this section. MTAs and BTAs are based on the Rand McNally 1992 Commercial Atlas & Marketing Guide, 123rd Edition, at pages 38–39 (''BTA/MTA Map''). Rand McNally organizes the 50 states and the District of Columbia into 47 MTAs and 487 BTAs. The BTA/MTA Map is available for public inspection at the Office of Engineering and Technology's Technical Information Center, 445 12th Street, SW, Washington, DC 20554.

(a) The MTA service areas are based on the Rand McNally *1992 Commercial Atlas & Marketing Guide*, 123rd Edition,

at pages 38–39, with the following exceptions and additions:

(1) Alaska is separated from the Seattle MTA and is licensed separately.

(2) Guam and the Northern Mariana Islands are licensed as a single MTA-like area.

(3) Puerto Rico and the United States Virgin Islands are licensed as a single MTA-like area.

(4) American Samoa is licensed as a single MTA-like area.

(b) The BTA service areas are based on the Rand McNally *1992 Commercial Atlas & Marketing Guide*, 123rd Edition, at pages 38–39, with the following additions licensed separately as BTA-like areas: American Samoa; Guam; Northern Mariana Islands; Mayagüez/Aguadilla-Ponce, Puerto Rico; San Juan, Puerto Rico; and the United States Virgin Islands. The Mayagüez/Aguadilla-Ponce BTA-like service area consists of the following municipios: Adjuntas, Aguada, Aguadilla, Añasco, Arroyo, Cabo Rojo, Coamo, Guánica, Guayama, Guayanilla, Hormigueros, Isabela, Jayuya, Juana Díaz, Lajas, Las Marías, Mayagüez, Maricao, Maunabo, Moca, Patillas, Peñuelas, Ponce, Quebradillas, Rincón, Sabana Grande, Salinas, San Germán, Santa Isabel, Villalba, and Yauco. The San Juan BTA-like service area consists of all other municipios in Puerto Rico.

[59 FR 32854, June 24, 1994; 59 FR 40835, Aug. 10, 1994; 63 FR 68952, Dec. 14, 1998; 65 FR 53636, Sept. 5, 2000]

§ 24.203 Construction requirements.

(a) Licensees of 30 MHz blocks must serve with a signal level sufficient to provide adequate service to at least one-third of the population in their licensed area within five years of being licensed and two-thirds of the population in their licensed area within ten years of being licensed. Licensees may, in the alternative, provide substantial service to their licensed area within the appropriate five- and ten-year benchmarks. Licensees may choose to define population using the 1990 census or the 2000 census. Failure by any licensee to meet these requirements will result in forfeiture or non-renewal of the license and the licensee will be ineligible to regain it.

(b) Licensees of 10 MHz blocks except for the 1910–1915 MHz and 1990–1995 MHz, including 10 MHz C block licenses reconfigured pursuant to Amendment of the Commission's Rules Regarding Installment Payment Financing for Personal Communications Services (PCS) Licensees, WT Docket No. 97–82, Sixth Report and Order, FCC 00–313, and 15 MHz blocks resulting from the disaggregation option as provided in the Commission's Rules Regarding Installment Payment Financing for Personal Communications Services (PCS) Licensees, Second Report and Order and Further Notice of Proposed Rule Making, WT Docket 97–82, 12 FCC Rcd 16436 (1997), as modified by Order on Reconsideration of the Second Report and Order, WT Docket 97–82, 13 FCC Rcd 8345 (1998), must serve with a signal level sufficient to provide adequate service to at least one-quarter of the population in their licensed area within five years of being licensed, or make a showing of substantial service in their licensed area within five years of being licensed. Population is defined as the 1990 population census. Licensees may elect to use the 2000 population census to determine the five-year construction requirement. Failure by any licensee to meet these requirements will result in forfeiture of the license and the licensee will be ineligible to regain it.

(c) Licensees must file maps and other supporting documents showing compliance with the respective construction requirements within the appropriate five- and ten-year benchmarks of the date of their initial licenses.

(d) Licensees in the paired 1910–1915 MHz and 1990–1995 MHz bands must make a showing of ''substantial service'' in their license area within ten years of the date of initial license issuance or renewal. ''Substantial service'' is defined as service which is sound, favorable, and substantially above a level of mediocre service which just might minimally warrant renewal. Failure by any licensee to meet this requirement will result in forfeiture of

the license and the licensee will be ineligible to regain it.

[58 FR 59183, Nov. 8, 1993, as amended at 64 FR 26890, May 18, 1999; 65 FR 53636, Sept. 5, 2000; 69 FR 67835, Nov. 22, 2004; 69 FR 75171, Dec. 15, 2004]

§ 24.229 Frequencies.

The frequencies available in the Broadband PCS service are listed in this section in accordance with the frequency allocations table of § 2.106 of this chapter.

(a) The following frequency blocks are available for assignment on an MTA basis:

Block A: 1850–1865 MHz paired with 1930–1945 MHz; and

Block B: 1870–1885 MHz paired with 1950–1965 MHz.

(b) The following frequency blocks are available for assignment on a BTA basis:

Block C: 1895–1910 MHz paired with 1975–1990 MHz;

Pursuant to Amendment of the Commission's Rules Regarding Installment Payment Financing for Personal Communications Services (PCS) Licensees, WT Docket No. 97–82, *Sixth Report and Order*, FCC 00–313, all 30 MHz Block C licenses available for auction in Auction No. 35 or any subsequent auction will be reconfigured into three 10 MHz C block licenses as follows: 1895–1900 MHz paired with 1975–1980 MHz, 1900–1905 MHz paired with 1980–1985 MHz, 1905–1910 MHz paired with 1985–1990 MHz;

Block D: 1865–1870 MHz paired with 1945–1950 MHz;

Block E: 1885–1890 MHz paired with 1965–1970 MHz;

Block F: 1890–1895 MHz paired with 1970–1975 MHz;

(c) The paired frequency blocks 1910–1915 MHz and 1990–1995 MHz are available for assignment in the 175 Economic Areas defined in § 90.7 of this chapter. The 1910–1915 MHz block shall be used for mobile/portable station transmissions while the 1990–1995 MHz block shall be used for base station transmissions.

[59 FR 32854, June 24, 1994, as amended at 60 FR 13917, Mar. 15, 1995; 60 FR 26375, May 17, 1995; 61 FR 33868, July 1, 1996; 62 FR 660, Jan. 6, 1997; 65 FR 53637, Sept. 5, 2000; 69 FR 67836, Nov. 22, 2004]

§ 24.232 Power and antenna height limits.

(a)(1) Base stations with an emission bandwidth of 1 MHz or less are limited to 1640 watts equivalent isotropically radiated power (EIRP) with an antenna height up to 300 meters HAAT, except as described in paragraph (b) below.

(2) Base stations with an emission bandwidth greater than 1 MHz are limited to 1640 watts/MHz equivalent isotropically radiated power (EIRP) with an antenna height up to 300 meters HAAT, except as described in paragraph (b) below.

(3) Base station antenna heights may exceed 300 meters HAAT with a corresponding reduction in power; *see* Tables 1 and 2 of this section.

(4) The service area boundary limit and microwave protection criteria specified in §§ 24.236 and 24.237 apply.

TABLE 1—REDUCED POWER FOR BASE STATION ANTENNA HEIGHTS OVER 300 METERS, WITH EMISSION BANDWIDTH OF 1 MHZ OR LESS

HAAT in meters	Maximum EIRP watts
≤300	1640
≤500	1070
≤1000	490
≤1500	270
≤2000	160

TABLE 2—REDUCED POWER FOR BASE STATION ANTENNA HEIGHTS OVER 300 METERS, WITH EMISSION BANDWIDTH GREATER THAN 1 MHZ

HAAT in meters	Maximum EIRP watts/MHz
≤300	1640
≤500	1070
≤1000	490
≤1500	270
≤2000	160

(b)(1) Base stations that are located in counties with population densities of 100 persons or fewer per square mile, based upon the most recently available population statistics from the Bureau of the Census, with an emission bandwidth of 1 MHz or less are limited to 3280 watts equivalent isotropically radiated power (EIRP) with an antenna height up to 300 meters HAAT.

(2) Base stations that are located in counties with population densities of 100 persons or fewer per square mile, based upon the most recently available

population statistics from the Bureau of the Census, with an emission bandwidth greater than 1 MHz are limited to 3280 watts/MHz equivalent isotropically radiated power (EIRP) with an antenna height up to 300 meters HAAT.

(3) Base station antenna heights may exceed 300 meters HAAT with a corresponding reduction in power; *see* Tables 3 and 4 of this section.

(4) The service area boundary limit and microwave protection criteria specified in §§ 24.236 and 24.237 apply.

(5) Operation under this paragraph (b) at power limits greater than permitted under paragraph (a) of this section must be coordinated in advance with all broadband PCS licensees authorized to operate on adjacent frequency blocks within 120 kilometers (75 miles) of the base station and is limited to base stations located more than 120 kilometers (75 miles) from the Canadian border and more than 75 kilometers (45 miles) from the Mexican border.

TABLE 3—REDUCED POWER FOR BASE STATION ANTENNA HEIGHTS OVER 300 METERS, WITH EMISSION BANDWIDTH OF 1 MHZ OR LESS

HAAT in meters	Maximum EIRP watts
≤300	3280
≤500	2140
≤1000	980
≤1500	540
≤2000	320

TABLE 4—REDUCED POWER FOR BASE STATION ANTENNA HEIGHTS OVER 300 METERS, WITH EMISSION BANDWIDTH GREATER THAN 1 MHZ

HAAT in meters	Maximum EIRP watts/MHz
≤300	3280
≤500	2140
≤1000	980
≤1500	540
≤2000	320

(c) Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

(d) Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of § 24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

(e) Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, *etc.*, so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

NOTE TO § 24.232: Height above average terrain (HAAT) is to be calculated using the method set forth in § 24.53 of this part.

[73 FR 24183, May 2, 2008]

§ 24.235 Frequency stability.

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

§ 24.236 Field strength limits.

The predicted or measured median field strength at any location on the border of the PCS service area shall not exceed 47 dBuV/m unless the parties agree to a higher field strength.

§ 24.237 Interference protection.

(a) All licensees are required to coordinate their frequency usage with the co-channel or adjacent channel incumbent fixed microwave licensees in the 1850–1990 MHz band. Coordination must occur before initiating operations from any base station. Problems that arise during the coordination process are to be resolved by the parties to the coordination. Licensees are required to coordinate with all users possibly affected, as determined by appendix I to this subpart E (Appendix E of the Memorandum Opinion and Order, GEN Docket No. 90–314, FCC 94–144; TIA Telecommunications Systems Bulletin

10–F, ''Interference Criteria for Microwave Systems,'' May 1994, (TSB10–F)); or an alternative method agreed to by the parties.

(b) The results of the coordination process need to be reported to the Commission only if the parties fail to agree. Because broadband PCS licensees are required to protect fixed microwave licensees in the 1850–1990 MHz band, the Commission will be involved in the coordination process only upon complaint of interference from a fixed microwave licensee. In such a case, the Commission will resolve the issues.

(c) In all other respects, coordination procedures are to follow the requirements of §101.103(d) of this chapter to the extent that these requirements are not inconsistent with those specified in this part.

(d) The licensee must perform an engineering analysis to assure that the proposed facilities will not cause interference to existing OFS stations within the coordination distance specified in Table 3 of a magnitude greater than that specified in the criteria set forth in paragraphs (e) and (f) of this section, unless there is prior agreement with the affected OFS licensee. Interference calculations shall be based on the sum of the power received at the terminals of each microwave receiver from all of the applicant's current and proposed PCS operations.

TABLE 3—COORDINATION DISTANCES IN KILOMETERS

	PCS Base Station Antenna HAAT in Meters												
EIRP(W)	5	10	20	50	100	150	200	250	300	500	1000	1500	2000
0.1	90	93	99	110	122	131	139	146	152	173	210	239	263
0.5	96	100	105	116	128	137	145	152	158	179	216	245	269
1	99	103	108	119	131	140	148	155	161	182	219	248	272
2	120	122	126	133	142	148	154	159	164	184	222	250	274
5	154	157	161	168	177	183	189	194	198	213	241	263	282
10	180	183	187	194	203	210	215	220	225	240	268	291	310
20	206	209	213	221	229	236	242	247	251	267	296	318	337
50	241	244	248	255	264	271	277	282	287	302	331	354	374
100	267	270	274	282	291	297	303	308	313	329	358	382	401
200	293	296	300	308	317	324	330	335	340	356	386	409	436
500	328	331	335	343	352	359	365	370	375	391	421	440	
1000	354	357	361	369	378	385	391	397	402	418			
1200	361	364	368	376	385	392	398	404	409	425			
1640	372	375	379	388	397	404	410	416	421	437			
2400	384	387	391	399	408	415	423	427	431				
3280	396	399	403	412	419	427	435	439	446				

(e) For microwave paths of 25 kilometers or less, interference determinations shall be based on the C/I criteria set forth in TIA Telecommunications Systems Bulletin 10–F, ''Interference Criteria for Microwave Systems,'' May 1994 (TSB10–F).

(f) For microwave paths longer than 25 kilometers, the interference protection criterion shall be such that the interfering signal will not produce more than 1.0 dB degradation of the practical threshold of the microwave receiver for analog system, or such that the interfering signal will not cause an increase in the bit error rate (BER) from 10E–6 to 10E–5 for digital systems.

(g) The development of the C/I ratios and interference criteria specified in paragraphs (e) and (f) of this section and the methods employed to compute the interfering power at the microwave receivers shall follow generally acceptable good engineering practices. The procedures described for computing interfering signal levels in (appendix I to this subpart E Appendix E of the Memorandum Opinion and Order, GEN Docket No. 90–314, FCC 94–144) shall be applied. Alternatively, procedures for determining interfering signal levels and other criteria as may be developed by the Electronics Industries Association (EIA), the Institute of Electrical and Electronics Engineers, Inc. (IEEE), the American National Standards Institute (ANSI) or any other recognized

authority will be acceptable to the Commission.

[59 FR 32854, June 24, 1994, as amended at 61 FR 29691, June 21, 1996; 69 FR 75171, Dec. 15, 2004]

§ 24.238 Emission limitations for Broadband PCS equipment.

The rules in this section govern the spectral characteristics of emissions in the Broadband Personal Communications Service.

(a) *Out of band emissions.* The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

(b) *Measurement procedure.* Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (*i.e.* 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(c) *Alternative out of band emission limit.* Licensees in this service may establish an alternative out of band emission limit to be used at specified band edge(s) in specified geographical areas, in lieu of that set forth in this section, pursuant to a private contractual arrangement of all affected licensees and applicants. In this event, each party to such contract shall maintain a copy of the contract in their station files and disclose it to prospective assignees or transferees and, upon request, to the FCC.

(d) *Interference caused by out of band emissions.* If any emission from a transmitter operating in this service results in interference to users of another radio service, the FCC may require a greater attenuation of that emission than specified in this section.

[67 FR 77192, Dec. 17, 2002]

POLICIES GOVERNING MICROWAVE RELOCATION FROM THE 1850–1990 MHZ BAND

§ 24.239 Cost-sharing requirements for broadband PCS.

Frequencies in the 1850–1990 MHz band listed in § 101.147(c) of this chapter have been allocated for use by PCS. In accordance with procedures specified in §§ 101.69 through 101.81 of this chapter, PCS entities (both licensed and unlicensed) are required to relocate the existing Fixed Microwave Services (FMS) licensees in these bands if interference to the existing FMS operations would occur. All PCS entities who benefit from spectrum clearance by other PCS entities or a voluntarily relocating microwave incumbent, must contribute to such relocation costs. PCS entities may satisfy this requirement by entering into private cost-sharing agreements or agreeing to terms other than those specified in § 24.243. However, PCS entities are required to reimburse other PCS entities or voluntarily relocating microwave incumbents that incur relocation costs and are not parties to the alternative agreement. In addition, parties to a private cost-sharing agreement may seek reimbursement through the clearinghouse (as discussed in § 24.241) from PCS entities that are not parties to the agreement. The cost-sharing plan is in effect during all phases of microwave relocation specified in § 101.69 of this chapter. If a licensee in the Broadband PCS Service enters into a spectrum leasing arrangement (as set forth in part 1, subpart X of this chapter) and the spectrum lessee triggers a cost-sharing obligation, the licensee is the PCS entity responsible for satisfying the cost-sharing obligations under §§ 24.239 through 24.253.

[62 FR 12757, Mar. 18, 1997, as amended at 69 FR 77559, Dec. 27, 2004]

§ 24.241 Administration of the Cost-Sharing Plan.

The Wireless Telecommunications Bureau, under delegated authority, will select an entity to operate as a neutral, not-for-profit clearinghouse. This clearinghouse will administer the cost-sharing plan by, *inter alia*, maintaining all of the cost and payment records related to the relocation of each link and determining the cost-sharing obligation of subsequent PCS entities. The cost-sharing rules will not take effect until an administrator is selected.

[61 FR 29691, June 12, 1996]

§ 24.243 The cost-sharing formula.

A PCS relocator who relocates an interfering microwave link, *i.e.* one that is in all or part of its market area and in all or part of its frequency band or a voluntarily relocating microwave incumbent, is entitled to *pro rata* reimbursement based on the following formula:

$$R_N = \frac{C}{N} \times \frac{\left[120 - \left(T_m\right)\right]}{120}$$

(a) *RN* equals the amount of reimbursement.

(b) *C* equals the actual cost of relocating the link. Actual relocation costs include, but are not limited to, such items as: Radio terminal equipment (TX and/or RX—antenna, necessary feed lines, MUX/Modems); towers and/or modifications; back-up power equipment; monitoring or control equipment; engineering costs (design/path survey); installation; systems testing; FCC filing costs; site acquisition and civil works; zoning costs; training; disposal of old equipment; test equipment (vendor required); spare equipment; project management; prior coordination notification under § 101.103(d) of this chapter; site lease renegotiation; required antenna upgrades for interference control; power plant upgrade (if required); electrical grounding systems; Heating Ventilation and Air Conditioning (HVAC) (if required); alternate transport equipment; and leased facilities. C also includes voluntarily relocating microwave incumbent's independent third party appraisal of its compensable relocation costs and incumbent transaction expenses that are directly attributable to the relocation, subject to a cap of two percent of the ''hard'' costs involved. C may not exceed $250,000 per link, with an additional $150,000 permitted if a new or modified tower is required.

(c) *N* equals the number of PCS entities that would have interfered with the link. For the PCS relocator, N = 1. For the next PCS entity that would have interfered with the link, N = 2, and so on. In the case of a voluntarily relocating microwave incumbent, N = 1 for the first PCS entity that would have interfered with the link. For the next PCS entity that would have interfered with the link, N = 2, and so on.

(d) *Tm* equals the number of months that have elapsed between the month the PCS relocator or voluntarily relocating microwave incumbent obtains reimbursement rights for the link and the month that the clearinghouse notifies a later-entrant of its reimbursement obligation for the link. A PCS relocator obtains reimbursement rights for the link on the date that it signs a relocation agreement with a microwave incumbent. A voluntarily relocating microwave incumbent obtains reimbursement rights for the link on the date that the incumbent notifies the Commission that it intends to discontinue, or has discontinued, the use of the link, pursuant to § 101.305 of the Commission's rules.

[62 FR 12757, Mar. 18, 1997, as amended at 65 FR 46113, July 27, 2000]

§ 24.245 Reimbursement under the Cost-Sharing Plan.

(a) *Registration of reimbursement rights.* (1) To obtain reimbursement, a PCS relocator must submit documentation of the relocation agreement to the clearinghouse within ten business days of the date a relocation agreement is signed with an incumbent.

(2) To obtain reimbursement, a voluntarily relocating microwave incumbent must submit documentation of the relocation of the link to the clearinghouse within ten business days of the date that the incumbent notifies the Commission that it intends to discontinue, or has discontinued, the use of the link, pursuant to § 101.305 of the Commission's rules.

(b) *Documentation of expenses.* Once relocation occurs, the PCS relocator or the voluntarily relocating microwave incumbent, must submit documentation itemizing the amount spent for items listed in §24.243(b). The voluntarily relocating microwave incumbent, must also submit an independent third party appraisal of its compensable relocation costs. The appraisal should be based on the actual cost of replacing the incumbent's system with comparable facilities and should exclude the cost of any equipment upgrades or items outside the scope of §24.243(b). The PCS relocator or the voluntarily relocating microwave incumbent, must identify the particular link associated with appropriate expenses (*i.e.*, costs may not be averaged over numerous links). If a PCS relocator pays a microwave incumbent a monetary sum to relocate its own facilities, the PCS relocator must estimate the costs associated with relocating the incumbent by itemizing the anticipated cost for items listed in §24.243(b). If the sum paid to the incumbent cannot be accounted for, the remaining amount is not eligible for reimbursement. A PCS relocator may submit receipts or other documentation to the clearinghouse for all relocation expenses incurred since April 5, 1995.

(c) *Full Reimbursement.* A PCS relocator who relocates a microwave link that is either fully outside its market area or its licensed frequency band may seek full reimbursement through the clearinghouse of compensable costs, up to the reimbursement cap as defined in §24.243(b). Such reimbursement will not be subject to depreciation under the cost-sharing formula.

[61 FR 29692, June 12, 1996, as amended at 62 FR 12757, Mar. 18, 1997; 65 FR 46113, July 27, 2000]

§24.247 Triggering a reimbursement obligation.

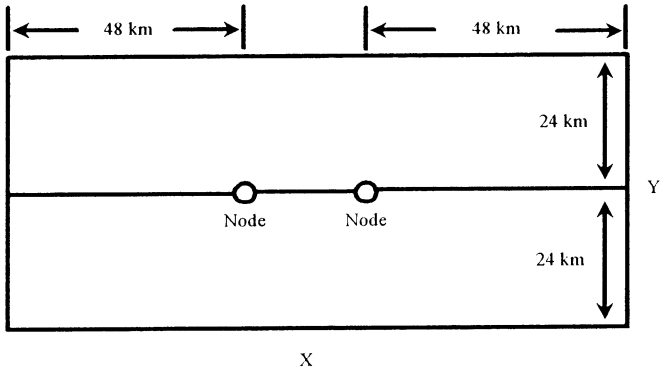
(a) *Licensed PCS.* The clearinghouse will apply the following test to determine if a PCS entity preparing to initiate operations must pay a PCS relocator or a voluntarily relocating microwave incumbent in accordance with the formula detailed in §24.243:

(1) All or part of the relocated microwave link was initially co-channel with the licensed PCS band(s) of the subsequent PCS entity;

(2) A PCS relocator has paid the relocation costs of the microwave incumbent; and

(3) The subsequent PCS entity is preparing to turn on a fixed base station at commercial power and the fixed base station is located within a rectangle (Proximity Threshold) described as follows:

(i) The length of the rectangle shall be x where x is a line extending through both nodes of the microwave link to a distance of 48 kilometers (30 miles) beyond each node. The width of the rectangle shall be y where y is a line perpendicular to x and extending for a distance of 24 kilometers (15 miles) on both sides of x. Thus, the rectangle is represented as follows:



(ii) If the application of the Proximity Threshold test indicates that a reimbursement obligation exists, the clearinghouse will calculate the reimbursement amount in accordance with the cost-sharing formula and notify the subsequent PCS entity of the total amount of its reimbursement obligation.

(b) *Unlicensed PCS.* UTAM's reimbursement obligation is triggered either:

(1) When a county is cleared of microwave links in the unlicensed allocation, and UTAM invokes a Zone 1 power cap as a result of third party relocation activities; or

(2) A county is cleared of microwave links in the unlicensed allocation and UTAM reclassifies a Zone 2 county to Zone 1 status.

(c) Any new entrants granted licenses for the 1910–1915 MHz band must reimburse UTAM a pro rata share of its total expenses incurred by UTAM as of the date that the new entrants gain access to the band. The percent required by new entrants to pay shall be calculated based upon the amount of spectrum granted to the new entrant as compared to the total amount of spectrum UTAM is responsible for clearing of incumbents (20 megahertz), and must be paid before a new entrant begins operations in the band. For example, if a new entrant obtains a license for 5 megahertz of spectrum in this band, it is required to reimburse UTAM one-quarter of UTAM's total costs to date on a pro rata shared basis. New entrants will be responsible for the actual costs associated with future relocation activities in their licensed spectrum, but will be entitled to seek reimbursement from UTAM for the proportion of those band clearing costs that benefit users of the 1915–1930 MHz band.

[61 FR 29692, June 12, 1996, as amended at 62 FR 12757, Mar. 18, 1997; 69 FR 67836, Nov. 22, 2004]

§ 24.249 Payment issues.

(a) *Timing.* On the day that a PCS entity files its prior coordination notice (PCN) in accordance with § 101.103(d) of this chapter, it must file a copy of the PCN with the clearinghouse. The clearinghouse will determine if any reimbursement obligation exists and notify the PCS entity in writing of its repayment obligation, if any. When the PCS entity receives a written copy of such obligation, it must pay directly to the PCS relocator or the voluntarily relocating microwave incumbent the amount owed within thirty days, with the exception of those businesses that qualify for installment payments. A business that qualifies for an installment payment plan must make its first installment payment within thirty days of notice from the clearinghouse. UTAM's first payment will be due thirty days after its reimbursement obligation is triggered, as described in § 24.247(b).

(b) *Eligibility for Installment Payments.* PCS licensees that are allowed to pay for their licenses in installments under

our designated entity rules will have identical payment options available to them with respect to payments under the cost-sharing plan. The specific terms of the installment payment mechanism, including the treatment of principal and interest, are the same as those applicable to the licensee's installment auction payments. If, for any reason, the entity eligible for installment payments is no longer eligible for such installment payments on its license, that entity is no longer eligible for installment payments under the cost-sharing plan. UTAM may make quarterly payments over a five-year period with an interest rate of prime plus 2.5 percent. UTAM may also negotiate separate repayment arrangements with other parties.

[61 FR 29693, June 12, 1996, as amended at 62 FR 12757, Mar. 18, 1997]

§ 24.251 Dispute resolution under the Cost-Sharing Plan.

Disputes arising out of the cost-sharing plan, such as disputes over the amount of reimbursement required, must be brought, in the first instance, to the clearinghouse for resolution. To the extent that disputes cannot be resolved by the clearinghouse, parties are encouraged to use expedited ADR procedures, such as binding arbitration, mediation, or other ADR techniques.

[61 FR 29693, June 12, 1996]

§ 24.253 Termination of cost-sharing obligations.

The cost-sharing plan will sunset for all PCS entities on April 4, 2005, which is ten years after the date that voluntary negotiations commenced for A and B block PCS entities. Those PCS entities that are paying their portion of relocation costs on an installment basis must continue the payments until the obligation is satisfied.

[61 FR 29693, June 12, 1996]

APPENDIX I TO SUBPART E OF PART 24—A PROCEDURE FOR CALCULATING PCS SIGNAL LEVELS AT MICROWAVE RECEIVERS (APPENDIX E OF THE MEMORANDUM OPINION AND ORDER)

The new Rules adopted in Part 24 stipulate that estimates of interference to fixed microwave operations from a PCS operation will be based on the sum of signals received at a microwave receiver from the PCS operation. This appendix describes a procedure for computing this PCS level.

In general, the procedure involves four steps:

1. Determine the geographical coordinates of all microwave receivers operating on co-channel and adjacent frequencies within the coordination distance of each base station and the characteristics of each receiver, *i.e.*, adjacent channel susceptibility, antenna gain, pattern and height, and line and other losses.

2. Determine an equivalent isotropically radiated power (e.i.r.p.) for each base station and equivalent e.i.r.p. values for the mobiles and portables associated with each base station. Determine the values of pertinent correction and weighting factors based on building heights and density and distribution of portables. Close-in situations, prominent hills, and extra tall buildings require special treatment.

3. Based on PCS e.i.r.p. values, correction and weighting factors, and microwave receiving system characteristics determined above, calculate the total interference power at the input of each microwave receiver, using the Longley-Rice propagation model.

4. Based on the interference power level computed in step 3, determine interference to each microwave receiver using criteria described in Part 24 and EIA/TIA Bulletin 10–F.

The interference from each base station and the mobiles and portables associated with it is calculated as follows:

$P_{rbi} = 10\text{Log}\,(p_{tbi}) - L_{bi} - UC_i + G_{mwi} - C_i - BP_i$

$P_{rmi} = 10\text{Log}\,(n_{mi} \times p_{tmi}) - L_{mi} - UC_i + G_{mwi} - C_i$

$P_{rpsi} = 10\text{Log}\,(n_{psi} \times p_{tpsi}) - L_{psi} - UC_i + G_{mwi} - C_i$

$P_{rpbi} = 10\text{Log}\,(n_{pbi} \times p_{tpbi}) - L_{pbi} - UC_i - (BP_i - BH_i) + G_{mwi} - C_i$

$P_{rpri} = 10\text{Log}\,(n_{pri} \times p_{tpri}) - L_{pri} - (UC_i - BH_i) + G_{mwi} - C_i$

where:

P refers to Power in dBm

p refers to power in milliwatts

P_{rbi} = Power at MW receiver from ith base station in dBm

p_{tbi} = e.i.r.p. transmitted from ith base station in milliwatts, which equals average power per channel × number of channels × antenna gain with respect to an isotropic antenna − line loss

L_{bi} = Path loss between MW and base station site in dB

UC_i = Urban correction factor in dB

G_{mwi} = Gain of MW antenna in pertinent direction (dBi)

C_i = Channel discrimination of MW system in dB

P_{rmi} = Power at MW receiver from mobiles associated with ith base station

p_{tmi} = e.i.r.p. transmitted from mobiles associated with ith base station

n_{mi} = Number of mobiles associated with ith base station
L_{mi} = Path loss between MW and mobile transmitters in dB
P_{rpsi} = Power at MW receiver from outdoor portables (s for sidewalk)
p_{tpsi} = e.i.r.p. transmitted from outdoor portables associated with ith base station
n_{psi} = Number of outdoor portables associated with ith base station
L_{psi} = Path loss between MW and outdoor portables in dB
P_{rpbi} = Power at MW receiver from indoor portables (b for building)
p_{tpbi} = e.i.r.p. transmitted from indoor portables associated with ith base station
n_{pbi} = number of indoor portables associated with ith base station
L_{pbi} = Path loss in dB between MW and base station site (using average building height divided by 2 as effective antenna height)
P_{rpri} = Power at MW receiver from rooftop portables (r for rooftop)
p_{tpri} = e.i.r.p. transmitted from rooftop portables associated with ith base station
n_{pri} = Number of rooftop portables associated with ith base station
L_{pri} = Path loss in dB between MW and base station site (using average building height as effective antenna height)
BP_i = Building penetration loss at street level in dB
BH_i = Height gain for portables in buildings dB = 2.5 × (nf–1), where nf is number of floors

NOTE: Where C_i varies from channel-to-channel, which often is the case, the summation process is more complex, requiring summation at a channel level first.

Finally, the total PCS interference power at a given microwave receiver from all the base stations in a given frequency band is found by summing the contributions from the individual stations. Likewise, the total interference power at a given microwave receiver from all mobiles and portables operating in a given frequency band is found by summing the contributions from the mobiles and portables associated with each cell.

$$p_{rb} = \sum_i p_{rbi} \text{ milliwatts}$$

$$p_{rm} = \sum_i \left(p_{rmi} + p_{rpsi} + p_{rpbi} + p_{rpri} \right) \text{milliwatts}$$

$$P = 10 \text{ Log}(p) \text{ dBm}$$

Base Stations. Interference from each base station to each microwave should normally be considered independently. A group of base stations having more or less (within ±50 percent) the same height above average terrain, the same e.i.r.p., basically the same path to a microwave receiving site, and subtending an angle to that receiving site of less than 5 degrees, may be treated as a group, using the total power of the group and the average antenna height of the group to calculate path loss, L.

Mobile Stations. The e.i.r.p. from mobile transmitters is weighted according to the number of base station channels expected to be devoted to mobile operation at any given time. The antenna height of mobiles used in calculating path loss, L, is assumed to be 2 meters.

Portable Stations. The e.i.r.p. from the portable units associated with each base station is weighted according to the estimated portion of portables associated with that cell expected to be operated inside buildings at any given time and the portion which could be expected to be operating from elevated locations, such as balconies or building rooftops. For example, in the case of service intended for business use in an urban area, one might expect that perhaps 85 percent of the portables in use at any given time would be operating from within buildings and perhaps 5 percent might be operating from rooftops or balconies. The remaining 10 percent would be outside at street level.

Calculation of an equivalent e.i.r.p. for cells in suburban areas will involve different weighting criteria.

Urban Correction Factor. The urban correction factor (UC) depends on the height and density of buildings surrounding a base station. For the core area of large cities, it is assumed to be 35 dB. For medium size cities and fringe areas of large cities (4- to 6-story buildings with scattered taller buildings and lower buildings and open spaces) it is assumed to be 25 dB; for small cities and towns, 15 dB, and for suburban residential areas (one- and two-story, single family

houses with scattered multiple-story apartment buildings, shopping centers and open areas), 10 dB.

The unadjusted urban correction factor, UC, should not be applied to base station antenna heights that are greater than 50 percent of the average building height for a cell.

Building Height and Building Penetration Factors. The building height correction, BH, is a function of the average building height within the nominal coverage area of the base station. It is used in conjunction with the building penetration loss, BP, to adjust the expected interference contribution from that portion of the portables transmitting from within buildings. The adjustment is given by:

BP = 20 dB in urban areas
BP = 10 dB in suburban areas
BH = 2.5 × (nf–1) dB

where nf is the average height (number of floors) of the buildings in the area.

(Note that this formula implies a net gain when the average building height is greater than 8 floors). All buildings more than twice the average height should be considered individually. The contribution to BH from that portion of portables in the building above the average building height should be increased by a factor of 20Log(h) dB, where h is the height of the portables above the average building height in meters.

Channel Discrimination Factor. A factor based on the interference selectivity of the microwave receiver.

Propagation Model. The PCS to microwave path loss, L, is calculated using the Longley-Rice propagation model, Version 1.2.2., in the point-to-point mode. The Longley-Rice [1] model was derived from NBS Technical Note 101 [2], and updated in 1982 by Hufford [3]. Version 1.2.2 incorporated modifications described in a letter by Hufford [4] in 1985. Terrain elevations used as input to the model should be from the U.S. Geological Survey 3-second digitized terrain database.

Special Situations. If a cell size is large compared to the distance between the cell and a microwave receiving site so that it subtends an angle greater than 5 degrees, the cell should be subdivided and calculations should be based on the expected distribution of mobiles and portables within each subdivision.

If terrain elevations within a cell differ by more than a factor of two-to-one, the cell should be subdivided and microwave interference calculations should be based on the average terrain elevation for each subdivision.

If a co-channel PCS base station lies within the main beam of a microwave antenna (±5 degrees), there is no intervening terrain obstructions, and the power at the microwave receiver from that base station, assuming free space propagation, would be 3 dB or less below the interference threshold, interference will be assumed to exist unless the PCS licensee can demonstrate otherwise by specific path loss calculations based on terrain and building losses.

If any part of a cell or cell subdivision lies within the main beam of a co-channel microwave antenna, there is no intervening terrain obstructions, and the accumulative power of 5 percent or less of the mobiles, assuming free space propagation would be 3 dB or less below the interference threshold, interference will be assumed to exist unless the PCS licensee can demonstrate otherwise by specific path loss calculations based on terrain and building losses.

If a building within a cell or cell subdivision lies within the main beam of a co-channel microwave antenna, there is no intervening terrain obstructions, and the cumulative power of 5 percent or fewer of the portables, assuming free space propagation, would be 3 dB or less below the interference threshold, interference will be assumed to exist unless the PCS licensee can demonstrate otherwise by specific path loss calculations based on terrain and building losses.

REFERENCES:

1. Longley, A.G. and Rice, P.L., ''Prediction of Tropospheric Radio Transmission Loss Over Irregular Terrain, A Computer Method-1968'', ESSA Technical Report ERL 79–ITS 67, Institute for Telecommunications Sciences, July 1968.

2. Rice, P.L. Longley, A.G., Norton, K.A., Barsis, A.P., ''Transmission Loss Predictions for Tropospheric Communications Circuits,'' NBS Technical Note 101 (Revised), Volumes I and II, U.S. Department of Commerce, 1967.

3. Hufford, G.A., Longley, A.G. and Kissick, W.A., ''A Guide to the use of the ITS Irregular Terrain Model in the Area Prediction Mode'', NTIA Report 82–100, U.S. Department of Commerce, April 1982. Also, Circular letter, dated January 30, 1985, from G.A. Hufford, identifying modifications to the computer program.

4. Hufford, G.A., Memorandum to Users of the ITS Irregular Terrain Model, Institute for Telecommunications Sciences, U.S. Department of Commerce, January 30, 1985.

Subpart F—Competitive Bidding Procedures for Narrowband PCS

SOURCE: 59 FR 26747, May 24, 1994, unless otherwise noted.

§ 24.301 Narrowband PCS subject to competitive bidding.

Mutually exclusive initial applications for narrowband PCS service licenses are subject to competitive bidding. The general competitive bidding procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this subpart.

[67 FR 45367, July 9, 2002]

§§ 24.302–24.309 [Reserved]

§ 24.320 [Reserved]

§ 24.321 Designated entities.

(a) *Eligibility for small business provisions.* (1) A small business is an entity that, together with its controlling interests and affiliates, has average gross revenues not exceeding $ 40 million for the preceding three years.

(2) A very small business is an entity that, together with its controlling interests and affiliates, has average gross revenues not exceeding $ 15 million for the preceding three years.

(b) *Bidding credits.* After August 7, 2000, a winning bidder that qualifies as a small business, as defined in this section, or a consortium of small businesses may use the bidding credit specified in §1.2110(f)(2)(iii) of this chapter. A winning bidder that qualifies as a very small business, as defined in this section, or a consortium of very small businesses may use the bidding credit specified in §1.2110(f)(2)(ii) of this chapter.

(c) *Installment payments.* Small businesses that are winning bidders on any regional license prior to August 7, 2000 will be eligible to pay the full amount of their winning bids in installments over the term of the license pursuant to the terms set forth in §1.2110(g) of this chapter.

[67 FR 45367, July 9, 2002, as amended at 68 FR 42998, July 21, 2003]

Subpart G—Interim Application, Licensing and Processing Rules for Narrowband PCS

SOURCE: 59 FR 26749, May 24, 1994, unless otherwise noted.

§ 24.403 Authorization required.

No person shall use or operate any device for the transmission of energy or communications by radio in the services authorized by this part except as provided in this part.

§ 24.404 Eligibility.

(a) *General.* Authorizations will be granted upon proper application if:

(1) The applicant is qualified under the applicable laws and the regulations, policies and decisions issued under the laws, including §24.12;

(2) There are frequencies available to provide satisfactory service; and

(3) The public interest, convenience or necessity would be served by a grant.

(b) *Alien ownership.* A narrowband PCS authorization to provide Commercial Mobile Radio Service may not be granted to or held by:

(1) Any alien or the representative of any alien.

(2) Any corporation organized under the laws of any foreign government.

(3) Any corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or any corporation organized under the laws of a foreign country.

(4) Any corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country, if the Commission finds that the public interest will be served by the refusal or revocation of such license. A Narrowband PCS authorization to provide Private Mobile Radio Service may not be granted to or held by a foreign government or a representative thereof.

[59 FR 26749, May 24, 1994, as amended at 61 FR 55581, Oct. 28, 1996; 65 FR 35855, June 6, 2000]

§§ 24.405–24.414 [Reserved]

§ 24.415 Technical content of applications; maintenance of list of station locations.

(a) All applications required by this part shall contain all technical information required by the application forms or associated public notice(s). Applications other than initial applications for a narrowband PCS license must also comply with all technical requirements of the rules governing the narrowband PCS (see subparts C and D as appropriate). The following paragraphs describe a number of general technical requirements.

(b) Each application (except applications for initial licenses filed on Form 175) for a radio station authorization for narrowband PCS must comply with the provisions of §§ 24.129 through 24.135.

(c)–(i) [Reserved]

(j) The location of the transmitting antenna shall be considered to be the station location. Narrowband PCS licensees must maintain a current list of all station locations, which must describe the transmitting antenna site by its geographical coordinates and also by conventional reference to street number, landmark, or the equivalent. All such coordinates shall be specified in terms of degrees, minutes, and seconds to the nearest second of latitude and longitude.

[59 FR 26749, May 24, 1994; 59 FR 43898, Aug. 25, 1994]

§§ 24.416–24.429 [Reserved]

§ 24.430 Opposition to applications.

(a) Petitions to deny (including petitions for other forms of relief) and responsive pleadings for Commission consideration must comply with § 1.2108 of this chapter and must:

(1) Identify the application or applications (including applicant's name, station location, Commission file numbers and radio service involved) with which it is concerned;

(2) Be filed in accordance with the pleading limitations, filing periods, and other applicable provisions of §§ 1.41 through 1.52 of this chapter except where otherwise provided in § 1.2108 of this chapter;

(3) Contain specific allegations of fact which, except for facts of which official notice may be taken, shall be supported by affidavit of a person or persons with personal knowledge thereof, and which shall be sufficient to demonstrate that the petitioner (or respondent) is a party in interest and that a grant of, or other Commission action regarding, the application would be prima facie inconsistent with the public interest; and

(4) Contain a certificate of service showing that it has been mailed to the applicant no later than the date of filing thereof with the Commission.

(b) A petition to deny a major amendment to a previously filed application may only raise matters directly related to the amendment which could not have been raised in connection with the underlying, previously filed application. This does not apply to petitioners who gain standing because of the major amendment.

(c) Parties who file frivolous petitions to deny may be subject to sanctions including monetary forfeitures, license revocation, if they are FCC licensees, and may be prohibited from participating in future auctions.

[59 FR 44072, Aug. 26, 1994, as amended at 65 FR 35855, June 6, 2000]

§ 24.431 Mutually exclusive applications.

(a) The Commission will consider applications to be mutually exclusive if their conflicts are such that the grant of one application would effectively preclude by reason of harmful electrical interference, or other practical reason, the grant of one or more of the other applications. The Commission will presume ''harmful electrical interference'' to mean interference which would result in a material impairment to service rendered to the public despite full cooperation in good faith by all applicants or parties to achieve reasonable technical adjustments which would avoid electrical conflict.

(b) Mutually exclusive applications filed on Form 175 for the initial provision of narrowband PCS service are subject to competitive bidding in accordance with the procedures in subpart F of this part and in 47 CFR part 1, subpart Q.

(c) An application will be entitled to comparative consideration with one or more conflicting applications only if the Commission determines that such comparative consideration will serve the public interest.

§§ 24.432–24.444 [Reserved]

Subpart H—Competitive Bidding Procedures for Broadband PCS

SOURCE: 59 FR 37604, July 22, 1994, unless otherwise noted.

§ 24.701 Broadband PCS subject to competitive bidding.

Mutually exclusive initial applications for broadband PCS service licenses are subject to competitive bidding. The general competitive bidding procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this subpart.

[67 FR 45367, July 9, 2002]

§§ 24.702–24.708 [Reserved]

§ 24.709 Eligibility for licenses for frequency Blocks C or F.

(a) *General rule for licenses offered for closed bidding.* (1) No application is acceptable for filing and no license shall be granted to a winning bidder in closed bidding for frequency block C or frequency block F, unless the applicant, together with its affiliates and persons or entities that hold interests in the applicant and their affiliates, have had gross revenues of less than $125 million in each of the last two years and total assets of less than $500 million at the time the applicant's short-form application (Form 175) is filed.

(2) Any licensee awarded a license won in closed bidding pursuant to the eligibility requirements of this section (or pursuant to §24.839(a)(2)) shall maintain its eligibility until at least five years from the date of initial license grant, except that a licensee's (or other attributable entity's) increased gross revenues or increased total assets due to nonattributable equity investments (i.e., from sources whose gross revenues and total assets are not considered under paragraph (b) of this section), debt financing, revenue from operations or other investments, business development, or expanded service shall not be considered.

(3) Tiers. (i) For purposes of determining spectrum to which the eligibility requirements of this section are applicable, the BTA service areas (see §24.202(b)) are divided into two tiers according to their population as follows:

(A) *Tier 1:* BTA service areas with population equal to or greater than 2.5 million;

(B) *Tier 2:* BTA service areas with population less than 2.5 million.

(ii) For Auction No. 35, the population of individual BTA service areas will be based on the 1990 census. For auctions beginning after the start of Auction No. 35, the population of individual BTA service areas will be based on the most recent available decennial census.

(4) Application of eligibility requirements. (i) The following categories of licenses will be subject to closed bidding pursuant to the eligibility requirements of this section in auctions that begin after the effective date of this paragraph.

(A) For Tier 1 BTAs, one of the 10 MHz C block licenses (1895–1900 MHz paired with 1975–1980 MHz);

(B) For Tier 2 BTAs, two of the 10 MHz C block licenses (1895–1900 MHz paired with 1975–1980 MHz; 1900–1905 MHz paired with 1980–1985 MHz) and all 15 MHz C block licenses.

(ii) Notwithstanding the provisions of paragraph (a)(4)(i) of this section, any C block license for operation on spectrum that has been offered, but not won by a bidder, in closed bidding in any auction beginning on or after March 23, 1999, will not be subject in a subsequent auction to closed bidding pursuant to the eligibility requirements of this section.

(5) Special rule for licensees disaggregating or returning certain spectrum in frequency block C.

(i) In addition to entities qualifying for closed bidding under paragraph (a)(1) of this section, any entity that was eligible for and participated in the auction for frequency block C, which began on December 18, 1995, or the reauction for frequency block C, which began on July 3, 1996, will be eligible to bid for C block licenses offered in

closed bidding in any reauction of frequency block C spectrum that begins within two years of March 23, 1999.

(ii) In cases of merger, acquisition, or other business combination of entities, where each of the entities is eligible to bid for C block licenses offered in closed bidding in any reauction of C block spectrum on the basis of the eligibility exception set forth in paragraph (a)(5)(i) of this section, the resulting entity will also be eligible for the exception specified in paragraph (a)(5)(i) of this section.

(iii) In cases of merger, acquisition, or other business combination of entities, where one or more of the entities are ineligible for the exception set forth in paragraph (a)(5)(i) of this section, the resulting entity will not be eligible pursuant to paragraph (a)(5)(i) of this section unless an eligible entity possesses *de jure* and *de facto* control over the resulting entity.

(iv) The following restrictions will apply for any reauction of frequency block C spectrum conducted after March 24, 1998:

(A) Applicants that elected to disaggregate and surrender to the Commission 15 MHz of spectrum from any or all of their frequency block C licenses, as provided in Amendment of the Commission's Rules Regarding Installment Payment Financing for Personal Communications Services (PCS) Licensees, Second Report and Order and Further Notice of Proposed Rule Making, WT Docket No. 97–82, 12 FCC Rcd 16,436 (1997), as modified by the Order on Reconsideration of the Second Report and Order, WT Docket No. 97–82, FCC 98–46 (rel. Mar. 24, 1998), will not be eligible to apply for such disaggregated spectrum until 2 years from the start of the reauction of that spectrum.

(B) Applicants that surrendered to the Commission any of their frequency block C licenses, as provided in Amendment of the Commission's Rules Regarding Installment Payment Financing for Personal Communications Services (PCS) Licensees, Second Report and Order and Further Notice of Proposed Rule Making, WT Docket No. 97–82, 12 FCC Rcd 16,436 (1997), as modified by the Order on Reconsideration of the Second Report and Order, WT Docket No. 97–82, FCC 98–46 (rel. Mar. 24, 1998), will not be eligible to apply for the licenses that they surrendered to the Commission until 2 years from the start of the reauction of those licenses if they elected to apply a credit of 70% of the down payment they made on those licenses toward the prepayment of licenses they did not surrender.

(b) *Exceptions to general rule*—(1) *Scope.* The following provisions apply to licenses acquired in Auctions No. 5, 10, 11 or 22, or pursuant to § 24.839(a)(2) or (a)(3) prior to October 30, 2000.

(i) *Small business consortia.* Where an applicant (or licensee) is a consortium of small businesses, the gross revenues and total assets of each small business shall not be aggregated.

(ii) *Publicly-traded corporations.* Where an applicant (or licensee) is a publicly traded corporation with widely dispersed voting power, the gross revenues and total assets of a person or entity that holds an interest in the applicant (or licensee), and its affiliates, shall not be considered.

(iii) *25 Percent equity exception.* The gross revenues and total assets of a person or entity that holds an interest in the applicant (or licensee), and its affiliates, shall not be considered so long as:

(A) Such person or entity, together with its *affiliates,* holds only *nonattributable equity* equaling no more than 25 percent of the applicant's (or licensee's) total equity;

(B) Except as provided in paragraph (b)(1)(v) of this section, such person or entity is not a member of the applicant's (or licensee's) *control group;* and

(C) The applicant (or licensee) has a *control group* that complies with the minimum equity requirements of paragraph (b)(1)(v) of this section, and, if the applicant (or licensee) is a corporation, owns at least 50.1 percent of the applicant's (or licensee's) voting interests, and, if the applicant (or licensee) is a partnership, holds all of its general partnership interests.

(iv) *49.9 Percent equity exception.* The *gross revenues* and *total assets* of a person or entity that holds an interest in the applicant (or licensee), and its affiliates, shall not be considered so long as:

(A) Such person or entity, together with its *affiliates,* holds only *nonattributable equity* equaling no more than 49.9 percent of the applicant's (or licensee's) total equity;

(B) Except as provided in paragraph (b)(1)(vi) of this section, such person or entity is not a member of the applicant's (or licensee's) *control group;* and

(C) The applicant (or licensee) has a *control group* that complies with the minimum equity requirements of paragraph (b)(1)(vi) of this section and, if the applicant (or licensee) is a corporation, owns at least 50.1 percent of the applicant's (or licensee's) voting interests, and, if the applicant (or licensee) is a partnership, holds all of its general partnership interests.

(v) *Control group minimum 25 percent equity requirement.* In order to be eligible to exclude gross revenues and total assets of persons or entities identified in paragraph (b)(1)(iii) of this section, and applicant (or licensee) must comply with the following requirements:

(A) Except for an applicant (or licensee) whose sole control group member is a *preexisting entity,* as provided in paragraph (b)(1)(v)(B) of this section, at the time the applicant's short-form application (Form 175) is filed and until at least three years following the date of initial license grant, the applicant's (or licensee's) control group must own at least 25 percent of the applicant's (or licensee's) total equity as follows:

(*1*) At least 15 percent of the applicant's (or licensee's) total equity must be held by *qualifying investors,* either unconditionally or in the form of options exercisable, at the option of the holder, at any time and at any exercise price equal to or less than the market value at the time the applicant files its short-form application (Form 175);

(*2*) Such *qualifying investors* must hold 50.1 percent of the voting stock and all general partnership interests within the control group, and must have de facto control of the control group and of the applicant;

(*3*) The remaining 10 percent of the applicant's (or licensee's) total equity may be owned, either unconditionally or in the form of stock options, by any of the following entities, which may not comply with § 24.720(g)(1):

(*i*) *Institutional Investors;*

(*ii*) Noncontrolling *existing investors* in any *preexisting entity* that is a member of the *control group;*

(*iii*) Individuals that are members of the applicant's (or licensee's) management; or

(*iv*) Qualifying investors, as specified in § 24.720(g)(3).

(*4*) Following termination of the three-year period specified in paragraph (b)(1)(v)(A) of this section, *qualifying investors* must continue to own at least 10 percent of the applicant's (or licensee's) total equity unconditionally or in the form of stock options subject to the restrictions in paragraph (b)(1)(v)(A)(*1*) of this section. The restrictions specified in paragraphs (b)(1)(v)(A)(*3*)(*i*) through (b)(1)(v)(A)(*3*)(*iv*) of this section no longer apply to the remaining equity after termination of such three-year period.

(B) At the election of an applicant (or licensee) whose *control group's* sole member is a preexisting entity, the 25 percent minimum equity requirements set forth in paragraph (b)(1)(v)(A) of this section shall apply, except that only 10 percent of the applicant's (or licensee's) total equity must be held in *qualifying investors,* and that the remaining 15 percent of the applicant's (or licensee's) total equity may be held by *qualifying investors,* or noncontrolling *existing investors* in such *control group* member or individuals that are members of the applicant's (or licensee's) management. These restrictions on the identity of the holder(s) of the remaining 15 percent of the licensee's total equity no longer apply after termination of the three-year period specified in paragraph (b)(1)(v)(A) of this section.

(vi) *Control group minimum 50.1 percent equity requirement.* In order to be eligible to exclude *gross revenues* and *total assets* of persons or entities identified in paragraph (b)(1)(iv) of this section, an applicant (or licensee) must comply with the following requirements:

(A) Except for an applicant (or licenses) whose sole control group member is a *preexisting entity,* as provided in paragraph (b)(1)(vi)(B) of this section, at the time the applicant's short-form application (Form 175) is filed and until at least three years following the date

of initial license grant, the applicant's (or licensee's) *control group* must own at least 50.1 percent of the applicant's (or licensee's) total equity as follows:

(*1*) At least 30 percent of the applicant's (or licensee's) total equity must be held by *qualifying investors*, either unconditionally or in the form of options, exercisable at the option of the holder, at any time and at any exercise price equal to or less than the market value at the time the applicant files its short-form application (Form 175);

(*2*) Such *qualifying investors* must hold 50.1 percent of the voting stock and all general partnership interests within the control group and must have *de facto* control of the control group and of the applicant;

(*3*) The remaining 20.1 percent of the applicant's (or licensee's) total equity may be owned by qualifying investors, either unconditionally or in the form of stock options not subject to the restrictions of paragraph (b)(1)(vi)(A)(*1*) of this section, or by any of the following entities which may not comply with §24.720(g)(1):

(*i*) *Institutional investors*, either unconditionally or in the form of stock options;

(*ii*) Noncontrolling *existing investors* in any *preexisting entity* that is a member of the *control group*, either unconditionally or in the form of stock options;

(*iii*) Individuals that are members of the applicant's (or licensee's) management, either unconditionally or in the form of stock options; or

(*iv*) Qualifying investors, as specified in §24.720(g)(3).

(*4*) Following termination of the three-year period specified in paragraph (b)(1)(vi)(A) of this section, *qualifying investors* must continue to own at least 20 percent of the applicant's (or licensee's) total equity unconditionally or in the form of stock options subject to the restrictions in paragraph (b)(1)(vi)(A)(*1*) of this section. The restrictions specified in paragraph (b)(1)(vi)(A)(*3*)(*i*) through (b)(1)(vi)(A)(*3*)(*iv*) of this section no longer apply to the remaining equity after termination of such three-year period.

(B) At the election of an applicant (or licensee) whose *control group's* sole member is a *preexisting entity*, the 50.1 percent minimum equity requirements set forth in paragraph (b)(1)(vi)(A) of this section shall apply, except that only 20 percent of the applicant's (or licensee's) total equity must be held by *qualifying investors*, and that the remaining 30.1 percent of the applicant's (or licensee's) total equity may be held by *qualifying investors*, or noncontrolling existing investors in such *control group* member or individuals that are members of the applicant's (or licensee's) management. These restrictions on the identity of the holder(s) of the remaining 30.1 percent of the licensee's total equity no longer apply after termination of the three-year period specified in paragraph (b)(1)(vi)(A) of this section.

(vii) *Calculation of certain interests.* Except as provided in paragraphs (b)(1)(v) and (b)(1)(vi) of this section, ownership interests shall be calculated on a fully diluted basis; all agreements such as warrants, stock options and convertible debentures will generally be treated as if the rights thereunder already have been fully exercised, except that such agreements may not be used to appear to terminate or divest ownership interests before they actually do so, in order to comply with the *nonattributable equity* requirements in paragraphs (b)(1)(iii)(A) and (b)(1)(iv)(A) of this section.

(viii) *Aggregation of affiliate interests.* Persons or entities that hold interest in an applicant (or licensee) that are affiliates of each other or have an identify of interests identified in §1.2110(c)(5)(iii) will be treated as though they were one person or entity and their ownership interests aggregated for purposes of determining an applicant's (or licensee's) compliance with the nonattributable equity requirements in paragraphs (b)(1)(iii)(A) and (b)(1)(iv)(A) of this section.

Example 1 for paragraph (b)(1)(viii). ABC Corp. is owned by individuals, A, B, and C, each having an equal one-third voting interest in ABC Corp. A and B together, with two-thirds of the stock have the power to control ABC Corp. and have an identity of interest. If A & B invest in DE Corp., a broadband PCS applicant for block C, A and B's separate interests in DE Corp. must be aggregated because A and B are to be treated as one person.

Example 2 for paragraph (b)(1)(viii). ABC Corp. has subsidiary BC Corp., of which it holds a controlling 51 percent of the stock. If ABC Corp. and BC Corp., both invest in DE Corp., their separate interests in DE Corp. must be aggregated because ABC Corp. and BC Corp. are affiliates of each other.

(2) *The following provisions apply to licenses acquired pursuant to § 24.839(a)(2) or (a)(3) on or after October 30, 2000.* In addition to the eligibility requirements set forth at 24.709(a) and (b), applicants and/or licensees seeking to acquire C and/or F block licenses pursuant to 24.839(a)(2) or (a)(3) will be subject to the controlling interest standard in 1.2110(c)(2) of this chapter for purposes of determining unjust enrichment payment obligations. See §1.2111 of this chapter.

(c) *Short-form and long-form applications: Certifications and disclosure*—(1) *Short-form application.* In addition to certifications and disclosures required by part 1, subpart Q of this chapter, each applicant to participate in closed bidding for frequency block C or frequency block F shall certify on its short-form application (Form 175) that it is eligible to bid on and obtain such license(s), and (if applicable) that it is eligible for designated entity status pursuant to this section and §24.720, and shall append the following information as an exhibit to its Form 175:

(i) *For all applicants:* The applicant's gross revenues and total assets, computed in accordance with paragraphs (a) of this section and §1.2110(b)(1) through (b)(2) of this chapter.

(ii) For all applicants that participated in Auction Nos. 5, 10, 11, and/or 22:

(A) The identity of each member of the applicant's *control group*, regardless of the size of each member's total interest in the applicant, and the percentage and type of interest held;

(B) The status of each *control group* member that is an *institutional investor*, an *existing investor*, and/or a member of the applicant's management;

(C) The identity of each affiliate of the applicant and each affiliate of individuals or entities identified pursuant to paragraphs (C)(1)(ii)(A) and (c)(1)(ii)(B) of this section;

(D) A certification that the applicant's sole *control group* member is a *preexisting entity*, if the applicant makes the election in either paragraph (b)(1)(v)(B) or (b)(1)(vi)(B)of this section; and

(E) For an applicant that is a *publicly traded corporation with widely disbursed voting power:*

(*1*) A certified statement that such applicant complies with the requirements of the definition of publicly traded corporation with widely disbursed voting power set forth in §24.720(f);

(*2*) The identity of each *affiliate* of the applicant.

(iii) For each applicant claiming status as a *small business consortium*, the information specified in paragraph (c)(1)(ii) of this section, for each member of such consortium.

(2) *Long-form application.* In addition to the requirements in subpart I of this part and other applicable rules (e.g., §§20.6(e) and 20.9(b) of this chapter), each applicant submitting a long-form application for a license(s) for frequency block C or F shall in an exhibit to its long-form application:

(i) Disclose separately and in the aggregate the *gross revenues* and *total assets*, computed in accordance with paragraphs (a) and (b) of this section, for each of the following: The applicant; the applicant's *affiliates*, the applicant's *control group* members; the applicant's attributable investors; and *affiliates* of its attributable investors;

(ii) List and summarize all agreements or other instruments (with appropriate references to specific provisions in the text of such agreements and instruments) that support the applicant's eligibility for a license(s) for frequency block C or frequency block F and its eligibility under §§24.711, 24.712, 24.714 and 24.720, including the establishment of *de facto* and *de jure* control; such agreements and instruments include articles of incorporation and bylaws, shareholder agreements, voting or other trust agreements, partnership agreements, management agreements, joint marketing agreements, franchise agreements, and any other relevant agreements (including letters of intent), oral or written; and

(iii) List and summarize any investor protection agreements and identify specifically any such provisions in those agreements identified pursuant

to paragraph (c)(2)(ii) of this section, including rights of first refusal, supermajority clauses, options, veto rights, and rights to hire and fire employees and to appoint members to boards of directors or management committees.

(3) *Records maintenance.* All applicants, including those that are winning bidders, shall maintain at their principal place of business an updated file of ownership, revenue and asset information, including those documents referenced in paragraphs (c)(2)(ii) and (c)(2)(iii) of this section and any other documents necessary to establish eligibility under this section and any other documents necessary to establish eligibility under this section or under the definition of small business. Licensees (and their successors in interest) shall maintain such files for the term of the license. Applicants that do not obtain the license(s) for which they applied shall maintain such files until the grant of such license(s) is final, or one year from the date of the filing of their short-form application (Form 175), whichever is earlier.

(d) *Definitions.* The terms control group, existing investor, institutional investor, nonattributable equity, preexisting entity, publicly traded corporation with widely dispersed voting power, qualifying investor, and small business used in this section are defined in § 24.720.

[67 FR 45368, July 9, 2002, as amended at 68 FR 42998, July 21, 2003]

§ 24.710 [Reserved]

§ 24.711 Installment payments for licenses for frequency Block C.

Installment payments. Each eligible licensee of frequency Block C may pay the remaining 90 percent of the net auction price for the license in installment payments pursuant to § 1.2110(f) of this chapter and under the following terms:

(a) For an eligible licensee with gross revenues exceeding $75 million (calculated in accordance with § 1.2110(n) of this chapter and § 24.709(b)) in each of the two preceding years (calculated in accordance with § 1.2110(n) of this chapter), interest shall be imposed based on the rate for ten-year U.S. Treasury obligations applicable on the date the license is granted, plus 3.5 percent; payments shall include both principal and interest amortized over the term of the license.

(b) For an eligible licensee with gross revenues not exceeding $75 million (calculated in accordance with § 1.2110(b) of this chapter and § 24.709(b)) in each of the two preceding years, interest shall be imposed based on the rate for ten-year U.S. Treasury obligations applicable on the date the license is granted, plus 2.5 percent; payments shall include interest only for the first year and payments of interest and principal amortized over the remaining nine years of the license term.

(c) For an eligible licensee that qualifies as a small business or as a consortium of small businesses, interest shall be imposed based on the rate for ten-year U.S. Treasury obligations applicable on the date the license is granted; payments shall include interest only for the first six years and payments of interest and principal amortized over the remaining four years of the license term.

[67 FR 45371, July 9, 2002, as amended at 68 FR 42999, July 21, 2003]

§ 24.712 Bidding credits for licenses won for frequency Block C.

(a) Except with respect to licenses won in closed bidding in auctions that begin after March 23, 1999, a winning bidder that qualifies as a small business, as defined in § 24.720(b)(1), or a consortium of small businesses may use a bidding credit of fifteen percent, as specified in § 1.2110(f)(2)(iii) of this chapter, to lower the cost of its winning bid.

(b) Except with respect to licenses won in closed bidding in auctions that begin after March 23, 1999, a winning bidder that qualifies as a very small business, as defined in § 24.720(b)(2), or a consortium of very small businesses may use a bidding credit of twenty-five percent as specified in § 1.2110(f)(2)(ii) of this chapter, to lower the cost of its winning bid.

(c) *Unjust enrichment.* The unjust enrichment provisions of § 1.2111(d) and (e)(2) of this chapter shall not apply with respect to licenses acquired in either the auction for frequency block C that began on December 18, 1995, or the

reauction of block C spectrum that began on July 3, 1996.

[67 FR 45371, July 9, 2002, as amended at 68 FR 42999, July 21, 2003]

§ 24.713 [Reserved]

§ 24.714 Partitioned licenses and disaggregated spectrum.

(a) *Eligibility.* (1) Parties seeking approval for partitioning and disaggregation shall request an authorization for partial assignment of a license pursuant to § 24.839.

(2) Broadband PCS licensees in spectrum blocks A, B, D, and E and broadband PCS C and F block licenses not subject to the eligibility requirements of § 24.709 may apply to partition their licensed geographic service area or disaggregate their licensed spectrum at any time following the grant of their licenses.

(3) Broadband PCS licensees that acquired C or F block licenses in closed bidding subject to the eligibility requirements of § 24.709 may partition their licensed geographic service area or disaggregate their licensed spectrum at any time to an entity that meets the eligibility criteria set forth in § 24.709 at the time the request for partial assignment of license is filed or to an entity that holds license(s) for frequency blocks C and F that met the eligibility criteria set forth in § 24.709 at the time of receipt of such license(s). Partial assignment applications seeking partitioning or disaggregation of broadband PCS licenses in spectrum blocks C and F must include an attachment demonstrating compliance with this section.

(b) *Technical standards*—(1) *Partitioning.* In the case of partitioning, applicants and licensees must file FCC Form 603 pursuant to §1.948 of this chapter and list the partitioned service area on a schedule to the application. The geographic coordinates must be specified in degrees, minutes, and seconds to the nearest second of latitude and longitude and must be based upon the 1983 North American Datum (NAD83).

(2) *Disaggregation.* Spectrum may be disaggregated in any amount.

(3) *Combined partitioning and disaggregation.* The Commission will consider requests for partial assignment of licenses that propose combinations of partitioning and disaggregation.

(c) *Installment payments*—(1) *Apportioning the balance on installment payment plans.* When a winning bidder elects to pay for its license through an installment payment plan pursuant to §1.2110(g) of this chapter or § 24.716, and partitions its licensed area or disaggregates spectrum to another party, the outstanding balance owed by the licensee on its installment payment plan (including accrued and unpaid interest) shall be apportioned between the licensee and partitionee or disaggregatee. Both parties will be responsible for paying their proportionate share of the outstanding balance to the U.S. Treasury. In the case of partitioning, the balance shall be apportioned based upon the ratio of the population of the partitioned area to the population of the entire original license area calculated based upon the most recent census data. In the case of disaggregation, the balance shall be apportioned based upon the ratio of the amount of spectrum disaggregated to the amount of spectrum allocated to the licensed area.

(2) *Parties not qualified for installment payment plans.* (i) When a winning bidder elects to pay for its license through an installment payment plan, and partitions its license or disaggregates spectrum to another party that would not qualify for an installment payment plan or elects not to pay its share of the license through installment payments, the outstanding balance owed by the licensee (including accrued and unpaid interest shall be apportioned according to § 24.714(c)(1)).

(ii) The partitionee or disaggregatee shall, as a condition of the approval of the partial assignment application, pay its entire pro rata amount within 30 days of Public Notice conditionally granting the partial assignment application. Failure to meet this condition will result in a rescission of the grant of the partial assignment application.

(iii) The licensee shall be permitted to continue to pay its pro rata share of

the outstanding balance and shall receive new financing documents (promissory note, security agreement) with a revised payment obligation, based on the remaining amount of time on the original installment payment schedule. These financing documents will replace the licensee's existing financing documents, which shall be marked ''superseded'' and returned to the licensee upon receipt of the new financing documents. The original interest rate, established pursuant to §1.2110(g)(3)(i) of this chapter at the time of the grant of the initial license in the market, shall continue to be applied to the licensee's portion of the remaining government obligation. The Commission will require, as a further condition to approval of the partial assignment application, that the licensee execute and return to the U.S. Treasury the new financing documents within 30 days of the Public Notice conditionally granting the partial assignment application. Failure to meet this condition will result in the automatic cancellation of the grant of the partial assignment application.

(iv) A default on the licensee's payment obligation will only affect the licensee's portion of the market.

(3) *Parties qualified for installment payment plans.* (i) Where both parties to a partitioning or disaggregation agreement qualify for installment payments, the partitionee or disaggregatee will be permitted to make installment payments on its portion of the remaining government obligations, as calculated according to §24.714(c)(1).

(ii) Each party will be required, as a condition to approval of the partial assignment application, to execute separate financing documents (promissory note, security agreement) agreeing to pay their pro rata portion of the balance due (including accrued and unpaid interest) based upon the installment payment terms for which they qualify under the rules. The financing documents must be returned to the U.S. Treasury within thirty (30) days of the Public Notice conditionally granting the partial assignment application. Failure by either party to meet this condition will result in the automatic cancellation of the grant of the partial assignment application. The interest rate, established pursuant to §1.2110(g)(3)(i) of this chapter at the time of the grant of the initial license in the market, shall continue to be applied to both parties' portion of the balance due. Each party will receive a license for their portion of the partitioned market or disaggregated spectrum.

(iii) A default on an obligation will only affect that portion of the market area held by the defaulting party.

(iv) Partitionees and disaggregatees that qualify for installment payment plans may elect to pay some of their pro rata portion of the balance due in a lump sum payment to the U.S. Treasury and to pay the remaining portion of the balance due pursuant to an installment payment plan.

(d) *License term.* The license term for a partitioned license area and for disaggregated spectrum shall be the remainder of the original licensee's license term as provided for in §24.15.

(e) *Construction requirements*—(1) *Requirements for partitioning.* Parties seeking authority to partition must meet one of the following construction requirements:

(i) The partitionee may certify that it will satisfy the applicable construction requirements set forth in §24.203 for the partitioned license area; or

(ii) The original licensee may certify that it has or will meet its five-year construction requirement and will meet the ten-year construction requirement, as set forth in §24.203, for the entire license area. In that case, the partitionee must only satisfy the requirements for ''substantial service,'' as set forth in §24.16(a), for the partitioned license area by the end of the original ten-year license term of the licensee.

(iii) Applications requesting partial assignments of license for partitioning must include a certification by each party as to which of the above construction options they select.

(iv) Partitionees must submit supporting documents showing compliance with the respective construction requirements within the appropriate five- and ten-year construction benchmarks set forth in §24.203.

(v) Failure by any partitionee to meet its respective construction requirements will result in the automatic cancellation of the partitioned or disaggregated license without further Commission action.

(2) *Requirements for disaggregation.* Parties seeking authority to disaggregate must submit with their partial assignment application a certification signed by both parties stating which of the parties will be responsible for meeting the five- and ten-year construction requirements for the PCS market as set forth in §24.203. Parties may agree to share responsibility for meeting the construction requirements. Parties that accept responsibility for meeting the construction requirements and later fail to do so will be subject to license forfeiture without further Commission action.

[62 FR 661, Jan. 6, 1997, as amended at 63 FR 68953, Dec. 14, 1998; 65 FR 53638, Sept. 5, 2000; 67 FR 45371, July 9, 2002; 68 FR 42999, July 21, 2003]

§24.716 Installment payments for licenses for frequency Block F.

Installment Payments. Each eligible licensee of frequency Block F may pay the remaining 80 percent of the net auction price for the license in installment payments pursuant to §1.2110(g) of this chapter and under the following terms:

(a) For an eligible licensee with gross revenues exceeding $75 million (calculated in accordance with §1.2110(b) of this chapter and, when applicable, §24.709(b)) in each of the two preceding years (calculated in accordance with §1.2110(n) of this chapter), interest shall be imposed based on the rate for ten-year U.S. Treasury obligations applicable on the date the license is granted, plus 3.5 percent; payments shall include both principal and interest amortized over the term of the license;

(b) For an eligible licensee with gross revenues not exceeding $75 million (calculated in accordance with §1.2110(b) of this chapter and, when applicable, §24.709(b)) in each of the two preceding years (calculated in accordance with §1.2110(n) of this chapter), interest shall be imposed based on the rate for ten-year U.S. Treasury obligations applicable on the date the license is granted, plus 2.5 percent; payments shall include interest only for the first year and payments of interest and principal amortized over the remaining nine years of the license term; or

(c) For an eligible licensee that qualifies as a small business or as a consortium of small businesses, interest shall be imposed based on the rate for ten-year U.S. Treasury obligations applicable on the date the license is granted; payments shall include interest only for the first two years and payments of interest and principal amortized over the remaining eight years of the license term.

[67 FR 45371, July 9, 2002, as amended at 68 FR 42999, July 21, 2003]

§24.717 Bidding credits for licenses for frequency Block F.

(a) Except with respect to licenses won in closed bidding in auctions that begin after March 23, 1999, a winning bidder that qualifies as a small business, as defined in §24.720(b)(1), or a consortium of small businesses may use a bidding credit of fifteen percent, as specified in §1.2110(f)(2)(iii) of this chapter, to lower the cost of its winning bid.

(b) Except with respect to licenses won in closed bidding in auctions that begin after March 23, 1999, a winning bidder that qualifies as a very small business, as defined in §24.720(b)(2), or a consortium of very small businesses may use a bidding credit of twenty-five percent as specified in §1.2110(f)(2)(ii) of this chapter, to lower the cost of its winning bid.

[68 FR 42999, July 21, 2003]

§24.720 Definitions.

(a) *Scope.* The definitions in this section apply to §§24.709 through 24.717, unless otherwise specified in those sections.

(b) *Small and very small business.* (1) A *small business* is an entity that, together with its *affiliates* and persons or entities that hold interest in such entity and their *affiliates*, has average annual *gross revenues* that are not more than $40 million for the preceding three years.

(2) A *very small business* is an entity that, together with its *affiliates* and persons or entities that hold interests in such entity and their *affiliates*, has average annual *gross revenues* that are not more than $15 million for the preceding three years.

(c) *Institutional Investor.* An *institutional investor* is an insurance company, a bank holding stock in trust accounts through its trust department, or an investment company as defined in 15 U.S.C. 80a–3(a), including within such definition any entity that would otherwise meet the definition of investment company under 15 U.S.C. 80a–3(a) but is excluded by the exemptions set forth in 15 U.S.C. 80a–3(b) and (c), without regard to whether such entity is an issuer of securities; provided that, if such investment company is owned, in whole or in part, by other entities, such investment company, such other entities and the *affiliates* of such other entities, taken as a whole, must be primarily engaged in the business of investing, reinvesting or trading in securities or in distributing or providing investment management services for securities.

(d) *Nonattributable Equity*—(1) *Nonattributable equity* shall mean:

(i) For corporations, voting stock or non-voting stock that includes no more than twenty-five percent of the total voting equity, including the right to vote such stock through a voting trust or other arrangement;

(ii) For partnerships, joint ventures and other non-corporate entities, limited partnership interests and similar interests that do not afford the power to exercise control of the entity.

(2) For purposes of assessing compliance with the equity limits in § 24.709 (b)(1)(iii)(A) and (b)(1)(iv)(A), where such interests are not held directly in the applicant, the total equity held by a person or entity shall be determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain.

(e) *Control Group.* A *control group* is an entity, or a group of individuals or entities, that possesses *de jure* control and *de facto* control of an applicant or licensee, and as to which the applicant's or licensee's charters, bylaws, agreements and any other relevant documents (and amendments thereto) provide:

(1) That the entity and/or its members own unconditionally at least 50.1 percent of the total voting interests of a corporation;

(2) That the entity and/or its members receive at least 50.1 percent of the annual distribution or any dividends paid on the voting stock of a corporation;

(3) That, in the event of dissolution or liquidation of a corporation, the entity and/or its members are entitled to receive 100 percent of the value of each share of stock in its possession and a percentage of the retained earnings of the concern that is equivalent to the amount of equity held in the corporation; and

(4) That, for other types of businesses, the entity and/or its members have the right to receive dividends, profits and regular and liquidating distributions from the business in proportion to the amount of equity held in the business.

NOTE TO PARAGRAPH (e): Voting control does not always assure *de facto* control, such as for example, when the voting stock of the control group is widely dispersed (see e.g., § 1.2110(c)(5)(ii)(C) of this chapter).

(f) *Publicly Traded Corporation with Widely Dispersed Voting Power.* A publicly traded corporation with widely dispersed voting power is a business entity organized under the laws of the United States:

(1) Whose shares, debt, or other ownership interests are traded on an organized securities exchange within the United States;

(2) In which no person:

(i) Owns more than 15 percent of the equity; or

(ii) Possesses, directly or indirectly, through the ownership of voting securities, by contract or otherwise, the power to control the election of more than 15 percent of the members of the board of directors or other governing body of such publicly traded corporation; and

(3) Over which no person other than the management and members of the board of directors or other governing body of such publicly traded corporation, in their capacities as such, has *de facto* control.

(4) The term *person* shall be defined as in section 13(d) of the Securities and Exchange Act of 1934, as amended (15 U.S.C. 78(m)), and shall also include investors that are commonly controlled under the indicia of control set forth in the definition of affiliate in §1.2110(c)(5) of the Commission's rules.

(g) *Qualifying investor.* (1) A qualifying investor is a person who is (or holds an interest in) a member of the applicant's (or licensee's) control group and whose gross revenues and total assets, when aggregated with those of all other attributable investors and affiliates, do not exceed the gross revenues and total assets limits specified in §24.709(a), or, in the case of an applicant (or licensee) that is a small business, do not exceed the gross revenues limit specified in paragraph (b) of this section.

(2) For purposes of assessing compliance with the minimum equity requirements of §24.709(b)(1)(v) and (b)(1)(vi), where such equity interests are not held directly in the applicant, interests held by qualifying investors shall be determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain.

(3) For purposes of §24.709(b)(1)(v)(A)(3) and (b)(1)(vi)(A)(3), a qualifying investor is a person who is (or holds an interest in) a member of the applicant's (or licensee's) control group and whose gross revenues and total assets do not exceed the gross revenues and total assets limits specified in §24.709(a).

(h) *Preexisting entity; Existing investor.* A *preexisting entity* is an entity that was operating and earning revenues for at least two years prior to December 31, 1994. An *existing investor* is a person or entity that was an owner of record of a preexisting entity's equity as of November 10, 1994, and any person or entity acquiring *de minimis* equity holdings in a *preexisting entity* after that date.

NOTE TO PARAGRAPH (h): In applying the term *existing investor* to *de minimis* interests in preexisting entities obtained or increased after November 10, 1994, the Commission will scrutinize any significant restructuring of the *preexisting entity* that occurs after that date and will presume that any change of equity that is five percent or less of the *preexisting entity's* total equity is *de minimis*. The burden is on the applicant (or licensee) to demonstrate that changes that exceed five percent are not significant.

[67 FR 45372, July 9, 2002, as amended at 68 FR 42999, July 21, 2003; 68 FR 57829, Oct. 7, 2003]

Subpart I—Interim Application, Licensing, and Processing Rules for Broadband PCS

SOURCE: 59 FR 37610, July 22, 1994, unless otherwise noted.

§§24.801–24.803 [Reserved]

§24.804 Eligibility.

(a) General. Authorizations will be granted upon proper application if:

(1) The applicant is qualified under all applicable laws and Commission regulations, policies and decisions;

(2) There are frequencies available to provide satisfactory service; and

(3) The public interest, convenience or necessity would be served by a grant.

(b) Alien ownership. A broadband PCS authorization to provide Commercial Mobile Radio Service may not be granted to or held by:

(1) Any alien or the representative of any alien.

(2) Any corporation organized under the laws of any foreign government.

(3) Any corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or any corporation organized under the laws of another country.

(4) Any corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country, if the Commission finds that the public interest will be served by the refusal or revocation of such a license.

(c) A broadband PCS authorization to provide Private Mobile Radio Service

may not be granted to or held by a foreign government or a representative thereof.

[59 FR 37610, July 22, 1994, as amended at 61 FR 55581, Oct. 28, 1996]

§§ 24.805–24.814 [Reserved]

§ 24.815 Technical content of applications; maintenance of list of station locations.

(a) All applications required by this part shall contain all technical information required by the application forms or associated Public Notice(s). Applications other than initial applications for a broadband PCS license must also comply with all technical requirements of the rules governing the broadband PC (*see* subparts C and E of this part as appropriate). The following paragraphs describe a number of general technical requirements.

(b) Each application (except applications for initial licenses filed on Form 175) for a license for broadband PCS must comply with the provisions of §§ 24.229–24.238 of the Commission's Rules.

(c)–(i) [Reserved]

(j) The location of the transmitting antenna shall be considered to be the station location. Broadband PCS licensees must maintain a current list of all station locations, which must describe the transmitting antenna site by its geographical coordinates and also by conventional reference to street number, landmark, or the equivalent. All such coordinates shall be specified in terms of degrees, minutes, and seconds to the nearest second of latitude and longitude.

§§ 24.816–24.829 [Reserved]

§ 24.830 Opposition to applications.

(a) Petitions to deny (including petitions for other forms of relief) and responsive pleadings for Commission consideration must comply with § 1.2108 of this chapter and must:

(1) Identify the application or applications (including applicant's name, station location, Commission file numbers and radio service involved) with which it is concerned;

(2) Be filed in accordance with the pleading limitations, filing periods, and other applicable provisions of §§ 1.41 through 1.52 of this chapter except where otherwise provided in § 1.2108 of this chapter;

(3) Contain specific allegations of fact which, except for facts of which official notice may be taken, shall be supported by affidavit of a person or persons with personal knowledge thereof, and which shall be sufficient to demonstrate that the petitioner (or respondent) is a party in interest and that a grant of, or other Commission action regarding, the application would be *prima facie* inconsistent with the public interest;

(4) Be filed within thirty (30) days after the date of public notice announcing the acceptance for filing of any such application or major amendment thereto (unless the Commission otherwise extends the filing deadline); and

(5) Contain a certificate of service showing that it has been mailed to the applicant no later than the date of filing thereof with the Commission.

(b) A petition to deny a major amendment to a previously-filed application may only raise matters directly related to the amendment which could not have been raised in connection with the underlying previously-filed application. This subsection does not apply, however, to petitioners who gain standing because of the major amendment.

§ 24.831 Mutually exclusive applications.

(a) The Commission will consider applications for broadband PCS licenses to be mutually exclusive if they relate to the same geographical boundaries (MTA or BTA) and are timely filed for the same frequency block.

(b) Mutually exclusive applications filed on Form 175 for the initial provision of broadband PCS are subject to competitive bidding in accordance with the procedures in subpart H of this part and in part 1, subpart Q of this chapter.

(c) An application will be entitled to comparative consideration with one or more conflicting applications only if the Commission determines that such comparative consideration will serve the public interest.

(d)–(j) [Reserved]

§ 24.832 [Reserved]

§ 24.833 Post-auction divestitures.

Any parties sharing a common non-controlling ownership interest who aggregate more PCS spectrum among them than a single entity is entitled to hold (*See* §§ 20.6(e), 24.710, 24.204, 24.229(c) of this chapter) will be permitted to divest sufficient properties within 90 days of the license grant to come into compliance with the spectrum aggregation limits as follows:

(a) The broadband PCS applicant shall submit a signed statement with its long-form application stating that sufficient properties will be divested within 90 days of the license grant. If the licensee is otherwise qualified, the Commission will grant the applications subject to a condition that the licensee come into compliance with the PCS spectrum aggregation limits within 90 days of grant.

(b) Within 90 days of license grant, the licensee must certify that the applicant and all parties to the application have come into compliance with the PCS spectrum aggregation limits. If the licensee fails to submit the certification within 90 days, the Commission will immediately cancel all broadband PCS licenses won by the applicant, impose the default penalty and, based on the facts presented, take any other action it may deem appropriate. Divestiture may be to an interim trustee if a buyer has not been secured in the required time frame, as long as the applicant has no interest in or control of the trustee, and the trustee may dispose of the property as it sees fit. In no event may the trustee retain the property for longer than six months from grant of license.

[59 FR 53371, Oct. 24, 1994]

§§ 24.834–24.838 [Reserved]

§ 24.839 Transfer of control or assignment of license.

(a) Restrictions on Assignments and Transfers of Licenses for Frequency Blocks C and F won in closed bidding. No assignment or transfer of control of a license for frequency Block C or frequency Block F won in closed bidding pursuant to the eligibility requirements of § 24.709 will be granted unless:

(1) The application for assignment or transfer of control is filed after five years from the date of the initial license grant; or

(2) The proposed assignee or transferee meets the eligibility criteria set forth in § 24.709 of this part at the time the application for assignment or transfer of control is filed, or the proposed assignee or transferee holds other license(s) for frequency blocks C and F and, at the time of receipt of such license(s), met the eligibility criteria set forth in § 24.709 of this part; or

(3) The application is for partial assignment of a partitioned service area to a rural telephone company pursuant to § 24.714 of this part and the proposed assignee meets the eligibility criteria set forth in § 24.709 of this part; or

(4) The application is for an involuntary assignment or transfer of control to a bankruptcy trustee appointed under involuntary bankruptcy, an independent receiver appointed by a court of competent jurisdiction in a foreclosure action, or, in the event of death or disability, to a person or entity legally qualified to succeed the deceased or disabled person under the laws of the place having jurisdiction over the estate involved; provided that, the applicant requests a waiver pursuant to this paragraph; or

(5) The assignment or transfer of control is pro forma; or

(6) The application for assignment or transfer of control is filed on or after the date the licensee has notified the Commission pursuant to § 24.203(c) that its five-year construction requirement has been satisfied.

(b) If the assignment or transfer of control of a license is approved, the assignee or transferee is subject to the original construction requirement of § 24.203 of this part.

[63 FR 68953, Dec. 14, 1998; as amended at 65 FR 53638, Sept. 5, 2000]

§§ 24.840–24.844 [Reserved]

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Subpart I—Equal Employment Opportunities

25.601 Equal employment opportunities.

Subpart J—Public Interest Obligations

25.701 Public interest obligations.

AUTHORITY: Interprets or applies sections 4, 301, 302, 303, 307, 309, 319, 332, 705, and 721 of the Communications Act, as amended, 47 U.S.C. 154, 301, 302, 303, 307, 309, 319, 332, 605, and 721, unless otherwise noted.

Subpart A—General

§ 25.101 Basis and scope.

(a) The rules and regulations in this part are issued pursuant to the authority contained in section 201(c)(11) of the Communications Satellite Act of 1962, as amended, section 501(c)(6) of the International Maritime Satellite Telecommunications Act, and titles I through III of the Communications Act of 1934, as amended.

(b) The rules and regulations in this part supplement, and are in addition to the rules and regulations contained in or to be added to, other parts of this chapter currently in force, or which may subsequently be promulgated, and which are applicable to matters relating to communications by satellites.

[28 FR 13037, Dec. 5, 1963, as amended at 56 FR 24015, May 28, 1991]

§ 25.102 Station authorization required.

(a) No person shall use or operate apparatus for the transmission of energy or communications or signals by space or earth stations except under, and in accordance with, an appropriate authorization granted by the Federal Communications Commission.

(b) Protection from impermissible levels of interference to the reception of signals by earth stations in the Fixed-Satellite Service from terrestrial stations in a co-equally shared band is provided through the authorizations granted under this part.

[56 FR 24016, May 28, 1991]

§ 25.103 Definitions.

Terms with definitions including the ''(RR)'' designation are defined in the same way in § 2.1 of this chapter and in the Radio Regulations of the International Telecommunication Union.

1.5/1.6 GHz Mobile-Satellite Service. Mobile-Satellite Service provided in any portion of the 1525–1559 MHz space-to-Earth band and the 1626.5–1660.5 MHz Earth-to-space band, which are referred to in this rule part as the ''1.5/1.6 GHz MSS bands.''

1.6/2.4 GHz Mobile-Satellite Service. A Mobile-Satellite Service that operates in the 1610–1626.5 MHz and 2483.5–2500 MHz bands, or in any portion thereof.

2 GHz Mobile-Satellite Service. A Mobile-Satellite Service that operates in the 2000–2020 MHz and 2180–2200 MHz bands, or in any portion thereof.

12/14 GHz bands. The 11.7–12.2 GHz Fixed-Satellite Service space-to-Earth

band and the 14.0–14.5 GHz Fixed-Satellite Service Earth-to-space band.

17/24 GHz Broadcasting-Satellite Service (17/24 GHz BSS). A radiocommunication service involving transmission from one or more feeder-link earth stations to other earth stations via geostationary satellites, in the 17.3–17.7 GHz (space-to-Earth) (domestic allocation), 17.3–17.8 GHz (space-to-Earth) (international allocation) and 24.75–25.25 GHz (Earth-to-space) bands. For purposes of the application processing provisions of this part, the 17/24 GHz BSS is a GSO-like service. Unless specifically stated otherwise, 17/24 GHz BSS systems are subject to the rules in this part applicable to FSS.

20/30 GHz bands. The 18.3–20.2 GHz Fixed-Satellite Service space-to-Earth band and the 28.35–30.0 GHz Fixed-Satellite Service Earth-to-space band.

Ancillary Terrestrial Component (ATC). A terrestrial communications network used in conjunction with a qualifying satellite network system authorized pursuant to these rules and the conditions established in the Orders issued in IB Docket No. 01–185, *Flexibility for Delivery of Communications by Mobile-Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Band.*

Ancillary Terrestrial Component (ATC) base station. A terrestrial fixed facility used to transmit communications to or receive communications from one or more ancillary terrestrial component mobile terminals.

Ancillary Terrestrial Component (ATC) mobile terminal. A terrestrial mobile facility used to transmit communications to or receive communications from an ancillary terrestrial component base station or a space station.

Blanket license. A license for multiple fixed or mobile earth stations or SDARS terrestrial repeaters that may be operated anywhere within a geographic area specified in the license, or for multiple non-geostationary-orbit space stations.

C band. As used in this part, the terms ''C band'' and ''conventional C band'' refer to the 3700–4200 MHz (space-to-Earth) and 5925–6425 MHz (Earth-to-space) bands. These paired bands are allocated to the Fixed-Satellite Service and are also referred to as the 4/6 GHz bands.

Coordination distance. When determining the need for coordination, the distance on a given azimuth from an earth station sharing the same frequency band with terrestrial stations, or from a transmitting earth station sharing the same bidirectionally allocated frequency band with receiving earth stations, beyond which the level of permissible interference will not be exceeded and coordination is therefore not required. (RR)

Direct Broadcast Satellite (DBS) Service. A radiocommunication service in which signals transmitted or retransmitted by Broadcasting-Satellite Service space stations in the 12.2–12.7 GHz band are intended for direct reception by subscribers or the general public. For the purposes of this definition, the term direct reception includes individual reception and community reception.

Earth station. A station located either on the Earth's surface or within the major portion of the Earth's atmosphere intended for communication:

(1) With one or more space stations; or

(2) With one or more stations of the same kind by means of one or more reflecting satellites or other objects in space. (RR)

Earth Station on Vessel (ESV). An earth station onboard a craft designed for traveling on water, receiving from and transmitting to geostationary-orbit Fixed-Satellite Service space stations.

Earth Stations Aboard Aircraft (ESAA). Earth stations operating aboard aircraft that receive from and transmit to geostationary-orbit Fixed-Satellite Service space stations pursuant to the requirements in § 25.227.

Emergency Call Center. A facility that subscribers of satellite commercial mobile radio services call when in need of emergency assistance by dialing ''911'' on their mobile earth station terminals.

Equivalent diameter. When circular aperture reflector antennas are employed, the size of the antenna is generally expressed as the diameter of the

antenna's main reflector. When non-reflector or non-circular-aperture antennas are employed, the equivalent diameter is the diameter of a hypothetical circular-aperture antenna with the same aperture area as the actual antenna. For example, an elliptical aperture antenna with major axis a and minor axis b will have an equivalent diameter of $[a \times b]^{1/2}$. A rectangular aperture antenna with length l and width w will have an equivalent diameter of $[4(l \times w)/\pi]^{1/2}$.

Equivalent Power Flux Density (EPFD). The sum of the power flux densities produced at a geostationary-orbit receive earth or space station on the Earth's surface or in the geostationary orbit, as appropriate, by all the transmit stations within a non-geostationary-orbit Fixed-Satellite Service system, taking into account the off-axis discrimination of a reference receiving antenna assumed to be pointing in its nominal direction. The equivalent power flux density, in dB(W/m²) in the reference bandwidth, is calculated using the following formula:

$$10 \log_{10} \left[\sum_{n=1}^{N_a} 10^{\frac{P_i}{10}} \frac{G_t(\theta_i)}{4\pi d_i^2} \cdot \frac{G_r(\phi_i)}{G_{r,max}} \right]$$

Where:

N_a is the number of transmit stations in the non-geostationary orbit system that are visible from the GSO receive station considered on the Earth's surface or in the geostationary orbit, as appropriate;

i is the index of the transmit station considered in the non-geostationary orbit system;

P_i is the RF power at the input of the antenna of the transmit station, considered in the non-geostationary orbit system in dBW in the reference bandwidth;

θ_i is the off-axis angle between the boresight of the transmit station considered in the non-geostationary orbit system and the direction of the GSO receive station;

$G_t(\theta_i)$ is the transmit antenna gain (as a ratio) of the station considered in the non-geostationary orbit system in the direction of the GSO receive station;

d_i is the distance in meters between the transmit station considered in the non-geostationary orbit system and the GSO receive station;

φ_i is the off-axis angle between the boresight of the antenna of the GSO receive station and the direction of the ith transmit station considered in the non-geostationary orbit system;

$G_r(\theta_i)$ is the receive antenna gain (as a ratio) of the GSO receive station in the direction of the ith transmit station considered in the non-geostationary orbit system;

$G_{r,max}$ is the maximum gain (as a ratio) of the antenna of the GSO receive station.

Extended Ku band. As used in this part, the term ''extended Ku band'' refers to the 10.7–11.7 GHz (space-to-Earth), 12.75–13.25 GHz (Earth-to-space), and 13.75–14.0 GHz (Earth-to-space) Fixed-Satellite Service bands.

Feeder link. A radio link from a fixed earth station at a given location to a space station, or vice versa, conveying information for a space radiocommunication service other than the Fixed-Satellite Service. The given location may be at a specified fixed point or at any fixed point within specified areas. (RR)

Fixed earth station. An earth station intended to be used at a fixed position. The position may be a specified fixed point or any fixed point within a specified area.

Fixed-Satellite Service (FSS). A radiocommunication service between earth stations at given positions, when one or more satellites are used; the given position may be a specified fixed point or any fixed point within specified areas; in some cases this service includes satellite-to-satellite links, which may also be operated in the inter-satellite service; the Fixed-Satellite Service may also include feeder links of other space radiocommunication services. (RR)

Geostationary-orbit (GSO) satellite. A geosynchronous satellite whose circular and direct orbit lies in the plane of the Earth's equator and which thus

remains fixed relative to the Earth; by extension, a geosynchronous satellite which remains approximately fixed relative to the Earth.

Inter-Satellite Service. A radiocommunication service providing links between artificial earth satellites.

Ku band. In this rule part, the terms ''Ku band'' and ''conventional Ku band'' refer to the 11.7–12.2 GHz (space-to-Earth) and 14.0–14.5 GHz (Earth-to-space) bands. These paired bands are allocated to the Fixed-Satellite Service and are also referred to as the 12/14 GHz bands.

Land earth station. An earth station in the Fixed-Satellite Service or, in some cases, in the Mobile-Satellite Service, located at a specified fixed point or within a specified area on land to provide a feeder link for the Mobile-Satellite Service. (RR)

Land Mobile Earth Station. A mobile earth station in the land mobile-satellite service capable of surface movement within the geographical limits of a country or continent. (RR)

Mobile Earth Station. An earth station in the Mobile-Satellite Service intended to be used while in motion or during halts at unspecified points. (RR)

Mobile-Satellite Service (MSS). (1) A radiocommunication service:

(i) Between mobile earth stations and one or more space stations, or between space stations used by this service; or

(ii) Between mobile earth stations, by means of one or more space stations.

(2) This service may also include feeder links necessary for its operation. (RR)

NGSO. Non-geostationary orbit.

NGSO FSS gateway earth station. An earth station complex consisting of multiple interconnecting earth station antennas supporting the communication routing and switching functions of a non-geostationary-orbit Fixed-Satellite Service system. A gateway earth station in the NGSO FSS:

(1) Does not originate or terminate radiocommunication traffic, but interconnects multiple non-collocated user earth stations operating in frequency bands other than designated gateway bands, through a satellite with other primary terrestrial networks, such as the public switched telephone network and/or Internet networks.

(2) Is not for the exclusive use of any customer.

(3) May also be used for telemetry, tracking, and command transmissions for the NGSO FSS system.

(4) May include multiple antennas, each required to meet the antenna performance standard in § 25.209(h), located within an area of one second latitude by one second longitude. Additional antennas located outside such area will be considered as a separate gateway earth station complex for purposes of coordination with terrestrial services.

Non-Voice, Non-Geostationary (NVNG) Mobile-Satellite Service. A Mobile-Satellite Service reserved for use by non-geostationary satellites in the provision of non-voice communications which may include satellite links between land earth stations at fixed locations.

Permitted Space Station List. A list of all U.S.-licensed geostationary-orbit space stations providing Fixed-Satellite Service in the conventional C band, the conventional Ku band, or the 18.3–18.8 GHz, 19.7–20.2 GHz, 28.35–28.6 GHz, and 29.25–30.0 GHz bands, as well as non-U.S.-licensed geostationary-orbit space stations approved for U.S. market access to provide Fixed-Satellite Service in the conventional C band, conventional Ku band, or 18.3–18.8 GHz, 19.7–20.2 GHz, 28.35–28.6 GHz, and 29.25–30.0 GHz bands.

Power flux density (PFD). The amount of power flow through a unit area within a unit bandwidth. The units of power flux density are those of power spectral density per unit area, namely watts per hertz per square meter. These units are generally expressed in decibel form as $dB(W/Hz/m^2)$, $dB(W/m^2)$ in a 4 kHz band, or $dB(W/m^2)$ in a 1 MHz band.

Power Spectral Density (PSD). The amount of an emission's transmitted carrier power applied at the antenna input falling within the stated bandwidth. The units of power spectral density are watts per hertz and are generally expressed in decibel form as dB(W/Hz) when measured in a 1 Hz bandwidth, dB(W/4kHz) when measured in a 4 kHz bandwidth, or dB(W/MHz) when measured in a 1 MHz bandwidth.

Protection areas. The geographic regions on the surface of the Earth where U.S. Department of Defense (DoD) meteorological satellite systems or National Oceanic and Atmospheric Administration (NOAA) meteorological satellite systems, or both such systems, are receiving signals from low earth orbiting satellites. Also, areas around 20/30 GHz NGSO MSS feederlink earth stations in the 1.6/2.4 GHz Mobile-Satellite Service determined in the manner specified in § 25.203(j).

Radiodetermination-Satellite Service. A radiocommunication service for the purpose of radiodetermination involving the use of one of more space stations. This service may also include feeder links necessary for its own operation. (RR)

Routine processing or licensing. Expedited processing of unopposed applications for Fixed-Satellite Service earth stations communicating via geostationary-orbit satellites that satisfy the criteria in § 25.134(a), § 25.134 (g), § 25.138(a), § 25.211(d), § 25.212(c), § 25.212(d), § 25.212(f), § 25.218, or § 25.223(b), include all required information, are consistent with all Commission rules, and do not raise any policy issues. Some, but not all, routine earth station applications are eligible for an autogrant procedure under § 25.115(a)(4).

Satellite Digital Audio Radio Service (SDARS). A radiocommunication service in which audio programming is digitally transmitted by one or more space stations directly to fixed, mobile, and/or portable stations, and which may involve complementary repeating terrestrial transmitters and telemetry, tracking and command facilities.

Satellite system. A space system using one or more artificial earth satellites. (RR)

Selected assignment. A spectrum assignment voluntarily identified by a 2 GHz MSS licensee at the time that the licensee's first 2 GHz Mobile-Satellite Service satellite reaches its intended orbit.

Shapeable antenna beam. A satellite transmit or receive antenna beam, the gain pattern of which can be modified at any time without physically repositioning a satellite antenna reflector.

Space radiocommunication. Any radiocommunication involving the use of one or more space stations or the use of one or more reflecting satellites or other objects in space.

Space station. A station located on an object which is beyond, is intended to go beyond, or has been beyond, the major portion of the Earth's atmosphere. (RR)

Space system. Any group of cooperating earth stations and/or space stations employing space radiocommunication for specific purposes. (RR)

Spacecraft. A man-made vehicle which is intended to go beyond the major portion of the Earth's atmosphere. (RR)

Terrestrial radiocommunication. Any radiocommunication other than space radiocommunication or radio astronomy. (RR)

Terrestrial station. A station effecting terrestrial radiocommunication.

Vehicle-Mounted Earth Station (VMES). An earth station, operating from a motorized vehicle that travels primarily on land, that receives from and transmits to geostationary orbit Fixed-Satellite Service space stations and operates within the United States pursuant to the requirements set out in § 25.226.

[79 FR 8311, Feb. 12, 2014, as amended at 79 FR 26868, May 12, 2014]

§ 25.104 Preemption of local zoning of earth stations.

(a) Any state or local zoning, land-use, building, or similar regulation that materially limits transmission or reception by satellite earth station antennas, or imposes more than minimal costs on users of such antennas, is preempted unless the promulgating authority can demonstrate that such regulation is reasonable, except that non-federal regulation of radio frequency emissions is not preempted by this section. For purposes of this paragraph (a), reasonable means that the local regulation:

(1) Has a clearly defined health, safety, or aesthetic objective that is stated in the text of the regulation itself; and

(2) Furthers the stated health, safety or aesthetic objective without unnecessarily burdening the federal interests in ensuring access to satellite services and in promoting fair and effective

competition among competing communications service providers.

(b)(1) Any state or local zoning, land-use, building, or similar regulation that affects the installation, maintenance, or use of a satellite earth station antenna that is two meters or less in diameter and is located or proposed to be located in any area where commercial or industrial uses are generally permitted by non-federal land-use regulation shall be presumed unreasonable and is therefore preempted subject to paragraph (b)(2) of this section. No civil, criminal, administrative, or other legal action of any kind shall be taken to enforce any regulation covered by this presumption unless the promulgating authority has obtained a waiver from the Commission pursuant to paragraph (e) of this section, or a final declaration from the Commission or a court of competent jurisdiction that the presumption has been rebutted pursuant to paragraph (b)(2) of this section.

(2) Any presumption arising from paragraph (b)(1) of this section may be rebutted upon a showing that the regulation in question:

(i) Is necessary to accomplish a clearly defined health or safety objective that is stated in the text of the regulation itself;

(ii) Is no more burdensome to satellite users than is necessary to achieve the health or safety objective; and

(iii) Is specifically applicable on its face to antennas of the class described in paragraph (b)(1) of this section.

(c) Any person aggrieved by the application or potential application of a state or local zoning or other regulation in violation of paragraph (a) of this section may, after exhausting all nonfederal administrative remedies, file a petition with the Commission requesting a declaration that the state or local regulation in question is preempted by this section. Nonfederal administrative remedies, which do not include judicial appeals of administrative determinations, shall be deemed exhausted when:

(1) The petitioner's application for a permit or other authorization required by the state or local authority has been denied and any administrative appeal and variance procedure has been exhausted;

(2) The petitioner's application for a permit or other authorization required by the state or local authority has been on file for ninety days without final action;

(3) The petitioner has received a permit or other authorization required by the state or local authority that is conditioned upon the petitioner's expenditure of a sum of money, including costs required to screen, pole-mount, or otherwise specially install the antenna, greater than the aggregate purchase or total lease cost of the equipment as normally installed; or

(4) A state or local authority has notified the petitioner of impending civil or criminal action in a court of law and there are no more nonfederal administrative steps to be taken.

(d) Procedures regarding filing of petitions requesting declaratory rulings and other related pleadings will be set forth in subsequent Public Notices. All allegations of fact contained in petitions and related pleadings must be supported by affidavit of a person or persons with personal knowledge thereof.

(e) Any state or local authority that wishes to maintain and enforce zoning or other regulations inconsistent with this section may apply to the Commission for a full or partial waiver of this section. Such waivers may be granted by the Commission in its sole discretion, upon a showing by the applicant that local concerns of a highly specialized or unusual nature create a necessity for regulation inconsistent with this section. No application for waiver shall be considered unless it specifically sets forth the particular regulation for which waiver is sought. Waivers granted in accordance with this section shall not apply to later-enacted or amended regulations by the local authority unless the Commission expressly orders otherwise.

(f) A satellite earth station antenna that is designed to receive direct broadcast satellite service, including direct-to-home satellite services, that is one meter or less in diameter or is

located in Alaska is covered by the regulations in §1.4000 of this chapter.

[61 FR 10898, Mar. 18, 1996, as amended at 61 FR 46562, Sept. 4, 1996]

EFFECTIVE DATE NOTE: At 61 FR 46562, Sept. 4, 1996, §25.104 was amended by revising paragraph (b)(1) and adding paragraph (f). These paragraphs contain information collection and recordkeeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

§ 25.105 Citizenship.

The rules that establish the requirements and conditions for obtaining the Commission's prior approval of foreign ownership in common carrier licensees that would exceed the 20 percent limit in section 310(b)(3) of the Communications Act (47 U.S.C. 310(b)(3)) and/or the 25 percent benchmark in section 310(b)(4) of the Act (47 U.S.C. 310(b)(4)) are set forth in §§1.990 through 1.994 of this chapter.

[78 FR 41331, July 10, 2013]

§§ 25.106–25.108 [Reserved]

§ 25.109 Cross-reference.

(a) Space and earth stations in the Amateur Satellite Service are licensed under 47 CFR part 97.

(b) Ship earth stations in the Maritime Mobile-Satellite Service transmitting in the 1626.5–1646.5 MHz band are subject to licensing under 47 CFR part 80.

(c) Earth stations in the Aeronautical Mobile-Satellite (Route) Service are subject to licensing under 47 CFR part 87.

(d) Space and earth stations in the Experimental Radio Service may be subject to licensing under 47 CFR part 5.

[78 FR 8420, Feb. 6, 2013]

Subpart B—Applications and Licenses

SOURCE: 56 FR 24016, May 28, 1991, unless otherwise noted.

GENERAL APPLICATION FILING REQUIREMENTS

§ 25.110 Filing of applications, fees, and number of copies.

(a) Applications may be filed by going online at licensing.fcc.gov/myibfs and submitting the application through the International Bureau Filing System (IBFS).

(b) *Submitting your application.* All space station applications and all earth station applications must be filed electronically on Form 312. In this part, any party permitted or required to file information on Form 312 must file that information electronically through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter.

(c) All correspondence concerning any application must identify:

(1) The applicant's name,

(2) The call sign of the space station or earth station, and

(3) The file number of the application.

(d) *Copies.* Applications must be filed electronically though IBFS. The Commission will not accept any paper version of any application.

(e) *Signing.* Upon filing an application electronically, the applicant must print out the filed application, obtain the proper signatures, and keep the original in its files.

(f) The applicant must pay the appropriate fee for its application and submit it in accordance with part 1, subpart G of this chapter.

[69 FR 47793, Aug. 6, 2004, as amended at 78 FR 8420, Feb. 6, 2013]

§ 25.111 Additional information and ITU cost recovery.

(a) The Commission may request from any party at any time additional information concerning any application, or any other submission or pleading regarding an application, filed under this part.

(b) Applicants and licensees of radio stations governed by this part must provide the Commission with the information required for Advance Publication, Coordination, and Notification of frequency assignment filings, including due diligence information, pursuant to

the Radio Regulations of the International Telecommunication Union. No protection from interference caused by radio stations authorized by other Administrations is guaranteed unless ITU procedures are timely completed or, with respect to individual Administrations, coordination agreements are successfully completed. A license for which such procedures have not been completed may be subject to additional terms and conditions required for coordination of the frequency assignments with other Administrations.

(c) In the Direct Broadcast Satellite service, applicants and licensees shall also provide the Commission with all information it requires in order to modify the plans for the Broadcasting-Satellite Service (BSS) in Appendix 30 of the ITU Radio Regulations (RR) and associated feeder-link plans in Appendix 30A of the ITU RR, if the system has technical characteristics differing from those specified in the Appendix 30 BSS Plans, the Appendix 30A feederlink Plans, Annex 5 to Appendix 30, or Annex 3 to Appendix 30A. For such systems, no protection from interference caused by radio stations authorized by other Administrations is guaranteed until the agreement of all affected Administrations is obtained and the frequency assignment becomes a part of the appropriate Region 2 BSS and feeder-link Plans. Authorizations for which coordination is not completed and/or for which the necessary agreements under Appendices 30 and 30A have not been obtained may be subject to additional terms and conditions as required to effect coordination or obtain the agreement of other Administrations. Applicants and licensees shall also provide the Commission with the information required by Appendix 4 of the ITU RR for advance publication and notification or coordination of the frequencies to be used for tracking, telemetry and control functions of DBS systems.

(d) The Commission will submit the information required by paragraphs (b) or (c) of this section to the ITU only after the applicant or licensee has submitted a signed declaration that it unconditionally accepts all consequent ITU cost-recovery responsibility. The declaration must be electronically filed in the ''Other Filings'' tab of the application file in the IBFS database, and a paper copy must be mailed to the International Bureau, Satellite Division. The filing must reference the call sign and name of the international satellite system and include the name(s), address(es), email address(es), and telephone and fax number(s) of a contact person, or persons, responsible for cost recovery inquiries and ITU correspondence and filings. Supplements must be filed as necessary to apprise the Commission of changes in the contact information until the ITU cost-recovery responsibility is discharged. The applicant or licensee must remit payment of any resultant cost-recovery fee to the ITU by the due date specified in the ITU invoice, unless an appeal is pending with the ITU that was filed prior to the due date. A license granted in reliance on such a commitment will be conditioned upon discharge of any such cost-recovery obligation. Where an applicant or licensee has an overdue ITU cost-recovery fee and does not have an appeal pending with the ITU, the Commission will dismiss any application associated with that satellite network.

[56 FR 24016, May 28, 1991, as amended at 67 FR 51113, Aug. 7, 2002; 68 FR 63997, Nov. 12, 2003; 78 FR 8421, Feb. 6, 2013; 79 FR 8314, Feb. 12, 2014]

§ 25.112 Defective applications.

(a) An application will be unacceptable for filing and will be returned to the applicant with a brief statement identifying the omissions or discrepancies if:

(1) The application is defective with respect to completeness of answers to questions, informational showings, internal inconsistencies, execution, or other matters of a formal character; or

(2) The application does not substantially comply with the Commission's rules, regulations, specific requests for additional information, or other requirements.

(3) The application requests authority to operate a space station in a frequency band that is not allocated internationally for such operations under the Radio Regulations of the International Telecommunication Union.

(4) The application is identical to a pending application that was timely filed pursuant to § 25.157 or § 25.158.

(b) Applications for space station authority found defective under paragraph (a)(3) of this section will not be considered. Applications for authority found defective under paragraphs (a)(1) or (a)(2) of this section may be accepted for filing if:

(1) The application is accompanied by a request which sets forth the reasons in support of a waiver of (or an exception to), in whole or in part, any specific rule, regulation, or requirement with which the application is in conflict;

(2) The Commission, upon its own motion, waives (or allows an exception to), in whole or in part, any rule, regulation or requirement.

(c) If an applicant is requested by the Commission to file any additional information or any supplementary or explanatory information not specifically required in the prescribed application form or these rules, a failure to comply with the request within a specified time period will be deemed to render the application defective and will subject it to dismissal.

[56 FR 24016, May 28, 1991, as amended at 68 FR 51502, Aug. 27, 2003; 79 FR 8314, Feb. 12, 2014]

§ 25.113 Station construction, launch authority, and operation of spare satellites.

(a) Construction permits are not required for earth stations. Construction of such stations may commence prior to grant of an earth station license at the applicant's own risk, subject to the requirements of § 1.1312 and part 17 of this chapter concerning environmental processing and construction, marking, and lighting of antenna structures.

(b) Construction permits are not required for Ancillary Terrestrial Component (ATC) stations. A party with licenses issued under this part for launch and operation of 1.5/1.6 GHz or 1.6/2.4 GHz GHz Mobile-Satellite Service space stations and operation of associated ATC facilities may commence construction of ATC base stations at its own risk after commencing physical construction of the space stations, subject to the requirements of § 1.1312 and part 17 of this chapter. Such an MSS/ATC licensee may also conduct equipment tests for the purpose of making adjustments and measurements necessary to ensure compliance with the terms of its ATC license, applicable rules in this part, and technical design requirements. Prior to commencing such construction and pre-operational testing, an MSS/ATC licensee must notify the Commission of the commencement of physical satellite construction and the licensee's intention to construct and test ATC facilities. This notification must be filed electronically in the appropriate file in the International Bureau Filing System database. The notification must specify the frequencies the licensee proposes to use for pre-operational testing and the name, address, and telephone number of a representative for the reporting and mitigation of any interference resulting from such testing. MSS/ATC licensees engaging in pre-operational testing must comply with §§ 5.83, 5.85(c), 5.111, and 5.117 of this chapter regarding experimental operations. An MSS/ATC licensee may not offer ATC service to the public for compensation during pre-operational testing.

(c)–(e) [Reserved]

(f) Construction permits are not required for U.S.-licensed space stations, except for stations that the applicant proposes to operate to disseminate program content to be received by the public at large, rather than only by subscribers. Construction of a station for which a construction permit is not required may commence, at the applicant's own risk, prior to grant of a license. Before commencing pre-grant construction, however, an applicant must notify the Commission in writing that it plans to begin construction at its own risk.

(g) Except as set forth in paragraph (h) of this section, a launch authorization and station license (*i.e.*, operating authority) must be applied for and granted before a space station may be launched and operated in orbit. Request for launch authorization may be included in an application for space station license. However, an application for authority to launch and operate an on-ground spare satellite will be

considered pursuant to the following procedures:

(1) Applications for launch and operation of an on-ground spare NGSO-like satellite will be considered pursuant to the procedures set forth in §25.157, except as set forth in paragraph (g)(3) of this section.

(2) Applications for launch and operation of an on-ground spare GSO-like satellite will be considered pursuant to the procedures set forth in §25.158, except as set forth in paragraph (g)(3) of this section.

(3) Neither paragraph (g)(1) nor (g)(2) of this section will apply in cases where the space station to be launched is determined to be an emergency replacement for a previously authorized space station that has been lost as a result of a launch failure or a catastrophic in-orbit failure.

(h) Operators of NGSO satellite systems licensed by the Commission need not file separate applications to operate technically identical in-orbit spares launched pursuant to a blanket license granted under §25.114(a). However, the licensee must notify the Commission within 30 days of bringing the in-orbit spare into operation and certify that its activation has not increased the number of operating space stations above the number previously authorized and that the licensee has determined by measurement that the activated spare is operating within the terms of the license.

[56 FR 24016, May 28, 1991, as amended at 61 FR 4366, Feb. 6, 1996; 61 FR 9951, Mar. 12, 1996; 61 FR 55582, Oct. 28, 1996; 62 FR 5927, Feb. 10, 1997; 62 FR 64172, Dec. 4, 1997; 68 FR 51502, Aug. 27, 2003; 69 FR 47794, Aug. 6, 2004; 70 FR 32253, June 2, 2005; 77 FR 3954, Jan. 26, 2012; 78 FR 8421, Feb. 6, 2013; 79 FR 8314, Feb. 12, 2014; 79 FR 27503, May 14, 2014]

EFFECTIVE DATE NOTE: At 79 FR 27503, May 14, 2014, in §25.113, in the second sentence in paragraph (b), ''1.5/1.6 GHz, 1.6/2.4 GHz, or 2 GHz Mobile-Satellite Service'' was corrected to read ''1.5/1.6 GHz or 1.6/2.4 GHz GHz Mobile-Satellite Service''. This amendment contains information collection and recordkeeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

§25.114 Applications for space station authorizations.

(a) A comprehensive proposal must be submitted for each proposed GSO space station or NGSO satellite constellation on FCC Form 312, Main Form and Schedule S, together with attached exhibits as described in paragraph (d) of this section. An application for blanket authority for an NGSO satellite constellation comprised of space stations that are not all technically identical must provide the information required by paragraphs (c) and (d) of this section for each type of space station in the constellation.

(b) Each application for a new or modified space station authorization must constitute a concrete proposal for Commission evaluation. Each application must also contain the formal waiver required by section 304 of the Communications Act, 47 U.S.C. 304. The technical information for a proposed satellite system specified in paragraph (c) of this section must be filed on FCC Form 312, Main Form and Schedule S. The technical information for a proposed satellite system specified in paragraph (d) of this section need not be filed on any prescribed form but should be complete in all pertinent details. Applications for all new space station authorizations must be filed electronically through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter.

(c) The following information shall be filed on FCC Form 312, Main Form and Schedule S:

(1) Name, address, and telephone number of the applicant;

(2) Name, address, and telephone number of the person(s), including counsel, to whom inquiries or correspondence should be directed;

(3) Type of authorization requested (*e.g.*, launch authority, station license, modification of authorization);

(4)(i) For each space station transmitting and receiving antenna beam (including telemetry and tracking beams but not command beams), specify channel center frequencies and bandwidths and polarization plan. For command beams, specify each of the center frequencies within a 5 MHz

range or a range of 2 percent of the assigned bandwidth, whichever is smaller, and the polarization plan. If the space station can vary channel bandwidth in a particular frequency band with on-board processing, specify only the range of frequencies in that band over which the beam can operate and the polarization plan.

(ii) Specify maximum EIRP and maximum EIRP density for each space station transmitting antenna beam. If the satellite uses shapeable antenna beams, as defined in §25.103, specify instead maximum possible EIRP and maximum possible EIRP density within each shapeable beam's proposed coverage area. Provide this information for each frequency band in which the transmitting antenna would operate. For bands below 15 GHz, specify EIRP density in dBW/4 kHz; for bands at and above 15 GHz, specify EIRP density in dBW/MHz. If the EIRP density varies over time, specify the maximum possible EIRP density.

(iii)–(iv) [Reserved]

(v) For each space station receiving beam other than command beams, specify the gain-to-temperature ratio at beam peak. For receiving beams fed into transponders, also specify the minimum and maximum saturation flux density at beam peak. If the satellite uses shapeable beams, specify the minimum and maximum gain-to-temperature ratio within each shapeable beam's proposed coverage area, and for shapeable receiving beams fed into transponders, specify the minimum and maximum saturation power flux density within the 0 dB relative antenna gain isoline. Provide this information for each frequency band in which the receiving beam can operate. For command beams, specify the beam peak flux density at the command threshold;

(vi)(A) For space stations in geostationary orbit, specify predicted space station antenna gain contour(s) for each transmit and receive antenna beam, except for beams where the contour at 8 dB below peak falls entirely beyond the edge of the visible Earth. These contour(s) should be plotted on an area map at 2 dB intervals down to 10 dB below the peak gain and at 5 dB intervals between 10 dB and 20 dB below the peak gain. Applicants must present this information in a GIMS-readable format.

(B) For space stations in non-geostationary orbits, specify for each unique orbital plane the predicted antenna gain contour(s) for each transmit and receive antenna beam for one space station if all space stations are identical in the constellation. If individual space stations in the constellation have different antenna beam configurations, specify the predicted antenna gain contours for each transmit and receive beam for each space station type and orbit or orbital plane requested. The contours should be plotted on an area map with the beam depicted on the surface of the earth with the space stations' peak antenna gain pointed at nadir to a latitude and longitude within the proposed service area. The contour(s) should be plotted at 2 dB intervals down to 10 dB below the peak gain and at 5 dB intervals between 10 dB and 20 dB below the peak gain. For inter-satellite links, specify the peak antenna gain and 3 dB beamwidth.

(C) For space stations with shapeable antenna beams, specify the contours, as defined in paragraph (c)(4)(vi)(A) or (B) of this section, for the transmitting beam configuration that results in the highest EIRP density for the beams listed in paragraph (c)(4)(ii) of this section and for the receiving beam configuration with the smallest gain-to-temperature ratio and the highest required saturation power flux density for the beams listed in paragraph (c)(4)(v) of this section. If the shapeable beams are also steerable, include the contours that would result from moving the beam peak around the limit of the effective beam peak area and the 0 dB relative antenna gain isoline. The proposed maximum coverage area must be clearly specified.

(D) For space stations with steerable beams that are not shapeable, specify the applicable contours, as defined in paragraph(c)(4)(vi)(A) or (B) of this section, with a description of the area that the steerable beam(s) is expected to serve, or provide the contour information described in paragraph (c)(4)(vi)(C) of this section.

(vii) For geostationary satellites with large numbers of identical fixed spot beams, other than DBS satellites,

applicants may, as an alternative to submitting the information described in paragraph (c)(4)(vi) of this section with respect to these beams, provide the predicted antenna gain contours for one transmit and receive antenna beam, together with one of the following:

(A) An area map showing all of the spot beams depicted on the surface of the Earth;

(B) A table identifying the maximum antenna gain point(s) in latitude and longitude to the nearest 0.1 degree; or

(C) A map of the isolines formed by combining all of the spot beams into one or more composite beams. For non-geostationary satellites with large numbers of identical fixed beams on each satellite, applicants may, as an alternative to submitting the information described in paragraph (c)(4)(vi) of this section with respect to those beams, specify the predicted antenna gain contours for one transmit and receive beam pointed to nadir, together with an area map showing all of the spot beams depicted on the surface of the earth with the satellites' peak antenna gain pointed to a selected latitude and longitude within the service area.

(5) For space stations in geostationary orbit:

(i) Orbital location requested,

(ii) [Reserved]

(iii) East-west station-keeping range,

(iv) North-south station-keeping range, and

(v) Accuracy to which antenna axis attitude will be maintained;

(6) For space stations in non-geostationary orbits:

(i) The number of orbital planes and the number of space stations in each plane,

(ii) The inclination of the orbital plane(s),

(iii) The orbital period,

(iv) The apogee,

(v) The perigee,

(vi) The argument(s) of perigee,

(vii) Active service arc(s),

(viii) Right ascension of the ascending node(s), and

(ix) For each satellite in each orbital plane, the initial phase angle at the reference time;

(7) The frequency bands, types of service, and coverage areas;

(8) Calculated maximum power flux density levels within each coverage area and energy dispersal bandwidths, if any, needed for compliance with §25.208, for the angles of arrival specified in the applicable paragraph(s) of §25.208;

(9) [Reserved]

(10) Estimated operational lifetime;

(11) Whether the space station is to be operated on a common carrier basis;

(12) [Reserved]

(13) The polarization information necessary for determining compliance with §25.210(a)(1), (a)(3), and (i);

(d) The following information in narrative form shall be contained in each application:

(1) Overall description of system facilities, operations and services and explanation of how uplink frequency bands would be connected to downlink frequency bands;

(2)–(5) [Reserved]

(6) Public interest considerations in support of grant;

(7) Applicants for authorizations for space stations in the Fixed-Satellite Service must also include the information specified in §25.140(a). Applicants for authorizations for space stations in the 17/24 GHz Broadcasting-Satellite Service must also include the information specified in §25.140(b)(3), (b)(4), (b)(5), or (b)(6);

(8) Applications for authorizations in the Mobile-Satellite Service in the 1545–1559/1646.5–1660.5 MHz frequency bands shall also provide all information necessary to comply with the policies and procedures set forth in Rules and Policies Pertaining to the Use of Radio Frequencies in a Land Mobile Satellite Service, 2 FCC Rcd 485 (1987) (Available at address in §0.445 of this chapter.);

(9) Applications to license multiple space station systems in the non-voice, non-geostationary mobile-satellite service under blanket operating authority shall also provide all information specified in §25.142; and

(10) Applications for space station authorizations in the 1.6/2.4 GHz Mobile-Satellite Service must also provide all information required by §25.143(b);

(11) Applications for space stations in the Direct Broadcast Satellite Service must include a clear and detailed statement of whether the space station is to be operated on a broadcast or non-broadcast basis;

(12) Applications for authorizations in the non-geostationary orbit Fixed-Satellite Service in the 10.7–14.5 GHz bands must also provide all information specified in § 25.146.

(13) For satellite applications in the Direct Broadcast Satellite Service, if the proposed system's technical characteristics differ from those specified in the Appendix 30 BSS Plans, the Appendix 30A feeder link Plans, Annex 5 to Appendix 30 or Annex 3 to Appendix 30A of the ITU Radio Regulations, each applicant must provide:

(i) The information requested in Appendix 4 of the ITU Radio Regulations. Further, applicants must provide sufficient technical showing that the proposed system could operate satisfactorily if all assignments in the BSS and feeder link Plans were implemented.

(ii) Analyses of the proposed system with respect to the limits in Annex 1 to Appendices 30 and 30A of the ITU Radio Regulations.

(14) A description of the design and operational strategies that will be used to mitigate orbital debris, including the following information:

(i) A statement that the space station operator has assessed and limited the amount of debris released in a planned manner during normal operations, and has assessed and limited the probability of the space station becoming a source of debris by collisions with small debris or meteoroids that could cause loss of control and prevent post-mission disposal;

(ii) A statement that the space station operator has assessed and limited the probability of accidental explosions during and after completion of mission operations. This statement must include a demonstration that debris generation will not result from the conversion of energy sources on board the spacecraft into energy that fragments the spacecraft. Energy sources include chemical, pressure, and kinetic energy. This demonstration should address whether stored energy will be removed at the spacecraft's end of life, by depleting residual fuel and leaving all fuel line valves open, venting any pressurized system, leaving all batteries in a permanent discharge state, and removing any remaining source of stored energy, or through other equivalent procedures specifically disclosed in the application;

(iii) A statement that the space station operator has assessed and limited the probability of the space station becoming a source of debris by collisions with large debris or other operational space stations. Where a space station will be launched into a low-Earth orbit that is identical, or very similar, to an orbit used by other space stations, the statement must include an analysis of the potential risk of collision and a description of what measures the space station operator plans to take to avoid in-orbit collisions. If the space station operator is relying on coordination with another system, the statement must indicate what steps have been taken to contact, and ascertain the likelihood of successful coordination of physical operations with, the other system. The statement must disclose the accuracy—if any—with which orbital parameters of non-geostationary satellite orbit space stations will be maintained, including apogee, perigee, inclination, and the right ascension of the ascending node(s). In the event that a system is not able to maintain orbital tolerances, *i.e.*, it lacks a propulsion system for orbital maintenance, that fact should be included in the debris mitigation disclosure. Such systems must also indicate the anticipated evolution over time of the orbit of the proposed satellite or satellites. Where a space station requests the assignment of a geostationary-Earth orbit location, it must assess whether there are any known satellites located at, or reasonably expected to be located at, the requested orbital location, or assigned in the vicinity of that location, such that the station keeping volumes of the respective satellites might overlap. If so, the statement must include a statement as to the identities of those parties and the measures that will be taken to prevent collisions;

(iv) A statement detailing the post-mission disposal plans for the space station at end of life, including the quantity of fuel—if any—that will be reserved for post-mission disposal maneuvers. For geostationary-Earth orbit space stations, the statement must disclose the altitude selected for a post-mission disposal orbit and the calculations that are used in deriving the disposal altitude. The statement must also include a casualty risk assessment if planned post-mission disposal involves atmospheric re-entry of the space station. In general, an assessment should include an estimate as to whether portions of the spacecraft will survive re-entry and reach the surface of the Earth, as well as an estimate of the resulting probability of human casualty. Applicants for space stations to be used only for commercial remote sensing may, in lieu of submitting detailed post-mission disposal plans to the Commission, certify that they have submitted such plans to the National Oceanic and Atmospheric Administration for review.

(v) For non-U.S.-licensed space stations, the requirement to describe the design and operational strategies to minimize orbital debris risk can be satisfied by demonstrating that debris mitigation plans for the space station(s) for which U.S. market access is requested are subject to direct and effective regulatory oversight by the national licensing authority.

(15) Each applicant for a space station license in the 17/24 GHz broadcasting-satellite service shall include the following information as an attachment to its application:

(i) Except as set forth in paragraph (d)(15)(ii) of this section, an applicant proposing to operate in the 17.3–17.7 GHz frequency band, must provide a demonstration that the proposed space station will comply with the power flux density limits set forth in § 25.208(w) of this part.

(ii) In cases where the proposed space station will not comply with the power flux density limits set forth in § 25.208(w) of this part, the applicant will be required to provide a certification that all potentially affected parties acknowledge and do not object to the use of the applicant's higher power flux densities. The affected parties with whom the applicant must coordinate are those GSO 17/24 GHz BSS satellite networks located up to ±6° away for excesses of up to 3 dB above the power flux-density levels specified in § 25.208(w) of this part, and up to ±10° away greater for excesses greater than 3 dB above those levels.

(iii) An applicant proposing to provide international service in the 17.7–17.8 GHz band must demonstrate that it will meet the power flux density limits set forth in § 25.208(c) of this part.

(iv) The information required in § 25.264(a) and (b).

(16) In addition to the requirements of paragraph (d)(15) of this section, each applicant for a license to operate a 17/24 GHz BSS space station that will be used to provide video programming directly to consumers in the United States, that will not meet the requirements of § 25.225 of this part, must include as an attachment to its application a technical analysis demonstrating that providing video programming service to consumers in Alaska and Hawaii that is comparable to the video programming service provided to consumers in the 48 contiguous United States (CONUS) is not feasible as a technical matter or that, while technically feasible, such service would require so many compromises in satellite design and operation as to make it economically unreasonable.

(17) An applicant seeking to operate a space station in the 17/24 GHz broadcasting-satellite service pursuant to the provisions of § 25.262(b) of this part, at an offset location no greater than one degree offset from an orbital location specified in Appendix F of the Report and Order adopted May 2, 2007, IB Docket No. 06–123, FCC 07–76, must submit a written request to that effect as part of the narrative portion of its application.

(18) For space stations in the Direct Broadcast Satellite service or the 17/24 GHz broadcasting-satellite service, maximum orbital eccentricity.

[68 FR 63997, Nov. 12, 2003, as amended at 69 FR 29901, May 26, 2004; 69 FR 47794, Aug. 6, 2004; 69 FR 54587, Sept. 9, 2004; 72 FR 50027, Aug. 29, 2007; 72 FR 60278, Oct. 24, 2007; 76 FR 50431, Aug. 15, 2011; 78 FR 8421, Feb. 6, 2013; 79 FR 8314, Feb. 12, 2014]

§ 25.115 Application for earth station authorizations.

(a)(1) *Transmitting earth stations.* Commission authorization must be obtained for authority to operate a transmitting earth station. Applications shall be filed electronically on FCC Form 312, Main Form and Schedule B, and include the information specified in § 25.130, except as set forth in paragraph (a)(2) of this section.

(2) Applicants for licenses for transmitting earth stations in the Fixed-Satellite Service may file on FCC Form 312EZ if all of the following criteria are met:

(i) The application is for a single station that will transmit to an FSS GSO space station, or stations, in the 5925–6425 MHz band, or for single or multiple stations that will transmit to an FSS GSO space station, or stations, in the 14.0–14.5 GHz, 28.35–28.6 GHz, and/or 29.5–30.0 GHz band;

(ii) The earth station(s) will not be installed or operated on ships, aircraft, or other moving vehicles;

(iii) The equivalent diameter of the proposed antenna is 4.5 meters or greater if the station will transmit in the 5925–6425 MHz band or 1.2 meters or greater if the station will transmit in the 14.0–14.5 GHz band;

(iv) If the station(s) will transmit in the 5925–6425 MHz band or the 14.0–14.5 GHz band, the performance of the proposed antenna comports with the standards in § 25.209(a) and (b) and is verified in accordance with applicable provisions of § 25.132;

(v) If the station(s) will transmit in the 5925–6425 MHz band or the 14.0–14.5 GHz band, input power to the antenna will not exceed applicable limits specified in §§ 25.211 and 25.212; if the station(s) will transmit in the 28.35–28.6 GHz and/or 29.5–30.0 GHz band, off-axis EIRP density will not exceed the levels specified in § 25.138(a);

(vi) Operation of the proposed station has been successfully coordinated with terrestrial systems, if the station would transmit in the 5925–6425 MHz band;

(vii) The applicant has provided an environmental impact statement pursuant to § 1.1311 of this chapter, if required; and

(viii) The applicant does not propose to communicate via non-U.S.-licensed satellites not on the Permitted Space Station List.

(ix) If the proposed station(s) will transmit in the 28.35–28.6 GHz and/or 29.5–30 GHz bands, the applicant is proposing to communicate only via satellites for which coordination has been completed pursuant to Footnote US334 of the U.S. Table of Frequency Allocations with respect to Federal Government systems authorized on a primary basis, under an agreement previously approved by the Commission and the National Telecommunications and Information Administration, and the applicant certifies that it will operate consistently with the agreement.

(3) Unless the Commission orders otherwise, an application filed on FCC Form 312EZ in accordance with paragraph (a)(2) of this section will be deemed granted 35 days after the date of the public notice that the application has been accepted for filing, provided no objection is filed during the 30-day public notice period.

(4) Applications for earth station authorizations must be filed in accordance with the pleading limitations, periods and other applicable provisions of §§ 1.41 through 1.52 of this chapter, except that such earth station applications must be filed electronically through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter;

(b) Receive-only earth stations. Applications to license or register receive only earth stations shall be filed on FCC Form 312, Main Form and Schedule B, and conform to the provisions of § 25.131.

(c)(1) Large Networks of Small Antennas operating in the 11.7–12.2 GHz and 14.0–14.5 GHz frequency bands with U.S.-licensed or non-U.S.-licensed satellites for domestic or international services. Applications to license small antenna network systems operating in the 11.7–12.2 GHz and 14.0–14.5 GHz frequency band under blanket operating authority shall be filed on FCC Form 312 and Schedule B, for each large (5 meters or larger) hub station, and Schedule B for each representative

type of small antenna (less than 5 meters) operating within the network.

(c)(2) Large Networks of Small Antennas operating in the 4/6 GHz frequency bands with U.S.-licensed or non-U.S. licensed satellites for domestic services (CSATs). Applications to license small antenna network systems operating in the standard C-Band, 3700–4200 MHz and 5925–6425 MHz frequency band shall be filed electronically on FCC Form 312, Main Form and Schedule B.

(i) An initial lead application providing a detailed overview of the complete network shall be filed. Such lead applications shall fully identify the scope and nature of the service to be provided, as well as the complete technical details of each representative type of small antenna (less than 4.5 meters) that will operate within the network. Such lead applications for a single CSAT system must identify:

(A) No more than three discrete geostationary satellites to be accessed;

(B) The amount of frequency bandwidth sought, up to a maximum of 20 MHz of spectrum in each direction at each of the satellites (The same 20 MHz of uplink and 20 MHz of downlink spectrum at each satellite would be accessible by all CSAT earth stations in the system. The 20 MHz of uplink and 20 MHz of downlink spectrum need not be the same at each satellite location);

(C) The maximum number of earth station sites;

(ii) Following the issuance of a license for the lead application, the licensee shall notify the Commission of the complete technical parameters of each individual earth station site before that site is bought into operation under the lead authorization. Full frequency coordination of each individual site (e.g., for each satellite and the spectrum associated therewith) shall be completed prior to filing Commission notification. The coordination must be conducted in accordance with § 25.203. Such notification shall be done by electronic filing and shall be consistent with the technical parameters of Schedule B of FCC Form 312.

(iii) Following successful coordination of such an earth station, if the earth station operator does not file a lead application or a Schedule B within six months after it successfully completes coordination, it will be assumed that such frequency use is no longer desired, unless a second notification has been received within ten days prior to the end of the six month period. Such renewal notifications must be sent to all parties concerned. If the lead application or Schedule B, or renewal notification, is not timely received, the coordination will lapse and the licensee must re-coordinate the relevant earth stations if it still wishes to bring them into operation.

(iv) Operation of each individual site may commence immediately after the public notice is released that identifies the notification sent to the Commission and if the requirements of paragraph (c)(2)(vi) of this section are met. Continuance of operation of each station for the duration of the lead license term shall be dependent upon successful completion of the normal public notice process. If any objections are received to the new station prior to the end of the 30 day comment period of the Public Notice, the licensee shall immediately cease operation of those particular stations until the coordination dispute is resolved and the CSAT licensee informs the Commission of the resolution. If the requirements of paragraph (c)(2)(vi) of this section are not met, operation may not commence until the Commission issues the public notice acting on the CSAT terminal authorization.

(v) Each CSAT licensee shall annually provide the Commission an updated list of all operational earth stations in its system. The annual list shall also include a list of all earth stations deactivated during the year and identification of the satellites providing service to the network as of the date of the report.

(vi) *Conditional authorization.* (A) An applicant for a new CSAT radio station or modification of an existing CSAT station authorized under paragraph (c)(2)(i) of this section in the 3700–4200; or 5925–6425 MHz bands may operate the proposed station during the pendency of its application after the release of the public notice accepting the notification for filing that complies with paragraph (c)(2)(ii) of this section. The applicant, however, must first certify

that the following conditions are satisfied:

(*1*) The frequency coordination procedures of § 25.203 have been successfully completed;

(*2*) The antenna structure has been previously studied by the Federal Aviation Administration and determined to pose no hazard to aviation safety as required by subpart B of part 17 of this chapter; or the antenna or tower structure does not exceed 6.1 meters above ground level or above an existing man-made structure (other than an antenna structure), if the antenna or tower has not been previously studied by the Federal Aviation Administration and cleared by the FCC;

(*3*) The grant of the application(s) does not require a waiver of the Commission's rules (with the exception of a request for waiver pertaining to fees);

(*4*) The applicant has determined that the facility(ies) will not significantly affect the environment as defined in § 1.1307 of this chapter after complying with any applicable environmental notification procedures specified in § 17.4(c) of this chapter.

(*5*) The station site does not lie within 56.3 kilometers of any international border or within a radio ''Quiet Zone'' identified in § 1.924 of this chapter; and

(*6*) The filed application is consistent with the proposal that was coordinated pursuant to § 25.251.

(B) Conditional authority ceases immediately if the Schedule B is returned by the Commission because it is not accepted for filing.

(C) A conditional authorization pursuant to paragraphs (c)(2)(vi)(A) and (c)(2)(vi)(B) of this section is evidenced by retaining a copy of the Schedule B notification with the station records. Conditional authorization does not prejudice any action the Commission may take on the subject application(s) or the Schedule B notifications.

(D) Conditional authority is accepted with the express understanding that such authority may be modified or cancelled by the Commission at any time without hearing if, in the Commission's discretion, the need for such action arises. An applicant operating pursuant to this conditional authority assumes all risks associated with such operation, the termination or modification of the conditional authority, or the subsequent dismissal or denial of its application(s).

(E) The copy of the Schedule B notification form must be posted at each station operating pursuant to this section.

(vii) *Period of construction.* Construction of each earth station must be completed and the station must be brought into regular operation within twelve months from the date that action is taken to authorize that station to operate under the lead authorization, except as may be otherwise determined by the Commission for any particular application.

(d) Mobile-Satellite Service user transceivers need not be individually licensed. Service vendors may file blanket applications for such transceivers using FCC Form 312, Main Form and Schedule B, specifying the number of units to be covered by the blanket license. A blanket license application for 1.5/1.6 GHz MSS user transceivers must include an explanation of how the applicant will comply with the priority and preemptive access requirements in § 25.287.

(e) Earth stations operating in the 20/30 GHz Fixed-Satellite Service with U.S.-licensed or non-U.S. licensed satellites: Applications to license individual earth stations operating in the 20/30 GHz band shall be filed on FCC Form 312, Main Form and Schedule B, and shall also include the information described in § 25.138. Earth stations belonging to a network operating in the 18.3–18.8 GHz, 19.7–20.2 GHz, 28.35–28.6 GHz or 29.25–30.0 GHz bands may be licensed on a blanket basis. Applications for such blanket authorization may be filed using FCC Form 312, Main Form and Schedule B, and specifying the number of terminals to be covered by the blanket license. Each application for a blanket license under this section shall include the information described in § 25.138.

(f) User transceivers in the non-geostationary satellite orbit Fixed-Satellite Service in the 11.7–12.2 GHz, 12.2–12.7 GHz and 14.0–14.5 GHz bands need not be individually licensed. Service vendors may file blanket applications for transceiver units using FCC Form 312, Main Form and Schedule B, and shall specify the number of terminals

to be covered by the blanket license. Each application for a blanket license under this section shall include the information described in § 25.146. Any earth stations that are not user transceivers, and which transmit in the non-geostationary satellite orbit Fixed-Satellite Service in the 10.7–11.7 GHz, 12.75–13.15 GHz, 13.2125–13.25 GHz, and 13.75–14.0 GHz bands must be individually licensed, pursuant to paragraph (a) of this section.

(g) Applications for feeder link earth stations operating in the 24.75—25.25 GHz band (Earth-to-space) and providing service to geostationary satellites in the 17/24 GHz BSS must include, in addition to the particulars of operation identified on Form 312 and associated Schedule B, the information specified in either paragraph (g)(1) or (g)(2) below for each earth station antenna type:

(1) A series of EIRP density charts or tables, calculated for a production earth station antenna, based on measurements taken on a calibrated antenna range at 25 GHz, with the off-axis EIRP envelope set forth in paragraphs (g)(1)(i) through (g)(1)(iv) of this section superimposed, as follows:

(i) Showing off-axis co-polarized EIRP spectral density in the azimuth plane, for off-axis angles from minus 10° to plus 10° and from minus 180° to plus 180°;

(ii) Showing off-axis co-polarized EIRP spectral density in the elevation plane, at off-axis angles from 0°to plus 30°;

(iii) Showing off-axis cross-polarized EIRP spectral density in the azimuth plane, at off-axis angles from minus 10° to plus 10°; and

(iv) Showing off-axis cross-polarized EIRP spectral density in the elevation plane, at off-axis angles from minus 10° to plus 10°

(2) A certification on Schedule B that the antenna conforms to the gain pattern criteria of § 25.209(a) and (b), that when combined with input power density (computed from the maximum on-axis EIRP density per carrier less the antenna gain entered in Schedule B), demonstrates that the off-axis EIRP spectral density envelope set forth in § 25.223(b)(1) through (4) of this part will be met.

(h) Any earth station applicant filing an application pursuant to § 25.218 of this chapter must file three tables showing the off-axis EIRP level of the proposed earth station antenna of the plane of the geostationary orbit, the elevation plane, and towards the horizon. In each table, the EIRP level must be provided at increments of 0.1° for angles between 0° and 10° off-axis, and at increments of 5° for angles between 10° and 180° off-axis.

(1) For purposes of the off-axis EIRP table in the plane of the geostationary orbit, the off-axis angle is the angle in degrees from the line connecting the focal point of the antenna to the target satellite, within the plane determined by the focal point of the antenna and the line tangent to the arc of the geostationary satellite orbit at the position of the target satellite.

(2) For purposes of the off-axis EIRP table in the elevation plane, the off-axis angle is the angle in degrees from the line connecting the focal point of the antenna to the target satellite, within the plane perpendicular to the plane determined by the focal point of the antenna and the line tangent to the arc of the geostationary satellite orbit at the position of the target satellite.

(3) For purposes of the off-axis EIRP table towards the horizon, the off-axis angle is the angle in degrees from the line determined by the intersection of the horizontal plane and the elevation plane described in paragraph (h)(2) of this section, in the horizontal plane. The horizontal plane is the plane determined by the focal point of the antenna and the horizon.

(4) In addition, in an attachment to its application, the earth station applicant must certify that it will limit its pointing error to 0.5°, or demonstrate that it will comply with the applicable off-axis EIRP envelopes in § 25.218 of this part when the antenna is mispointed at its maximum pointing error.

(i) Any earth station applicant filing an application for a VSAT network made up of FSS earth stations and planning to use a contention protocol must include in its application a certification that it will comply with the requirements of § 25.134(g)(4).

(j) An application for a new fixed earth station or modification involving alteration of the overall height of one or more existing earth station antenna structures must include the FCC Antenna Structure Registration Number(s) for the antenna structure(s), if assigned. If no such number has been assigned, the application must state whether prior FAA notification is required by part 17 of this chapter and, if so, whether the applicant or owner of the structure has notified the FAA of the proposed construction or alteration and applied for an Antenna Structure Registration Number in accordance with part 17 of this chapter. Applicants who maintain that prior FAA notification is not required for construction or alteration of a structure with overall height more than 6.1 meters above ground level must explain in the application why such prior notification is not required.

(k)(1) Applicants for Fixed-Satellite Service earth stations that qualify for routine processing in the C, Ku, or 20/30 GHz band, including ESV applications filed pursuant to §25.222(a)(1) or (a)(3), VMES applications filed pursuant to §25.226(a)(1) or (a)(3), and ESAA applications filed pursuant to §25.227(a)(1) or (a)(3), may designate the Permitted Space Station List as a point of communication. Once such an application is granted, the earth station operator may communicate with any space station on the Permitted Space Station List, provided that the operation is consistent with the technical parameters and conditions established in the earth station license and any limitations placed on the space station authorization or noted in the Permitted Space Station List.

(2) Notwithstanding paragraph (k)(1) of this section, the operator of an earth station that qualifies for routine processing in the 20/30 GHz bands may not communicate with a space station on the Permitted Space Station List in the 18.3–18.8 GHz or 19.7–20.2 GHz band until the space station operator has completed coordination under Footnote US334 to §2.106 of this chapter.

[62 FR 5928, Feb. 10, 1997]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §25.115, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at *www.fdsys.gov*.

EFFECTIVE DATE NOTE: At 74 FR 9962, Mar. 9, 2009, §25.115 paragraphs (h) and (i) which contain information collection and recordkeeping requirements, became effective with approval by the Office of Management and Budget for a period of 3 years.

§25.116 Amendments to applications.

(a) Unless otherwise specified, any pending application may be amended until designated for hearing, a public notice is issued stating that a substantive disposition of the application is to be considered at a forthcoming Commission meeting, or a final order disposing of the matter is adopted by the Commission.

(b) Major amendments submitted pursuant to paragraph (a) of this section are subject to the public notice requirements of §25.151. An amendment will be deemed to be a major amendment under the following circumstances:

(1) If the amendment increases the potential for interference, or changes the proposed frequencies or orbital locations to be used.

(2) If the amendment would convert the proposal into an action that may have a significant environmental effect under §1.1307 of this chapter.

(3) [Reserved]

(4) If the amendment, or the cumulative effect of the amendment, is determined by the Commission otherwise to be substantial pursuant to section 309 of the Communications Act.

(5) Amendments to ''defective'' space station applications, within the meaning of §25.112 will not be considered.

(c) Any application for an NGSO-like satellite license within the meaning of §25.157 will be considered to be a newly filed application if it is amended by a major amendment (as defined by paragraph (b) of this section) after a ''cut-off'' date applicable to the application, except under the following circumstances:

(1) The amendment resolves frequency conflicts with authorized stations or other pending applications but does not create new or increased frequency conflicts;

(2) The amendment reflects only a change in ownership or control found by the Commission to be in the public

interest and, for which a requested exemption from a ''cut-off'' date is granted;

(3) The amendment corrects typographical, transcription, or similar clerical errors which are clearly demonstrated to be mistakes by reference to other parts of the application, and whose discovery does not create new or increased frequency conflicts; or

(4) The amendment does not create new or increased frequency conflicts, and is demonstrably necessitated by events which the applicant could not have reasonably foreseen at the time of filing.

(d) Any application for a GSO-like satellite license within the meaning of § 25.158 will be considered to be a newly filed application if it is amended by a major amendment (as defined by paragraph (b) of this section), and will cause the application to lose its status relative to later-filed applications in the ''queue'' as described in § 25.158.

(e) Any amendment to an application shall be filed electronically through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter. Amendments to space station applications must be filed on Form 312 and Schedule S. Amendments to earth station applications must be filed on Form 312 and Schedule B.

[56 FR 24016, May 28, 1991, as amended at 68 FR 51503, Aug. 27, 2003; 69 FR 47794, Aug. 6, 2004; 78 FR 8421, Feb. 6, 2013]

§ 25.117 Modification of station license.

(a) Except as provided for in § 25.118 (Modifications not requiring prior authorization), no modification of a radio station governed by this part which affects the parameters or terms and conditions of the station authorization shall be made except upon application to and grant of such application by the Commission.

(b) Both earth station and space station modification applications must be filed electronically through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter.

(c) Applications for modification of earth station authorizations must be submitted on FCC Form 312, Main Form and Schedule B. Applications for modification of space station authorizations must be submitted on FCC Form 312, Main Form and Schedule S. Only those items that change need to be specified, provided that the applicant certifies that the remaining information has not changed.

(d)(1) Except as set forth in § 25.118(e), applications for modifications of space station authorizations shall be filed in accordance with § 25.114, but only those items of information listed in § 25.114 that change need to be submitted, provided the applicant certifies that the remaining information has not changed.

(2) Applications for modifications of space station authorizations will be granted except under the following circumstances:

(i) Granting the modification would make the applicant unqualified to operate a space station under the Commission's rules.

(ii) Granting the modification request would not serve the public interest, convenience, and necessity.

(iii) Except as set forth in paragraph (d)(2)(iv) of this section, applications for modifications of GSO-like space station authorizations granted pursuant to the procedure set forth in § 25.158, which seek to relocate a GSO satellite or add a frequency band to the authorization, will be placed in a queue pursuant to § 25.158 and considered only after previously filed space station license applications or space station modification applications have been considered.

(iv) Applications for modifications of space station authorizations to increase the authorized bandwidth will not be considered in cases in which the original space station authorization was granted pursuant to the procedures set forth in § 25.157(e) or § 25.158(c)(4).

(v) Any 17/24 GHz BSS space station operator whose license is conditioned to operate at less than the power level otherwise permitted by § 25.208(c) and/or (w) of this part, and is conditioned to accept interference from a neighboring 17/24 GHz BSS space station, may file a modification application to remove those two conditions in the event that the license for that neighboring space station is cancelled or

surrendered. In the event that two or more such modification applications are filed, and those applications are mutually exclusive, the modification applications will be considered on a first-come, first-served basis pursuant to the procedure set forth in § 25.158 of this part.

(3) In the event that a space station licensee provides notification of a planned license modification pursuant to § 25.118(e), and the Commission finds that the proposed modification does not meet the requirements of § 25.118(e), the Commission will issue a public notice announcing that the proposed license modification will be considered pursuant to the procedure specified in paragraphs (d)(1) and (d)(2) of this section.

(e) Any application for modification of authorization to extend a required date of completion, as set forth in § 25.133 for earth station authorizations or § 25.164 for space stations, or included as a condition of any earth station or space station authorization, must include a verified statement from the applicant:

(1) That states that the additional time is required due to unforeseeable circumstances beyond the applicant's control, describes these circumstances with specificity, and justifies the precise extension period requested; or

(2) That states there are unique and overriding public interest concerns that justify an extension, identifies these interests and justifies a precise extension period (f) An application for modification of a space station license to add an ancillary terrestrial component to an eligible satellite network will be treated as a request for a minor modification if the particulars of operations provided by the applicant comply with the criteria specified in § 25.149. Notwithstanding the treatment of such an application as a minor modification, the Commission shall place any initial application for the modification of a space station license to add an ancillary terrestrial component on notice for public comment. Except as provided for in § 25.149(f), no application for authority to add an ancillary terrestrial component to an eligible satellite network shall be granted until the applicant has demonstrated actual compliance with the criteria specified in § 25.149(b).

(g) In cases where an earth station licensee proposes additional transmitters, facilities, or modifications, the resulting transmissions of which can reasonably be expected to cause the power density to exceed the RF exposure limits specified in part 1, subpart I of this chapter by five percent, the licensee must submit an environmental assessment pursuant to § 1.1307(b)(3)(i) of this chapter as an attachment to its modification application.

[56 FR 24016, May 28, 1991, as amended at 61 FR 9952, Mar. 12, 1996; 62 FR 5928, Feb. 10, 1997; 68 FR 33649, June 5, 2003; 68 FR 47858, Aug. 12, 2003; 68 FR 51503, Aug. 27, 2003; 68 FR 62248, Nov. 3, 2003; 68 FR 63998, Nov. 12, 2003; 69 FR 47794, Aug. 6, 2004; 70 FR 32253, June 2, 2005; 72 FR 60279, Oct. 24, 2007; 78 FR 8421, Feb. 6, 2013]

§ 25.118 Modifications not requiring prior authorization.

(a) *Earth station license modifications, notification required.* Authorized earth station operators may make the following modifications to their licenses without prior Commission authorization, provided that the operators notify the Commission, using FCC Form 312 and Schedule B, within 30 days of the modification. This notification must be filed electronically through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter:

(1) Licensees may make changes to their authorized earth stations without obtaining prior Commission authorization, provided that they have complied with all applicable frequency coordination procedures in accordance with § 25.251, and the modification does not involve:

(i) An increase in EIRP or EIRP density (both main lobe and side lobe);

(ii) An increase in transmitted power;

(iii) A change in coordinates of more than 1 second in latitude or longitude for stations operating in frequency bands that are shared with terrestrial systems; or

(iv) A change in coordinates of 10 seconds or greater in latitude or longitude for stations operating in frequency bands that are not shared with terrestrial systems.

(2) Except for replacement of equipment where the new equipment is electrically identical to the existing equipment, an authorized earth station licensee may add, change or replace transmitters or antenna facilities without prior authorization, provided:

(i) The added, changed, or replaced facilities conform to any applicable requirements in § 25.209;

(ii) The particulars of operations remain unchanged;

(iii) Frequency coordination is not required; and

(iv) The maximum power and power density delivered into any antenna at the earth station site shall not exceed the values calculated by subtracting the maximum antenna gain specified in the license from the maximum authorized e.i.r.p. and e.i.r.p. density values.

(3) Authorized VSAT earth station operators may add VSAT remote terminals without prior authorization, provided that they have complied with all applicable frequency coordination procedures in accordance with § 25.251.

(4) A licensee providing service on a private carrier basis may change its operations to common carrier status without obtaining prior Commission authorization. The licensee must notify the Commission using Form 312 within 30 days after the completed change to common carrier status.

(5) Earth station operators may change their points of communication without prior authorization, provided that the change results from a space station license modification described in paragraph (e) of this section, and the earth station operator does not repoint its antenna. Otherwise, any modification of an earth station license to add or change a point of communication will be considered under § 25.117.

(b) *Earth station license modifications, notification not required.* Notwithstanding paragraph (a)(2) of this section, equipment in an authorized earth station may be replaced without prior authorization and without notifying the Commission if the new equipment is electrically identical to the existing equipment.

(c)–(d) [Reserved]

(e) *Relocation of GSO space stations.* A space station operator may modify its license without prior authorization, but upon 30 days prior notice to the Commission and any potentially affected licensed spectrum user, provided that the operator meets the following requirements. This notification must be filed electronically on Form 312 through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter:

(1) The space station licensee will relocate a Geostationary Satellite Orbit (GSO) space station to another orbit location that is assigned to that licensee;

(2) The relocated space station licensee will operate with the same technical parameters as the space station initially assigned to that location, or within the original satellite's authorized and/or coordinated parameters;

(3) The space station licensee certifies that it will comply with all the conditions of its original license and all applicable rules after the relocation;

(4) The space station licensee certifies that it will comply with all applicable coordination agreements at the newly occupied orbital location;

(5) The space station licensee certifies that it has completed any necessary coordination of its space station at the new location with other potentially affected space station operators, including coordination of station-keeping volume.

(6) The space station licensee certifies that it will limit operations of the space station to Tracking, Telemetry, and Control (TT&C) functions during the relocation and satellite drift transition period; and

(7) The space station licensee certifies that the relocation of the space station does not result in a lapse of service for any current customer.

(8) A DBS space station licensee must certify that there will be no increase in interference due to the operations of the relocated space station that would require the Commission to submit a proposed modification to the ITU Appendix 30 Broadcasting-Satellite Service (''BSS'') Plan and/or the Appendix 30A feeder link Plan to the ITU Radiocommunication Bureau.

(9) For DBS licensees, the space station licensee must certify that it will

meet the geographic service requirements in § 25.148(c).

(f) *Repositioning of NGSO space stations.* A licensee may reposition NGSO space stations within an authorized orbital plane without prior Commission approval, provided the licensee notifies the Commission of the repositioning 10 days in advance by electronic filing on Form 312 in the International Bureau Filing System. The notification must specify all changes in previously authorized parameters and must certify the following:

(1) The licensee will continue to comply with the conditions of the space station license and all applicable Commission rules, including geographic coverage requirements, after the repositioning;

(2) The repositioning will not increase risk of harmful interference to other systems not permitted by coordination agreements;

(3) The licensee will not request increased interference protection because of the repositioning;

(4) The licensee will monitor collision risk during the maneuver and take any necessary evasive measures.

(5) Any change of orbital altitude entailed by the repositioning will not exceed 10 kilometers in extent or 30 days in duration and the licensee has notified, or will notify, the operator(s) of any satellite within 20 kilometers of the interim orbit at least 10 days before commencing the repositioning maneuver.

[62 FR 5928, Feb. 10, 1997, as amended at 68 FR 62248, Nov. 3, 2003; 68 FR 63999, Nov. 12, 2003; 69 FR 47794, Aug. 6, 2004; 70 FR 32253, June 2, 2005; 79 FR 8317, Feb. 12, 2014]

§ 25.119 Assignment or transfer of control of station authorization.

(a) You must file an application for Commission authorization before you can transfer, assign, dispose of (voluntarily or involuntarily, directly or indirectly, or by transfer of control of any corporation or any other entity) your station license or accompanying rights. The Commission will grant your application only if it finds that doing so will serve the public interest, convenience and necessity.

(b) For purposes of this section, transfers of control requiring Commission approval shall include any and all transactions that:

(1) Change the party controlling the affairs of the licensee, or

(2) Effect any change in a controlling interest in the ownership of the licensee, including changes in legal or equitable ownership.

(c) *Assignment of license.* You must submit an FCC Form 312, Main Form and Schedule A to voluntarily assign (*e.g.*, as by contract or other agreement) or involuntarily assign (*e.g.*, as by death, bankruptcy, or legal disability) your station authorization. You must file these forms electronically through IBFS.

(d) *Transfer of control of corporation holding license.* If you want to transfer control of a corporation, which holds one or more licenses voluntarily or involuntarily (*de jure* or *de facto*), you must submit an FCC Form 312, Main Form and Schedule A. You must file these forms electronically through IBFS. For involuntary transfers, you must file your application within 10 days of the event causing the transfer of control. You can also use FCC Form 312, Main Form and Schedule A for non-substantial (*pro forma*) transfers of control.

(e) Whenever a group of station licenses in the same radio service for the same class of facility licensed to the same entity is to be assigned or transferred to a single assignee or transferee, a single application may be filed to cover the entire group, if the application identifies in an exhibit each station by call sign, station location and expiration date of license.

(f) Assignments and transfers of control shall be completed within 180 days from the date of authorization. Within 30 days of consummation, the Commission shall be notified by letter of the date of consummation and the file numbers of the applications involved in the transaction.

(g) The Commission retains discretion in reviewing assignments and transfers of control of space station licenses to determine whether the initial license was obtained in good faith with

the intent to construct a satellite system.

[56 FR 24016, May 20, 1991; 56 FR 29757, June 20, 1991. Redesignated and amended at 62 FR 5928, 5929, Feb. 10, 1997; 68 FR 51503, Aug. 27, 2003; 69 FR 29901, May 26, 2004; 78 FR 8421, Feb. 6, 2013; 79 FR 51264, Aug. 28, 2014]

§ 25.120 Application for special temporary authorization.

(a) In circumstances requiring immediate or temporary use of facilities, request may be made for special temporary authority to install and/or operate new or modified equipment. The request must contain the full particulars of the proposed operation including all facts sufficient to justify the temporary authority sought and the public interest therein. No request for temporary authority will be considered unless it is received by the Commission at least 3 working days prior to the date of proposed construction or operation or, where an extension is sought, the expiration date of the existing temporary authorization. A request received within less than 3 working days may be accepted only upon due showing of extraordinary reasons for the delay in submitting the request which could not have been earlier foreseen by the applicant. A copy of the request for special temporary authority also shall be forwarded to the Commission's Columbia Operations Center, 9200 Farm House Lane, Columbia, MD 21046–1609.

(b)(1) The Commission may grant a temporary authorization only upon a finding that there are extraordinary circumstances requiring temporary operations in the public interest and that delay in the institution of these temporary operations would seriously prejudice the public interest. Convenience to the applicant, such as marketing considerations or meeting scheduled customer in-service dates, will not be deemed sufficient for this purpose.

(2) The Commission may grant a temporary authorization for a period not to exceed 180 days, with additional periods not exceeding 180 days, if the Commission has placed the special temporary authority (STA) request on public notice.

(3) The Commission may grant a temporary authorization for a period not to exceed 60 days, if the STA request has not been placed on public notice, and the applicant plans to file a request for regular authority for the service.

(4) The Commission may grant a temporary authorization for a period not to exceed 30 days, if the STA request has not been placed on public notice, and an application for regular authority is not contemplated.

(c) Each application proposing construction of one or more earth station antennas or alteration of the overall height of one or more existing earth station antenna structures, where FAA notification prior to such construction or alteration is required by part 17 of this chapter, must include the FCC Antenna Structure Registration Number(s) for the affected satellite earth station antenna(s). If no such number has been assigned at the time the application(s) is filed, the applicant must state in the application whether the satellite earth station antenna owner has notified the FAA of the proposed construction or alteration and applied to the FCC for an Antenna Structure Registration Number in accordance with part 17 of this chapter. Applications proposing construction of one or more earth station antennas or alteration of the overall height of one or more existing earth station antennas, where FAA notification prior to such construction or alteration is *not* required by part 17 of this chapter, must indicate such and, unless the satellite earth station antenna is 6.10 meters or less above ground level (AGL), must contain a statement explaining why FAA notification is not required.

[56 FR 24016, May 28, 1991, as amended at 61 FR 4367, Feb. 6, 1996. Redesignated and amended at 62 FR 5928, 5929, Feb. 10, 1997; 66 FR 9973, Feb. 13, 2001; 68 FR 51503, Aug. 27, 2003]

§ 25.121 License term and renewals.

(a) *License Term.* (1) Except for licenses for DBS space stations, SDARS space stations and terrestrial repeaters, and 17/24 GHz BSS space stations licensed as broadcast facilities, licenses for facilities governed by this part will be issued for a period of 15 years.

(2) Licenses for DBS space stations and 17/24 GHz BSS space stations licensed as broadcast facilities, and for SDARS space stations and terrestrial repeaters, will be issued for a period of 8 years. Licenses for DBS space stations not licensed as broadcast facilities will be issued for a period of 10 years.

(b) The Commission reserves the right to grant or renew station licenses for less than 15 years if, in its judgment, the public interest, convenience and necessity will be served by such action.

(c) For earth stations, the license term will be specified in the instrument of authorization.

(d) *Space stations.* (1) For geostationary-orbit space stations, the license term will begin at 3 a.m. Eastern Time on the date when the licensee notifies the Commission pursuant to §25.173(b) that the space station has been successfully placed into orbit at its assigned orbital location and that its operations conform to the terms and conditions of the space station authorization.

(2) For non-geostationary orbit space stations, the license period will begin at 3 a.m. Eastern Time on the date when the licensee notifies the Commission pursuant to §25.173(b) that operation of an initial space station is compliant with the license terms and conditions and that the space station has been placed in its authorized orbit. Operating authority for all space stations subsequently brought into service pursuant to the license will terminate upon its expiration.

(e) *Renewal of licenses.* Applications for renewals of earth station licenses must be submitted on FCC Form 312R no earlier than 90 days, and no later than 30 days, before the expiration date of the license. Applications for space station system replacement authorization for non-geostationary orbit satellites shall be filed no earlier than 90 days, and no later than 30 days, prior to the end of the twelfth year of the existing license term.

[56 FR 24016, May 28, 1991, as amended at 58 FR 68059, Dec. 23, 1993; 59 FR 53327, Oct. 21, 1994. Redesignated and amended at 62 FR 5928, 5929, Feb. 10, 1997; 65 FR 59142, Oct. 4, 2000; 67 FR 12485, Mar. 19, 2002; 67 FR 51113, Aug. 7, 2002; 68 FR 51503, Aug. 27, 2003; 68 FR 63999, Nov. 12, 2003; 72 FR 50027, Aug. 29, 2007; 75 FR 45067, Aug. 2, 2010; 79 FR 8317, Feb. 12, 2014]

§25.129 Equipment authorization for portable earth-station transceivers.

(a) Except as expressly permitted by §2.803 or §2.1204 of this chapter, prior authorization must be obtained pursuant to the equipment certification procedure in part 2, Subpart J of this chapter for importation, sale or lease in the United States, or offer, shipment, or distribution for sale or lease in the United States of portable earth-station transceivers subject to regulation under part 25. This requirement does not apply, however, to devices imported, sold, leased, or offered, shipped, or distributed for sale or lease before November 20, 2004.

(b) For purposes of this section, an earth-station transceiver is portable if it is a ''portable device'' as defined in §2.1093(b) of this chapter, *i.e.*, if its radiating structure(s) would be within 20 centimeters of the operator's body when the transceiver is in operation.

(c) In addition to the information required by §§1.1307(b) and 2.1033(c) of this chapter, applicants for certification required by this section must submit any test data necessary to demonstrate compliance with pertinent performance standards in §§25.138, 25.202(f), 25.204, 25.209, and 25.216, must submit the statements required by §2.1093(c) of this chapter, and must demonstrate compliance with the labeling requirement in §25.285(b).

(d) Applicants for certification required by this section must submit evidence that the devices in question are designed for use with a satellite system that may lawfully provide service to users in the United States pursuant to an FCC license or order reserving spectrum.

[69 FR 5709, Feb. 6, 2004, as amended at 79 FR 8317, Feb. 12, 2014]

EARTH STATIONS

§ 25.130 Filing requirements for transmitting earth stations.

(a) Applications for a new or modified transmitting earth station facility shall be submitted on FCC Form 312, and associated Schedule B, accompanied by any required exhibits, except for those earth station applications filed on FCC Form 312EZ pursuant to § 25.115(a). All such earth station license applications must be filed electronically through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter. Additional filing requirements for Earth Stations on Vessels are described in §§ 25.221 and 25.222. Additional filing requirements for Vehicle-Mounted Earth Stations are described in § 25.226. Additional filing requirements for Earth Stations Aboard Aircraft are described in § 25.227. In addition, applicants that are not required to submit applications on Form 312EZ, other than ESV, VMES or ESAA applicants, must submit the following information to be used as an ''informative'' in the public notice issued under § 25.151 as an attachment to their application:

(1) A detailed description of the service to be provided, including frequency bands and satellites to be used. The applicant must identify either the specific satellite(s) with which it plans to operate, or the eastern and western boundaries of the arc it plans to coordinate.

(2) The diameter or equivalent diameter of the antenna.

(3) Proposed power and power density levels.

(4) Identification of any random access technique, if applicable.

(5) Identification of a specific rule or rules for which a waiver is requested.

(b) A frequency coordination analysis in accordance with § 25.203 shall be provided for earth stations transmitting in the frequency bands shared with equal rights between terrestrial and space services, except that applications for user transceiver units associated with the NVNG mobile-satellite service shall instead provide the information required by § 25.135 and applications for user transceiver units associated with the 1.6/2.4 GHz Mobile-Satellite Service shall demonstrate that user transceiver operations comply with the requirements set forth in § 25.213.

(c) In those cases where an applicant is filing a number of essentially similar applications, showings of a general nature applicable to all of the proposed stations may be submitted in the initial application and incorporated by reference in subsequent applications.

(d) Transmissions of signals or programming to non-U.S. licensed satellites, and to and/or from foreign points by means of U.S.-licensed fixed satellites may be subject to restrictions as a result of international agreements or treaties. The Commission will maintain public information on the status of any such agreements.

(e) [Reserved]

(f) Applicants seeking to operate in a shared government/non-government band must provide the half-power beam width of their proposed earth station antenna, as an attachment to their applications.

(g) Parties may apply for a single FSS earth station license under one call sign covering operation of multiple transmitting antennas not eligible for blanket licensing under another section of this part, in the following circumstances:

(1) The antennas would transmit in frequency bands shared with terrestrial services on a co-primary basis and the antennas would be sited within an area bounded by 1 second of latitude and 1 second of longitude.

(2) The antennas would transmit in frequency bands allocated to FSS on a primary basis and there is no co-primary allocation for terrestrial services, and the antennas would be sited within an area bounded by 10 seconds of latitude and 10 seconds of longitude.

NOTE TO PARAGRAPH (g): This paragraph does not apply to applications filed pursuant to § 25.134, § 25.138, § 25.221, § 25.222, § 25.226, or § 25.227 or to applications for 29 GHz NGSO

MSS feeder link stations in a complex as defined in § 25.257.

[56 FR 24016, May 28, 1991, as amended at 58 FR 68059, Dec. 23, 1993; 59 FR 53327, Oct. 21, 1994; 61 FR 4367, Feb. 6, 1996; 61 FR 9952, Mar. 12, 1996; 62 FR 5929, Feb. 10, 1997; 62 FR 64172, Dec. 4, 1997; 69 FR 29901, May 26, 2004; 69 FR 47795, Aug. 6, 2004; 70 FR 4783, Jan. 31, 2005; 70 FR 32253, June 2, 2005; 74 FR 57098, Nov. 4, 2009; 78 FR 14926, Mar. 8, 2013; 79 FR 8317, Feb. 12, 2014]

§ 25.131 Filing requirements and registration for receive-only earth stations.

(a) Except as provided in paragraphs (b) and (j) of this section, applications for licenses for receive-only earth stations shall be submitted on FCC Form 312, Main Form and Schedule B, accompanied by any required exhibits and the information described in § 25.130(a)(1) through (a)(5). Such applications must be filed electronically through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter.

(b) Receive-only earth stations in the Fixed-Satellite Service that operate with U.S.-licensed satellites, or that operate with non-U.S.-licensed satellites on the Permitted Space Station List in accordance with paragraph (j) of this section, may be registered with the Commission in order to protect them from interference from terrestrial microwave stations in bands shared co-equally with the Fixed Service in accordance with the procedures of §§ 25.203 and 25.251, subject to the stricture in § 25.209(e).

(c) Licensing or registration of receive-only earth stations with the Commission confers no authority to receive and use signals or programming received from satellites. *See* section 705 of the Communications Act. 47 U.S.C. 605.

(d) Applications for registration must be filed on FCC Form 312, Main Form and Schedule B, accompanied by the coordination exhibit required by § 25.203 and any other required exhibits.

(e) Complete applications for registration will be placed on public notice for 30 days and automatically granted if no objection is submitted to the Commission and served on the applicant. Additional pleadings are authorized in accordance with § 1.45 of this chapter.

(f) The registration of a receive-only earth station results in the listing of an authorized frequency band at the location specified in the registration. Interference protection levels are those agreed to during coordination.

(g) Reception of signals or programming from non-U.S. satellites may be subject to restrictions as a result of international agreements or treaties. The Commission will maintain public information on the status of any such agreements.

(h) Registration term: Registrations for receive-only earth stations governed by this section will be issued for a period of 15 years from the date on which the application was filed. Applications for renewals of registrations must be submitted on FCC Form 312R (Application for Renewal of Radio Station License in Specified Services) no earlier than 90 days and no later than 30 days before the expiration date of the registration.

(i) Applications for modification of license or registration of receive-only earth stations shall be made in conformance with §§ 25.117 and 25.118. In addition, registrants are required to notify the Commission when a receive-only earth station is no longer operational or when it has not been used to provide any service during any 6-month period.

(j)(1) Except as set forth in paragraph (j)(2) of this section, receive-only earth stations operating with non-U.S. licensed space stations shall file an FCC Form 312 requesting a license or modification to operate such station.

(2) Operators of receive-only earth stations used to receive transmissions from non-U.S.-licensed space stations on the Permitted Space Station List need not file for licenses, provided that the space station operator and earth station operator comply with all applicable rules in this chapter and with the

applicable conditions in the Permitted Space Station List.

[56 FR 24016, May 28, 1991, as amended at 61 FR 9952, Mar. 12, 1996; 62 FR 5929, Feb. 10, 1997; 62 FR 64172, Dec. 4, 1997; 65 FR 58466, Sept. 29, 2000; 67 FR 12485, Mar. 19, 2002; 68 FR 62249, Nov. 3, 2003; 68 FR 63999, Nov. 12, 2003; 69 FR 29901, May 26, 2004; 69 FR 47795, Aug. 6, 2004; 70 FR 32253, June 2, 2005; 78 FR 8421, Feb. 6, 2013; 79 FR 8318, Feb. 12, 2014]

§ 25.132 Verification of earth station antenna performance standards.

(a)(1) Except for applications for 20/30 GHz earth stations and applications subject to the requirement in paragraph (b)(3) of this section, applications for transmitting earth stations in the Fixed-Satellite Service, including feeder-link stations, must include certification that the applicant has reviewed the results of a series of radiation pattern tests performed by the antenna manufacturer on representative equipment in representative configurations, and the test results demonstrate that the equipment meets the off-axis gain standards in § 25.209, measured in accordance with paragraph (b)(1) of this section. The licensee must be prepared to submit the radiation pattern measurements to the Commission on request.

(2) Applications for transmitting GSO FSS earth stations operating in the 20/30 GHz band must include the antenna measurements specified in § 25.138(d) and (e). Applications for transmitting NGSO FSS earth stations operating in the 20/30 GHz band must include the antenna measurements specified in § 25.138(d).

(b)(1) For purposes of paragraph (a)(1) of this section, the following measurements on a production antenna performed on calibrated antenna range, as a minimum, must be made at the bottom, middle and top of each allocated frequency band:

(i) Co-polarized patterns in the E- and H-planes for linear-polarized antennas or in two orthogonal cuts for circularly-polarized antennas:

(A) In the azimuth plane, plus and minus 7 degrees and plus and minus 180 degrees from beam peak.

(B) In the elevation plane, 0 to 45 degrees from beam peak.

(ii) Cross-polarization patterns in the E- and H-planes for linear-polarized antennas or in two orthogonal cuts for circularly-polarized antennas, plus and minus 9 degrees from beam peak.

(iii) Main beam gain.

(2) The FCC envelope specified in § 25.209 shall be superimposed on each pattern. The minimum tests specified above are recognized as representative of the performance of the antenna in most planes although some increase in sidelobe levels should be expected in the spar planes and orthogonal spar planes.

(3) Except as provided in paragraph (d) of this section, applicants seeking authority to operate a Fixed-Satellite Service earth station pursuant to the requirements in § 25.218, § 25.220, § 25.221, § 25.222, § 25.223, § 25.226, or § 25.227 must submit a copy of the manufacturer's range test plots of the antenna gain patterns specified in paragraph (b)(1) of this section.

(c) The tests specified in paragraph (b) of this section are normally performed at the manufacturer's facility; but for those antennas that are very large and only assembled on-site, on-site measurements may be used for product qualification data. If on-site data is to be used for qualification, the test frequencies and number of patterns should follow, where possible, the recommendations in paragraph (b) of this section, and the test data is to be submitted in the same manner as described in paragraph (a) of this section.

(d) For each new or modified transmitting antenna over 3 meters in diameter, except antennas subject to measurement under § 25.138(d), the following on-site verification measurements must be completed at one frequency on an available transponder in each frequency band of interest and submitted to the Commission.

(1) Co-polarized patterns in the elevation plane, plus and minus 7 degrees, in the transmit band.

(2) Co-polarized patterns in the azimuth and elevation planes, plus and minus 7 degrees, in the receive band.

(3) *System cross-polarization discrimination on-axis.* The FCC envelope specified in § 25.209 shall be superimposed on each pattern. The transmit patterns are to be measured with the aid of a co-operating earth station in coordination

with the satellite system control center under the provisions of § 25.272.

(e) Certification that the tests required by paragraph (c) of this section have been satisfactorily performed shall be provided to the Commission in notification that construction of the facilities has been completed as required by § 25.133.

(f) Antennas less than 3 meters in diameter and antennas on simple (manual) drive mounts that are operated at a fixed site are exempt from the requirements of paragraphs (c) and (d) of this section provided that a detailed technical showing is made that confirms proper installation, pointing procedures, and polarization alignment and manufacturing quality control. These showing must also include a plan for periodic testing and field installation procedures and precautions.

(g) Records of the results of the tests required by this section must be maintained at the antenna site or the earth station operator's control center and be available for inspection.

[58 FR 13419, Mar. 11, 1993, as amended at 69 FR 5710, Feb. 6, 2004; 70 FR 32253, June 2, 2005; 72 FR 50028, Aug. 29, 2007; 74 FR 47102, Sept. 15, 2009; 74 FR 57098, Nov. 4, 2009; 78 FR 14926, Mar. 8, 2013; 79 FR 8318, Feb. 12, 2014]

§ 25.133 Period of construction; certification of commencement of operation.

(a)(1) Each initial license for an earth station governed by this part, except for blanket licenses, will specify as a condition therein the period in which construction of facilities must be completed and station operation commenced. Construction of the earth station must be completed and the station must be brought into operation within 12 months from the date of the license grant except as may be determined by the Commission for any particular application.

(2) Each initial blanket license for multiple earth stations at unspecified locations will specify as a condition therein the period in which station operation must be commenced. The networks in which the mobile earth stations will be operated must be brought into operation within 12 months from the date of the license grant except as may be determined by the Commission for any particular application.

(b)(1) Each initial license for a transmitting earth station or modified license authorizing operation of an additional transmitting antenna, except for blanket licenses, will also specify as a condition therein that upon completion of construction, the licensee must file with the Commission a certification containing the following information:

(i) The name of the licensee;

(ii) File number of the application;

(iii) Call sign of the antenna;

(iv) Date of the license;

(v) A certification that the facility as authorized has been completed and that each antenna has been tested and found to perform within 2 dB of the applicable pattern specified in § 25.209 or other authorized pattern;

(vi) The date on which the earth station became operational; and

(vii) A statement that the station will remain operational during the license period unless the license is submitted for cancellation.

(2) For earth stations authorized under any blanket licensing provision in this chapter, a certification containing the information in paragraph (b)(1) of this section must be filed when the network is put into operation.

(c) If the facility does not meet the technical parameters set forth in § 25.209, a request for a waiver must be submitted and approved by the Commission before operations may commence.

(d) Each receiving earth station licensed or registered pursuant to § 25.131 must be constructed and placed into service within 6 months after coordination has been completed. Each licensee or registrant must file with the Commission a certification that the facility is completed and operating as provided in paragraph (b) of this section, with the exception of certification of antenna patterns.

[56 FR 24016, May 28, 1991, as amended at 58 FR 68059, Dec. 23, 1993; 59 FR 53327, Oct. 21, 1994; 65 FR 59142, Oct. 4, 2000; 70 FR 32254, June 2, 2005; 78 FR 8421, Feb. 6, 2013; 79 FR 8318, Feb. 12, 2014]

§ 25.134 Licensing provisions for Very Small Aperture Terminal (VSAT) and C-band Small Aperture Terminal (CSAT) networks.

(a)(1) [Reserved]

(2) *Large Networks of Small Antennas operating in the 4/6 GHz frequency bands.* All applications for digital and/or analog operations will be routinely processed provided the network employs antennas that are 4.5 meter or larger in diameter, that are consistent with § 25.209, the power levels are consistent with §§ 25.211(d) and 25.212(d), and frequency coordination has been satisfactorily completed. The use of smaller antennas or non-consistent power levels require the filing of an initial lead application (§ 25.115(c)(2)) that includes all technical analyses required to demonstrate that unacceptable interference will not be caused to any and all affected adjacent satellite operators by the operation of the non-conforming earth station.

(b) *VSAT networks operating in the 12/14 GHz band.* An applicant for a VSAT network authorization proposing to operate with transmitted power spectral density and/or antenna input power in excess of the values specified in paragraph (g) of this section must comply with the requirements in § 25.220.

(c) [Reserved]

(d) An application for VSAT authorization shall be filed on FCC Form 312, Main Form and Schedule B.

(e) VSAT networks operating in the 12/14 GHz bands may use more than one hub earth station, and the hubs may be sited at different locations.

(f) 12/14 GHz VSAT operators may use temporary fixed earth stations as hub earth stations or remote earth stations in their networks, but must specify, in their license applications, the number of temporary fixed earth stations they plan to use.

(g) Applications for VSAT operation in the 12/14 GHz bands that meet the following requirements will be routinely processed:

(1) Equivalent antenna diameter is 1.2 meters or more and the application includes certification of conformance with relevant antenna performance standards in § 25.209 pursuant to § 25.132(a)(1).

(2) The maximum transmitter power spectral density of a digital modulated carrier into any GSO FSS earth station antenna does not exceed $-14.0 - 10\log(N)$ dB(W/4 kHz). For a VSAT network using a frequency division multiple access (FDMA) or a time division multiple access (TDMA) technique, N is equal to one. For a VSAT network using a code division multiple access (CDMA) technique, N is the maximum number of co-frequency simultaneously transmitting earth stations in the same satellite receiving beam.

(3) The maximum GSO FSS satellite EIRP spectral density of the digital modulated emission does not exceed 10 dB(W/4kHz) for all methods of modulation and accessing techniques.

(4) Any earth station applicant filing an application to operate a VSAT network in the 12/14 GHz bands and planning to use a contention protocol must certify that its contention protocol usage will be reasonable.

(5) The maximum transmitter power spectral density of an analog carrier into any GSO FSS earth station antenna does not exceed −8.0 dB(W/4kHz) and the maximum GSO FSS satellite EIRP spectral density does not exceed + 17.0 dB(W/4kHz).

(h) VSAT operators licensed pursuant to this section are prohibited from using remote earth stations in their networks that are not designed to stop transmission when synchronization to signals from the target satellite fails.

[56 FR 66001, Dec. 20, 1991, as amended at 62 FR 5929, Feb. 10, 1997; 66 FR 31560, June 12, 2001; 70 FR 32254, June 2, 2005; 70 FR 33376, June 8, 2005; 73 FR 70900, Nov. 24, 2008; 78 FR 8421, Feb. 6, 2013; 79 FR 8318, Feb. 12, 2014]

EFFECTIVE DATE NOTE: At 74 FR 9962, Mar. 9, 2009, § 25.134 paragraph (g)(4), which contains information collection and recordkeeping requirements, became effective with approval by the Office of Management and Budget for a period of three years.

§ 25.135 Licensing provisions for earth station networks in the non-voice, non-geostationary Mobile-Satellite Service.

(a) Each applicant for a blanket earth station license in the non-voice, non-geostationary mobile-satellite

service shall demonstrate that transceiver operations will not cause unacceptable interference to other authorized users of the spectrum, based on existing system information publicly available at the Commission at the time of filing, and will comply with operational conditions placed upon the systems with which they are to operate in accordance with §25.142(b). This demonstration shall include a showing as to all the technical parameters, including duty cycle and power limits, under which the individual user transceivers will operate.

(b) [Reserved]

(c) Transceiver units in this service are authorized to communicate with and through U.S.-authorized space stations only.

[58 FR 68059, Dec. 23, 1993, as amended at 69 FR 5710, Feb. 6, 2004; 79 FR 8319, Feb. 12, 2014]

§25.136 [Reserved]

§25.137 Application requirements for earth stations operating with non-U.S. licensed space stations.

(a) Earth station applicants or entities filing a ''letter of intent'' or ''Petition for Declaratory Ruling'' requesting authority to operate with a non-U.S. licensed space station to serve the United States must attach an exhibit with their FCC Form 312 application with information demonstrating that U.S.-licensed satellite systems have effective competitive opportunities to provide analogous services in:

(1) The country in which the non-U.S. licensed space station is licensed; and

(2) All countries in which communications with the U.S. earth station will originate or terminate. The applicant bears the burden of showing that there are no practical or legal constraints that limit or prevent access of the U.S. satellite system in the relevant foreign markets. The exhibit required by this paragraph must also include a statement of why grant of the application is in the public interest. This paragraph shall not apply with respect to requests for authority to operate using a non-U.S. licensed satellite that is licensed by or seeking a license from a country that is a member of the World Trade Organization for services covered under the World Trade Organization Basic Telecommunications Agreement.

(b) Any request pursuant to paragraph (a) of this section must be filed electronically through the International Bureau Filing System and must include an exhibit providing legal and technical information for the non-U.S.-licensed space station of the kind that §25.114 would require in a license application for that space-station, including but not limited to, information required to complete Schedule S. An applicant may satisfy this requirement by cross-referencing a pending application containing the requisite information or by citing a prior grant of authority to communicate via the space station in question in the same frequency bands to provide the same type of service.

(c) A non-U.S.-licensed NGSO-like satellite system seeking to serve the United States can be considered contemporaneously with other U.S. NGSO-like satellite systems pursuant to §25.157 and considered before later-filed applications of other U.S. satellite system operators, and a non-U.S.-licensed GSO-like satellite system seeking to serve the United States can have its request placed in a queue pursuant to §25.158 and considered before later-filed applications of other U.S. satellite system operators, if the non-U.S.-licensed satellite system:

(1) Is in orbit and operating;

(2) Has a license from another administration; or

(3) Has been submitted for coordination to the International Telecommunication Union.

(d) Earth station applicants requesting authority to operate with a non-U.S.-licensed space station and non-U.S.-licensed satellite operators filing letters of intent or petitions for declaratory ruling to access the U.S. market must demonstrate that the non-U.S.-licensed space station has complied with all applicable Commission requirements for non-U.S. licensed systems to operate in the United States, including but not limited to the following:

(1) Milestones;

(2) Reporting requirements;

(3) Any other applicable service rules;

(4) For non-U.S.-licensed satellites that are not in orbit and operating, a

bond must be posted. This bond must be in the amount of $5 million for NGSO satellite systems, or $3 million for GSO satellites, denominated in U.S. dollars, and compliant with the terms of § 25.165 of this chapter. The party posting the bond will be permitted to reduce the amount of the bond upon a showing that a milestone has been met, in accordance with the terms of § 25.165(d) of this chapter.

(5) Non-U.S. licensed GSO-like space station operators with a total of five requests for access to the U.S. market in a particular frequency band, or a total of five previously granted requests for access to the U.S. market with unbuilt GSO-like space stations in a particular frequency band, or a combination of pending GSO-like requests and granted requests for unbuilt GSO-like space stations in a particular frequency band that equals five, will not be permitted to request access to the U.S. market with another GSO-like space station license in that frequency band. In addition, non-U.S.-licensed NGSO-like satellite system operators with one request on file with the Commission in a particular frequency band, or one granted request for an unbuilt NGSO-like satellite system in a particular frequency band, will not be permitted to request access to the U.S. market with another NGSO-like satellite system in that frequency band.

(e) A non-U.S.-licensed satellite operator that is seeking to serve the United States pursuant to a Letter of Intent may amend its request by submitting an additional Letter of Intent. Such additional Letters of Intent will be treated on the same basis as amendments filed by U.S. space station applicants for purposes of determining the order in which the Letters of Intent will be considered relative to other pending applications.

(f) A non-U.S.-licensed satellite operator that has been permitted to serve the United States pursuant to a Letter of Intent or Petition for Declaratory Ruling, may modify its U.S. operations under the procedures set forth in § 25.117(d). In addition, a non-U.S.-licensed satellite operator that has been permitted to serve the United States pursuant to a Petition for Declaratory Ruling, may modify its U.S. operations under the procedures set forth in § 25.118(e).

(g) A non-U.S.-licensed satellite operator that has been permitted to serve the United States pursuant to a Petition for Declaratory Ruling must notify the Commission if it plans to transfer control or assign its license to another party, so that the Commission can afford interested parties an opportunity to comment on whether the proposed transaction affects any of the considerations we made when we allowed the satellite operator to enter the U.S. market. If the transferee or assignee is not licensed by or seeking a license from a country that is a member of the World Trade Organization for services covered under the World Trade Organization Basic Telecommunications Agreement, the non-U.S.-licensed satellite operator will be required to make the showing described in paragraph (a) of this section.

[62 FR 64172, Dec. 4, 1997, as amended at 64 FR 61792, Nov. 15, 1999; 65 FR 16327, Mar. 28, 2000; 65 FR 59143, Oct. 4, 2000; 68 FR 51503, Aug. 27, 2003; 68 FR 62249, Nov. 3, 2003; 69 FR 51587, Aug. 20, 2004; 78 FR 8422, Feb. 6, 2013]

§ 25.138 Licensing requirements for GSO FSS Earth Stations in the 18.3–18.8 GHz (space-to-Earth), 19.7–20.2 GHz (space-to-Earth), 28.35–28.6 GHz (Earth-to-space), and 29.25–30.0 GHz (Earth-to-space) bands.

(a) Applications for earth station licenses in the GSO FSS in the 18.3–18.8 GHz, 19.7–20.2 GHz, 28.35–28.6 GHz, and 29.25–30.0 GHz bands that indicate that the following requirements will be met and include the information required by paragraph (d) of this section will be routinely processed:

(1) GSO FSS earth station antenna off-axis EIRP spectral density for co-polarized signals shall not exceed the following values, within ±3° of the GSO arc, under clear sky conditions:

18.5–25log(θ)–10log(N)	dBW/40kHz	for 2.0° ≤θ ≤7°
−2.63–10log(N)	dBW/40kHz	for 7° ≤θ ≤9.23°

21.5–25log(θ)–10log(N)	dBW/40kHz	for 9.23° ≤θ ≤48°
−10.5–10log(N)	dBW/40kHz	for 48° <θ ≤180°

Where:

θ is the angle in degrees from the axis of the main lobe; for systems where more than one earth station is expected to transmit simultaneously in the same bandwidth, *e.g.*, CDMA systems,

N is the likely maximum number of simultaneously transmitting co-frequency earth stations in the receive beam of the satellite; N = 1 for TDMA and FDMA systems.

(2) GSO FSS earth station antenna off-axis EIRP spectral density for co-polarized signals shall not exceed the following values, for all directions other than within ±3° of the GSO arc, under clear sky conditions:

21.5–25log(θ)–10log(N)	dBW/40kHz	for 3.5° ≤θ ≤7°
0.37–10log(N)	dBW/40kHz	for 7° <θ ≤9.23°
24.5–25log(θ)–10log(N)	dBW/40kHz	for 9.23° <θ ≤48°
−7.5–10log(N)	dBW/40kHz	for 48° <θ ≤180°

Where:

θ: is the angle in degrees from the axis of the main lobe; for systems where more than one earth station is expected to transmit simultaneously in the same bandwidth, *e.g.*, CDMA systems.

N: is the likely maximum number of simultaneously transmitting co-frequency earth stations in the receive beam of the satellite; N = 1 for TDMA and FDMA systems.

(3) The values given in paragraphs (a)(1) and (2) of this section may be exceeded by 3 dB, for values of θ >10°, provided that the total angular range over which this occurs does not exceed 20° when measured along both sides of the GSO arc.

(4) GSO FSS earth station antenna off-axis EIRP spectral density for cross-polarized signals shall not exceed the following values, in all directions relative to the GSO arc, under clear sky conditions:

8.5–25log(θ)–10log(N)	dBW/40 kHz	For	2.0° <θ ≤7.0°
−12.63–10log(N)	dBW/40 kHz	For	7.0° <θ ≤9.23°

where θ is the angle in degrees from the axis of the main lobe. For systems where more than one earth station is expected to transmit simultaneously in the same bandwidth, *e.g.*, CDMA systems, N is the likely maximum number of simultaneously transmitting co-frequency earth stations in the receive beam of the satellite. N = 1 for TDMA and FDMA systems.

(5) [Reserved]

(6) Power flux-density (PFD) at the Earth's surface produced by emissions from a space station for all conditions, including clear sky, and for all methods of modulation shall not exceed a level of −118 dBW/m²/MHz, in addition to the limits specified in § 25.208 (d).

(b) An applicant proposing levels in excess of those specified in paragraph (a) of this section must certify that operators of all co-frequency GSO FSS space stations within 6 degrees of the proposed satellite point(s) of communication are aware of the applicant's proposal to operate with the higher power densities and have stated that they have no objection to such operation.

(c) Licensees authorized pursuant to paragraph (b) of this section shall bear the burden of coordinating with any future applicants or licensees whose proposed compliant operations at 6 degrees or smaller orbital spacing, as defined by paragraph (a) of this section,

is potentially or actually adversely affected by the operation of the non-compliant licensee. If no good faith agreement can be reached, however, the non-compliant licensee shall reduce its earth station and space station power density levels to be compliant with those specified in paragraph (a) of this section.

(d)(1) Except as provided in paragraph (d)(2) of this section, the applicant must provide, for each earth station antenna type, a series of radiation patterns measured on a production antenna. The measurements must be performed on a calibrated antenna range and, at a minimum, must be made at the bottom, middle, and top frequencies of each requested uplink band. The radiation patterns are:

(i) Co-polarized patterns in the E- and H-planes for linear-polarized antennas or in two orthogonal planes for circularly-polarized antennas:

(A) In the azimuth plane, plus and minus 10 degrees and plus and minus 180 degrees from beam peak.

(B) In the elevation plane, 0 to 30 degrees.

(ii) Cross-polarization patterns in the E- and H-planes for linear-polarized antennas or in two orthogonal planes for circularly-polarized antennas, plus and minus 10 degrees from beam peak.

(iii) Main beam gain.

(2) For antennas more than 3 meters in diameter that will only be assembled on-site, on-site measurements may be submitted. If on-site data is to be submitted, the test frequencies and number of patterns should follow, where possible, the requirements in paragraph (d)(1) of this section for at least one frequency. Certification that the on-site testing has been satisfactorily performed must be included with the certification filed pursuant to § 25.133(b).

(e) Protection of downlink reception from adjacent satellite interference is based on either the antenna performance specified in § 25.209 (a) and (b), or the actual receiving earth station antenna performance, if actual performance provides greater isolation from adjacent satellite interference. For purposes of ensuring the correct level of protection, the applicant must provide, for each earth station antenna type, antenna performance plots for the 18.3–18.8 GHz and 19.7–20.2 GHz bands in the format prescribed in paragraph (d) of this section.

(f) The holder of a blanket license pursuant to this section will be responsible for operation of any transceiver to receive service provided by that licensee or provided by another party with the blanket licensee's consent. Space station operators may not transmit communications to or from user transceivers in the United States in the 18.3–18.8 GHz, 19.7–20.2 GHz, 28.35–28.6 GHz, or 29.25–30.0 GHz band unless such communications are authorized under an FCC earth station license.

(g) A licensee applying for renewal of a license issued pursuant to this section must specify on FCC Form 312R the number of constructed earth stations.

[65 FR 54169, Sept. 7, 2000, as amended at 66 FR 63515, Dec. 7, 2001; 68 FR 16966, Apr. 8, 2003; 69 FR 5710, Feb. 6, 2004; 73 FR 70900, Nov. 24, 2008; 79 FR 8319, Feb. 12, 2014]

§ 25.139 NGSO FSS coordination and information sharing between MVDDS licensees in the 12.2 GHz to 12.7 GHz band.

(a) NGSO FSS licensees shall maintain a subscriber database in a format that can be readily shared with MVDDS licensees for the purpose of determining compliance with the MVDDS transmitting antenna spacing requirement relating to qualifying existing NGSO FSS subscriber receivers set forth in § 101.129 of this chapter. This information shall not be used for purposes other than set forth in § 101.129 of this chapter. Only sufficient information to determine compliance with § 101.129 of this chapter is required.

(b) Within ten business days of receiving notification of the location of a proposed MVDDS transmitting antenna, the NGSO FSS licensee shall provide sufficient information from the database to enable the MVDDS licensee to determine whether the proposed MVDDS transmitting site meets the minimum spacing requirement.

(c) If the location of the proposed MVDDS transmitting antenna site does not meet the separation requirements of § 101.129 of this chapter, then the NGSO FSS licensee shall also indicate

to the MVDDS licensee within the same ten day period specified in paragraph (b) of this section whether the proposed MVDDS transmitting site is acceptable at the proposed location.

(d) Nothing in this section shall preclude NGSO FSS and MVDDS licensees from entering into an agreement to accept MVDDS transmitting antenna locations that are shorter-spaced from existing NGSO FSS subscriber receivers than the distance set forth in § 101.129 of this chapter.

[67 FR 43037, June 26, 2002, as amended at 68 FR 43945, July 25, 2003]

SPACE STATIONS

§ 25.140 Further requirements for license applications for geostationary space stations in the Fixed-Satellite Service and the 17/24 GHz Broadcasting-Satellite Service.

(a) In addition to the information required by § 25.114, applicants for geostationary-orbit FSS space stations must provide an interference analysis to demonstrate the compatibility of their proposed system with respect to authorized space stations within 2 degrees of any proposed satellite point of communication. An applicant should provide details of its proposed radio frequency carriers which it believes should be taken into account in this analysis. At a minimum, the applicant must include, for each type of radio frequency carrier, the link noise budget, modulation parameters, and overall link performance analysis. (See Appendices B and C to Licensing of Space Stations in the Domestic Fixed-Satellite Service, FCC 83–184, and the following public notices, copies of which are available in the Commission's EDOCS database: DA 03–3863 and DA 04–1708.)

(b) Each applicant for a license for a 17/24 GHz Broadcasting-Satellite Service space station must provide the following information, in addition to that required by § 25.114:

(1)–(2) [Reserved]

(3) Except as described in paragraph (b)(5) of this section, an applicant for a license to operate a 17/24 GHz BSS space station that will be located precisely at one of the 17/24 GHz BSS orbital locations specified in Appendix F of the Report and Order adopted May 2, 2007, IB Docket No. 06–123, FCC 07–76, must provide an interference analysis of the kind described in paragraph (a) of this section, except that the applicant must demonstrate the compatibility of its proposed network with any current or future authorized space station in the 17/24 GHz BSS that complies with the technical rules in this part and that will be located at least four degrees from the proposed space station.

(4) Except as described in paragraph (b)(5) of this section, an applicant for a license to operate a 17/24 GHz BSS space station that will not be located precisely at one of the nominal 17/24 GHz BSS orbital locations specified in Appendix F of the Report and Order adopted May 2, 2007, IB Docket No. 06–123, FCC 07–76, must make one of the following showings:

(i) In cases where there is no previously licensed or proposed space station to be located closer than four degrees from the applicant's space station, and the applicant seeks to operate pursuant to § 25.262(b) of this part, the applicant must provide an interference analysis of the kind described in paragraph (a) of this section, except that the applicant must demonstrate the compatibility of its proposed network with any current or future authorized space stations in the 17/24 GHz BSS that are operating in compliance with the technical rules of this part and that will be located at least four degrees from the applicant's proposed space station;

(ii) In cases where there is a previously licensed or proposed 17/24 GHz BSS space station to be located within four degrees of the applicant's proposed space station, the applicant must provide an interference analysis of the kind described in paragraph (a) of this section, except that the applicant must demonstrate that its proposed network will not cause more interference to the adjacent 17/24 GHz BSS satellite networks operating in compliance with the technical requirements of this part, than if the applicant were located at the precise Appendix F orbital location from which it seeks to offset;

(iii) In cases where there is no previously licensed or proposed 17/24 GHz

BSS space station to be located within four degrees of the applicant's proposed space station, and the applicant does not seek to operate pursuant to §25.262(b) of this part, the applicant must provide an interference analysis of the kind described in paragraph (a) of this section, except that the applicant must demonstrate that its proposed operations will not cause more interference to any current or future 17/24 GHz BSS satellite networks operating in compliance with the technical requirements of this part, than if the applicant were located at the precise Appendix F orbital location from which it seeks to offset.

(5) An applicant for a license to operate a 17/24 GHz BSS space station, in cases where there is a previously licensed or proposed space station operating pursuant to §25.262(b) of this part located within four degrees of the applicant's proposed 17/24 GHz BSS space station, must provide an interference analysis of the kind described in paragraph (a) of this section, except that the applicant must demonstrate that its proposed operations will not cause more interference to the adjacent 17/24 GHz BSS satellite network than if the adjacent space station were located four degrees from the applicant's space station.

(6) In addition to the requirements of paragraphs (b)(3), (b)(4), and (b)(5) of this section, the link budget for any satellite in the 17/24 GHz BSS must take into account longitudinal stationkeeping tolerances and, where appropriate, any existing orbital location offsets from the 17/24 GHz BSS orbital locations of the adjacent prior-authorized 17/24 GHz BSS space stations. In addition, any 17/24 GHz BSS satellite applicant that has reached a coordination agreement with an operator of another 17/24 GHz BSS satellite to allow that operator to exceed the pfd levels specified in the rules for this service, must use those higher pfd levels for the purposes of this showing.

(c) Operators of satellite networks using 17/24 GHz BSS space stations must design their satellite networks to be capable of operating with another 17/24 GHz BSS space station as follows:

(1) Except as described in paragraphs (b)(4)(ii) and (b)(4)(iii) of this section, all satellite network operators using 17/24 GHz BSS space stations must design their satellite networks to be capable of operating with another 17/24 GHz BSS space station as close as four degrees away.

(2) Satellite network operators located less than four degrees away from a space station to be operated pursuant to §25.262(b) of this part must design their satellite networks to be capable of operating with that adjacent 17/24 GHz BSS space station.

(3) Satellite network operators using 17/24 GHz BSS space stations located at an orbital location other than those specified in Appendix F of the Report and Order adopted May 2, 2007, IB Docket No. 06–123, FCC 07–76, and that are not operating pursuant to §25.262(b) of this part, must design their satellite networks to be capable of operating with another 17/24 GHz BSS space station closer than four degrees away, as a result of the operator's offset position.

(d)–(g) [Reserved]

[62 FR 5929, Feb. 10, 1997, as amended at 68 FR 51504, Aug. 27, 2003; 72 FR 50028, Aug. 29, 2007; 72 FR 60279, Oct. 24, 2007; 78 FR 8422, Feb. 6, 2013; 79 FR 8319, Feb. 12, 2014; 79 FR 44312, July 31, 2014]

EFFECTIVE DATE NOTE: At 79 FR 44312, July 31, 2014, the amendatory instruction at 79 FR 8319, Feb. 12, 2014 was corrected by adding ''revise paragraph (b) introductory text''. This text contains information collection and recordkeeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

§25.142 Licensing provisions for the non-voice, non-geostationary Mobile-Satellite Service.

(a) *Space station application requirements.* (1) Each application for a space station system authorization in the non-voice, non-geostationary mobile-satellite service shall describe in detail the proposed non-voice, non-geostationary mobile-satellite system, setting forth all pertinent technical and operational aspects of the system, and the technical and legal qualifications of the applicant. In particular,

each application shall include the information specified in § 25.114. Applicants must also file information demonstrating compliance with all requirements of this section, and showing, based on existing system information publicly available at the Commission at the time of filing, that they will not cause unacceptable interference to any non-voice, non-geostationary mobile-satellite service system authorized to construct or operate.

(2) Applicants for a non-voice, non-geostationary Mobile-Satellite Service space station license must identify the power flux density produced at the Earth's surface by each space station of their system in the 137–138 MHz and 400.15–401 MHz bands, to allow determination of whether coordination with terrestrial services is required under any applicable footnote to the Table of Frequency Allocations in § 2.106 of this chapter. In addition, applicants must identify the measures they would employ to protect the radio astronomy service in the 150.05–153 MHz and 406.1–410 MHz bands from harmful interference from unwanted emissions.

(3) Emission limitations. (i) Applicants in the non-voice, non-geostationary mobile-satellite service shall show that their space stations will not exceed the emission limitations of § 25.202(f) (1), (2) and (3), as calculated for a fixed point on the Earth's surface in the plane of the space station's orbit, considering the worst-case frequency tolerance of all frequency determining components, and maximum positive and negative Doppler shift of both the uplink and downlink signals, taking into account the system design.

(ii) Applicants in the non-voice, non-geostationary mobile-satellite service shall show that no signal received by their satellites from sources outside of their system shall be retransmitted with a power flux density level, in the worst 4 kHz, higher than the level described by the applicants in paragraph (a)(2) of this section.

(4) [Reserved]

(5) Replacement of space stations within the system license term. The licensee need not file separate applications to construct, launch and operate technically identical replacement satellites within the term of the system authorization. However, the licensee shall certify to the Commission, at least thirty days prior to launch of such replacement(s) that:

(i) The licensee intends to launch a space station that is technically identical to those authorized in its system license, and

(ii) Launch of this space station will not cause the licensee to exceed the total number of operating space stations authorized by the Commission.

(b) *Operating conditions.* In order to ensure compatible operations with authorized users in the frequency bands to be utilized for operations in the non-voice, non-geostationary mobile-satellite service, non-voice, non-geostationary mobile-satellite service systems must operate in accordance with the conditions specified in this section.

(1) Service limitation. Voice services may not be provided.

(2) Coordination requirements with Federal government users.

(i) The frequency bands allocated for use by the non-voice, non-geostationary mobile-satellite service are also authorized for use by agencies of the Federal government. The Federal use of frequencies in the non-voice, non-geostationary mobile-satellite service frequency bands is under the regulatory jurisdiction of the National Telecommunications and Information Administration (NTIA).

(ii) The Commission will use its existing procedures for liaison with NTIA to reach agreement with respect to achieving compatible operations between Federal Government users under the jurisdiction of NTIA and non-voice, non-geostationary Mobile-Satellite Service systems (including user transceivers subject to blanket licensing under § 25.115(d)) through the frequency assignment and coordination practices established by NTIA and the Interdepartment Radio Advisory Committee (IRAC). In order to facilitate such frequency assignment and coordination, applicants shall provide the Commission with sufficient information to evaluate electromagnetic compatibility with the Federal government use of the spectrum, and any additional

information requested by the Commission. As part of the coordination process, applicants shall show that they will not cause unacceptable interference to authorized Federal government users, based upon existing system information provided by the Government. The frequency assignment and coordination of the satellite system with Federal Government users shall be completed prior to grant of authorization.

(iii) The Commission shall also coordinate with NTIA/IRAC with regard to the frequencies to be shared by those earth stations of non-voice, non-geostationary mobile-satellite service systems that are not subject to blanket licensing under §25.115(d), and authorized Federal government stations in the fixed and mobile services, through the exchange of appropriate systems information.

(3) Coordination among non-voice, non-geostationary mobile-satellite service systems. Applicants for authority to establish non-voice, non-geostationary mobile-satellite service systems are encouraged to coordinate their proposed frequency usage with existing permittees and licensees in the non-voice, non-geostationary mobile-satellite service whose facilities could be affected by the new proposal in terms of frequency interference or restricted system capacity. All affected applicants, permittees, and licensees shall, at the direction of the Commission, cooperate fully and make every reasonable effort to resolve technical problems and conflicts that may inhibit effective and efficient use of the radio spectrum; however, the permittee or licensee being coordinated with is not obligated to suggest changes or reengineer an applicant's proposal in cases involving conflicts.

(4) Safety and distress communications. Stations operating in the non-voice, non-geostationary mobile-satellite service that are used to comply with any statutory or regulatory equipment carriage requirements may also be subject to the provisions of sections 321(b) and 359 of the Communications Act of 1934, as amended. Licensees are advised that these provisions give priority to radio communications or signals relating to ships in distress and prohibit a charge for the transmission of maritime distress calls and related traffic.

(c) [Reserved]

(d) *Prohibition of certain agreements.* No license shall be granted to any applicant for a non-voice, non-geostationary mobile-satellite service system if that applicant, or any companies controlling or controlled by the applicant, shall acquire or enjoy any right, for the purpose of handling traffic to or from the United States, its territories or possessions, to construct or operate space segment or earth stations in the non-voice, non-geosynchronous mobile-satellite service, or to interchange traffic, which is denied to any other United States company by reason of any concession, contract, understanding, or working arrangement to which the licensee or any persons or companies controlling or controlled by the licensee are parties.

[58 FR 68060, Dec. 23, 1993, as amended at 62 FR 5930, Feb. 10, 1997; 62 FR 59295, Nov. 3, 1997; 68 FR 51504, Aug. 27, 2003; 78 FR 8422, Feb. 6, 2013; 79 FR 8320, Feb. 12, 2014]

§ 25.143 Licensing provisions for the 1.6/2.4 GHz Mobile-Satellite Service and 2 GHz Mobile-Satellite Service.

(a) *System license.* Applicants authorized to construct and launch a system of technically identical satellites will be awarded a single ''blanket'' license. In the case of non-geostationary satellites, the blanket license will cover a specified number of space stations to operate in a specified number of orbital planes. In the case of geostationary satellites, as part of a geostationary-only satellite system or a geostationary/non-geostationary hybrid satellite system, an individual license will be issued for each satellite to be located at a geostationary orbital location.

(b) *Qualification Requirements*—(1) *General Requirements.* Each application for a space station system authorization in the 1.6/2.4 GHz Mobile-Satellite Service or 2 GHz Mobile-Satellite Service must include the information specified in §25.114. Applications for non-U.S.-licensed systems must comply with the provisions of §25.137.

(2) *Technical qualifications.* In addition to providing the information specified in paragraph (b)(1) of this section, each applicant and letter of intent filer shall demonstrate the following:

(i) That a proposed system in the 1.6/2.4 GHz MSS frequency bands employs a non-geostationary constellation or constellations of satellites;

(ii) That a system proposed to operate using non-geostationary satellites be capable of providing Mobile-Satellite Service to all locations as far north as 70° North latitude and as far south as 55° South latitude for at least 75% of every 24-hour period, i.e., that at least one satellite will be visible above the horizon at an elevation angle of at least 5° for at least 18 hours each day within the described geographic area;

(iii) That a system proposed to operate using non-geostationary satellites be capable of providing Mobile-Satellite Service on a continuous basis throughout the fifty states, Puerto Rico and the U.S. Virgin Islands, i.e., that at least one satellite will be visible above the horizon at an elevation angle of at least 5° at all times within the described geographic areas; and

(iv) That a system only using geostationary orbit satellites, at a minimum, be capable of providing Mobile-Satellite Service on a continuous basis throughout the 50 states, Puerto Rico, and the U.S. Virgin Islands, if technically feasible.

(v) That operations will not cause unacceptable interference to other authorized users of the spectrum. In particular, each application in the 1.6/2.4 GHz frequency bands shall demonstrate that the space station(s) comply with the requirements specified in § 25.213.

(3) [Reserved]

(c) *Replacement of Space Stations Within the System License Term.* Licensees of 1.6/2.4 GHz mobile-satellite systems authorized through a blanket license pursuant to paragraph (a) of this section need not file separate applications to construct, launch and operate technically identical replacement satellites within the term of the system authorization. However, the licensee shall certify to the Commission, at least thirty days prior to launch of such replacement(s) that:

(1) The licensee intends to launch a space station that is technically identical to those authorized in its system authorization, and

(2) Launch of this space station will not cause the licensee to exceed the total number of operating space stations authorized by the Commission.

(d)–(e) [Reserved]

(f) *Safety and distress communications.* (1) Stations operating in the 1.6/2.4 GHz Mobile-Satellite Service and 2 GHz Mobile-Satellite Service that are voluntarily installed on a U.S. ship or are used to comply with any statute or regulatory equipment carriage requirements may also be subject to the requirements of sections 321(b) and 359 of the Communications Act of 1934. Licensees are advised that these provisions give priority to radio communications or signals relating to ships in distress and prohibits a charge for the transmission of maritime distress calls and related traffic.

(2) Licensees offering distress and safety services should coordinate with the appropriate search and rescue organizations responsible for the licensees service area.

(g) [Reserved]

(h) Prohibition of certain agreements. No license shall be granted to any applicant for a space station in the Mobile-Satellite Service operating at 1610–1626.5 MHz/2483.5–2500 MHz if that applicant, or any persons or companies controlling or controlled by the applicant, shall acquire or enjoy any right, for the purpose of handling traffic to or from the United States, its territories or possession, to construct or operate space segment or earth stations, or to interchange traffic, which is denied to any other United States company by reason of any concession, contract, understanding, or working arrangement to which the Licensee or any persons or companies controlling or controlled by the Licensee are parties.

[59 FR 53328, Oct. 21, 1994, as amended at 61 FR 9945, Mar. 12, 1996; 62 FR 5930, Feb. 10, 1997; 65 FR 59143, Oct. 4, 2000; 68 FR 33649, June 5, 2003; 68 FR 47858, Aug. 12, 2003; 68 FR 51504, Aug. 27, 2003; 70 FR 59277, Oct. 12, 2005; 78 FR 8267, Feb. 5, 2013; 78 FR 8422, Feb. 6, 2013; 79 FR 8320, Feb. 12, 2014]

§ 25.144 Licensing provisions for the 2.3 GHz satellite digital audio radio service.

(a) Qualification Requirements:

(1) [Reserved]

(2) General Requirements: Each application for a system authorization in the satellite digital audio radio service in the 2310–2360 MHz band shall describe in detail the proposed satellite digital audio radio system, setting forth all pertinent technical and operational aspects of the system, and the technical, legal, and financial qualifications of the applicant. In particular, applicants must file information demonstrating compliance with § 25.114 and all of the requirements of this section.

(3) Technical Qualifications: In addition to the information specified in paragraph (a)(1) of this section, each applicant shall:

(i) Demonstrate that its system will, at a minimum, service the 48 contiguous states of the United States (full CONUS);

(ii) Certify that its satellite DARS system includes a receiver that will permit end users to access all licensed satellite DARS systems that are operational or under construction; and

(b) Milestone requirements. Each applicant for system authorization in the satellite digital audio radio service must demonstrate within 10 days after a required implementation milestone as specified in the system authorization, and on the basis of the documentation contained in its application, certify to the Commission by affidavit that the milestone has been met or notify the Commission by letter that it has not been met. At its discretion, the Commission may require the submission of additional information (supported by affidavit of a person or persons with knowledge thereof) to demonstrate that the milestone has been met. The satellite DARS milestones are as follows, based on the date of authorization:

(1) One year: Complete contracting for construction of first space station or begin space station construction;

(2) Two years: If applied for, complete contracting for construction of second space station or begin second space station construction;

(3) Four years: In orbit operation of at least one space station; and

(4) Six years: Full operation of the satellite system.

(c) [Reserved]

(d) The license term for each digital audio radio service satellite and any associated terrestrial repeaters is specified in § 25.121.

(e) *SDARS Terrestrial Repeaters.* (1) Only entities holding or controlling SDARS space station licenses may construct and operate SDARS terrestrial repeaters and such construction and operation is permitted only in conjunction with at least one SDARS space station that is concurrently authorized and transmitting directly to subscribers.

(2) SDARS terrestrial repeaters will be eligible for blanket licensing only under the following circumstances:

(i) The SDARS terrestrial repeaters will comply with all applicable power limits set forth in § 25.214(d)(1) of this chapter and all applicable out-of-band emission limits set forth in § 25.202(h)(1) and (h)(2).

(ii) The SDARS terrestrial repeaters will meet all applicable requirements in part 1, subpart I, and part 17 of this chapter. Operators of SDARS terrestrial repeaters must maintain demonstrations of compliance with part 1, subpart I, of this chapter and make such demonstrations available to the Commission upon request within three business days.

(iii) The SDARS terrestrial repeaters will comply with all requirements of all applicable international agreements.

(3) After May 20, 2010, SDARS licensees shall, before deploying any new, or modifying any existing, terrestrial repeater, notify potentially affected WCS licensees pursuant to the procedure set forth in § 25.263.

(4) SDARS terrestrial repeaters are restricted to the simultaneous retransmission of the complete programming, and only that programming, transmitted by the SDARS licensee's satellite(s) directly to the SDARS licensee's subscribers' receivers, and may not be used to distribute any information not also transmitted to all subscribers' receivers.

(5) Operators of SDARS terrestrial repeaters are prohibited from using those repeaters to retransmit different transmissions from a satellite to different regions within that satellite's coverage area.

(6) Operators of SDARS terrestrial repeaters are required to comply with all applicable provisions of part 1, subpart I, and part 17 of this chapter.

(7)(i) Each SDARS terrestrial repeater transmitter utilized for operation under this paragraph must be of a type that has been authorized by the Commission under its certification procedure.

(ii) In addition to the procedures set forth in subpart J of part 2 of this chapter, power measurements for SDARS repeater transmitters may be made in accordance with a Commission-approved average power technique. Peak-to-average power ratio (PAPR) measurements for SDARS repeater transmitters should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities to determine that the PAPR will not exceed 13 dB for more than 0.1 percent of the time or another Commission approved procedure. The measurement must be performed using a signal corresponding to the highest PAPR expected during periods of continuous transmission.

(iii) Any manufacturer of radio transmitting equipment to be used in these services may request equipment authorization following the procedures set forth in subpart J of part 2 of this chapter. Equipment authorization for an individual transmitter may be requested by an applicant for a station authorization by following the procedures set forth in part 2 of this chapter.

(8) Applications for blanket authority to operate terrestrial repeaters must be filed using Form 312, except that Schedule B to Form 312 need not be filed. Such applications must also include the following information as an attachment:

(i) The space station(s) with which the terrestrial repeaters will communicate, the frequencies and emission designators of such communications, and the frequencies and emission designators used by the repeaters to retransmit the received signals.

(ii) The maximum number of terrestrial repeaters that will be deployed under the authorization at 1) power levels equal to or less than 2-watt average EIRP, and 2) power levels greater than 2-watt average EIRP (up to 12-kW average EIRP).

(iii) A certification of compliance with the requirements of § 25.144(e)(1) through (7).

(9) SDARS terrestrial repeaters that are ineligible for blanket licensing must be authorized on a site-by-site basis. Applications for site-by-site authorization must be filed using Form 312, except that Schedule B need not be provided. Such applications must also include the following information, as an attachment:

(i) The technical information for each repeater required to be shared with potentially affected WCS licensees as part of the notification requirement set forth in § 25.263(c)(2).

(ii) The space station(s) with which the terrestrial repeaters will communicate, the frequencies and emission designators of such communications, and the frequencies and emission designators used by the repeaters to retransmit the received signals.

[62 FR 11105, Mar. 11, 1997, as amended at 68 FR 51504, Aug. 27, 2003; 70 FR 32254, June 2, 2005; 75 FR 45067, Aug. 2, 2010; 79 FR 8320, Feb. 12, 2014]

§ 25.145 Licensing provisions for the Fixed-Satellite Service in the 20/30 GHz bands.

(a) [Reserved]

(b) *System License.* Applicants authorized to construct and launch a system of technically identical non-geostationary satellite orbit satellites will be awarded a single ''blanket'' license covering a specified number of space stations to operate in a specified number of orbital planes.

(c) In addition to providing the information specified in § 25.114, each non-geostationary satellite orbit applicant shall demonstrate the following:

(1) That the proposed system is capable of providing Fixed-Satellite Service to all locations as far north as 70° North Latitude and as far south as 55° South Latitude for at least 75% of every 24-hour period; and

(2) That the proposed system is capable of providing Fixed-Satellite Service on a continuous basis throughout the fifty states, Puerto Rico and the U.S. Virgin Islands.

(3) [Reserved]

(d) [Reserved]

(e) Prohibition of certain agreements. No license shall be granted to any applicant for a space station in the Fixed-Satellite Service operating in the 20/30 GHz band if that applicant, or any persons or companies controlling or controlled by the applicant, shall acquire or enjoy any right, for the purpose of handling traffic to or from the United States, its territories or possession, to construct or operate space segment or earth stations, or to interchange traffic, which is denied to any other United States company by reason of any concession, contract, understanding, or working arrangement to which the Licensee or any persons or companies controlling or controlled by the Licensee are parties.

(f)(1) [Reserved]

(2) Licensees shall submit to the Commission a yearly report indicating the number of earth stations actually brought into service under its blanket licensing authority. The annual report is due to the Commission no later than the first day of April of each year and shall indicate the deployment figures for the preceding calendar year.

(g) *Protection from interference from terrestrial operation in the 18.3 to 19.3 GHz band.* Fixed-Satellite Service operators are entitled to protection from harmful interference from terrestrial stations operating in this frequency band. See §§ 21.901(e), 74.502(c), 74.602(g), 78.18(a)(4), and 101.147(r) of this chapter.

(h) *Replacement of Space Stations within the System License Term.* Licensees of NGSO FSS systems in the 18.8–19.3 GHz and 28.6–29.1 GHz frequency bands authorized through a blanket license pursuant to paragraph (b) of this section need not file separate applications to launch and operate technically identical replacement satellites within the term of the system authorization. However, the licensee shall certify to the Commission, at least thirty days prior to launch of such replacement(s) that:

(1) The licensee intends to launch a space station into the previously-authorized orbit that is technically identical to those authorized in its system authorization and

(2) Launch of this space station will not cause the license to exceed the total number of operating space stations authorized by the Commission.

[62 FR 61456, Nov. 18, 1997, as amended at 65 FR 54171, Sept. 7, 2000; 66 FR 63515, Dec. 7, 2001; 67 FR 39310, June 7, 2002; 68 FR 16966, Apr. 8, 2003; 68 FR 51505, Aug. 27, 2003; 68 FR 59129, Oct. 14, 2003; 70 FR 59277, Oct. 12, 2005; 78 FR 8423, Feb. 6, 2013; 79 FR 8320, Feb. 12, 2014]

§ 25.146 Licensing and operating rules for the non-geostationary orbit Fixed-Satellite Service in the 10.7 GHz-14.5 GHz bands.

(a) A comprehensive technical showing shall be submitted for the proposed non-geostationary satellite orbit Fixed-Satellite Service (NGSO FSS) system in the 10.7–14.5 GHz bands. The technical information shall demonstrate that the proposed NGSO FSS system would not exceed the validation equivalent power flux-density (EPFD) limits as specified in § 25.208 (g), (k), and (l) for $EPFD_{down}$, and $EPFD_{up}$. If the technical demonstration exceeds the validation EPFD limits at any test points within the U.S. for domestic service and at any points outside of the U.S. for international service or at any points in the geostationary satellite orbit, as appropriate, the application would be unacceptable for filing and will be returned to the applicant with a brief statement identifying the non-compliance technical demonstration. The technical showing consists of the following:

(1) *Single-entry validation equivalent power flux-density, in the space-to-Earth direction, ($EPFD_{down}$) limits.* (i) Provide a set of power flux-density (PFD) masks, on the surface of the Earth, for each space station in the NGSO FSS system. The PFD masks shall be generated in accordance with the specification stipulated in the most recent version of ITU–R Recommendation S.1503, ''Functional Description to be used in Developing Software Tools for Determining Conformity of Non-GSO FSS Networks with Limits Contained in Article 22 of the Radio Regulations.'' In

particular, the PFD masks must encompass the power flux-density radiated by the space station regardless of the satellite transmitter power resource allocation and traffic/beam switching strategy that are used at different periods of a NGSO FSS system's life. The PFD masks shall also be in an electronic form that can be accessed by the computer program specified in paragraph (a)(1)(iii) of this section.

(ii) Identify and describe in detail the assumptions and conditions used in generating the power flux-density masks.

(iii) If a computer program that has been approved by the ITU for determining compliance with the single-entry $EPFD_{down}$ validation limits is not yet available, the applicant shall provide a computer program for the single-entry $EPFD_{down}$ validation computation, including both the source code and the executable file. This computer program shall be developed in accordance with the specification stipulated in the most recent version of Recommendation ITU–R S.1503. If the applicant uses the ITU approved software, the applicant shall indicate the program name and the version used.

(iv) Identify and describe in detail the necessary input parameters for the execution of the computer program identified in paragraph (a)(1)(iii) of this section.

(v) Provide the result, the cumulative probability distribution function of EPFD, of the execution of the computer program described in paragraph (a)(1)(iii) of this section by using only the input parameters contained in paragraphs (a)(1)(i) and (a)(1)(iv) of this section.

(2) *Single-entry additional operational equivalent power flux-density, in the space-to-Earth direction, (additional operational* $EPFD_{down}$*) limits.* (i) Provide a set of NGSO FSS earth station maximum equivalent isotropically radiated power (EIRP) masks as a function of the off-axis angle generated by an NGSO FSS earth station. The maximum EIRP mask shall be generated in accordance with the specification stipulated in the most recent version of ITU–R Recommendation S.1503. In particular, the results of calculations encompass what would be radiated regardless of the earth station transmitter power resource allocation and traffic/beam switching strategy are used at different periods of an NGSO FSS system's life. The EIRP masks shall be in an electronic form that can be accessed by the computer program specified in paragraph (a)(2)(iii) of this section.

(ii) Identify and describe in detail the assumptions and conditions used in generating the maximum earth station e.i.r.p. mask.

(iii) If a computer program that has been approved by the ITU for determining compliance with the single-entry $EPFD_{up}$ validation limits is not yet available, the applicant shall provide a computer program for the single-entry $EPFD_{up}$ validation computation, including both the source code and the executable file. This computer program shall be developed in accordance with the specification stipulated in the most recent version of Recommendation ITU–R S.1503. If the applicant uses the ITU approved software, the applicant shall indicate the program name and the version used.

(iv) Identify and describe in detail the necessary input parameters for the execution of the computer program identified in paragraph (a)(2)(iii) of this section.

(v) Provide the result of the execution of the computer program described in paragraph (a)(2)(iii) of this section by using only the input parameters contained in paragraphs (a)(2)(i) and (a)(2)(iv) of this section.

(b) Ninety days prior to the initiation of service to the public, the NGSO FSS system licensee shall submit a comprehensive technical showing for the non-geostationary satellite orbit Fixed-Satellite Service (NGSO FSS) system in the 10.7–14.5 GHz bands. The technical information shall demonstrate that the NGSO FSS system is expected not to operate in excess of the additional operational $EPFD_{down}$ limits and the operational $EPFD_{down}$ limits as specified in §25.208(i) and (j), and notes 2 and 3 to Table 1L in §25.208(*l*). If the technical demonstration exceeds the additional operational $EPFD_{down}$ limits or the operational $EPFD_{down}$ limits at any test points within the United States for domestic service and at any

test points outside of the United States for international service, the NGSO FSS system licensee shall not initiate service to the public until the deficiency has been rectified by reducing satellite transmission power or other adjustments. This must be substantiated by subsequent technical showings. The technical showings consist of the following:

(1) *Single-entry additional operational equivalent power flux-density, in the space-to-Earth direction, (additional operational $EPFD_{down}$) limits.* (i) Provide a set of anticipated operational power flux density (PFD) masks, on the surface of the Earth, for each space station in the NGSO FSS system. The anticipated operational PFD masks could be generated by using the method specified in the most recent version of ITU–R Recommendation S.1503. In particular, the anticipated operational PFD mask shall take into account the expected maximum traffic loading distributions and geographic specific scheduling of the actual measured space station antenna patterns (see § 25.210(k)). The anticipated operational PFD masks shall also be in an electronic form that can be accessed by the computer program contained in paragraph (b)(1)(iii) of this section.

(ii) Identify and describe in detail the assumptions and conditions used in generating the anticipated operational power flux-density masks.

(iii) Provide a computer program for the single-entry additional operational $EPFD_{down}$ verification computation, including both the source code and the executable file. This computer program could be developed by using the method specified in the most recent version of ITU–R Recommendation S.1503.

(iv) Identify and describe in detail the necessary input parameters for the execution of the additional operational $EPFD_{down}$ verification computer program identified in paragraph (b)(1)(iii) of this section.

(v) Provide the result, the cumulative probability distribution function of EPFD, of the execution of the verification computer program described in paragraph (b)(1)(iii) of this section by using only the input parameters contained in paragraphs (b)(1)(i) and (iv) of this section for each of the submitted test points provided by the Commission. These test points are based on information from U.S.-licensed geostationary satellite orbit Fixed-Satellite Service and Broadcasting-Satellite Service operators in the 10.7–14.5 GHz bands. Each U.S.-licensed geostationary satellite orbit Fixed-Satellite Service and Broadcasting-Satellite Service operator in the 10.7–14.5 GHz bands may submit up to 10 test points for this section containing the latitude, longitude, altitude, azimuth, elevation angle, antenna size, efficiency to be used by non-geostationary satellite orbit Fixed-Satellite Service licensees in the 10.7–14.5 GHz bands during the upcoming year.

(2) Operational equivalent power flux-density, space-to-Earth direction, (operational $EPFD_{down}$) limits. Using the information contained in (b)(1) of this section plus the measured space station antenna patterns, provide the result of the execution of the computer simulation for the anticipated in-line operational $EPFD_{down}$ levels for each of the submitted test points provided by the Commission. Submitted test points are based on inputs from U.S.-licensed geostationary satellite orbit Fixed-Satellite Service and Broadcasting-Satellite Service operators in the 10.7-14.5 GHz bands. Each U.S.-licensed geostationary satellite orbit Fixed-Satellite Service and Broadcasting-Satellite Service operator in the 10.7–14.5 GHz bands may submit up to 10 test points for this section containing the latitude, longitude, altitude, azimuth, elevation angle, antenna size, efficiency to be used by non-geostationary satellite orbit Fixed-Satellite Service licensees in the 10.7–14.5 GHz bands during the upcoming year.

(c) [Reserved]

(d) The Commission may request at any time additional information from the NGSO FSS system applicant or licensee concerning the EPFD levels and the related technical showings.

(e) An NGSO FSS system licensee operating a system in compliance with the limits specified in § 25.208(g), (i), (j), (k), (l), and (m) shall be considered as having fulfilled its obligations under ITU Radio Regulations Article 22.2

with respect to any GSO network. However, such NGSO FSS system shall not claim protection from GSO FSS and BSS networks operating in accordance with part 25 of this chapter and the ITU Radio Regulations.

(f) Coordination will be required between NGSO FSS systems and GSO FSS earth stations in the frequency band 10.7–12.75 GHz when all of the following threshold conditions are met:

(1) Bandwidth overlap; and

(2) The satellite network using the GSO has specific receive earth stations which meet all of the following conditions: earth station antenna maximum isotropic gain greater than or equal to 64 dBi; G/T of 44 dB/K or higher; and emission bandwidth of 250 MHz; and the $EPFD_{down}$ radiated by the satellite system using the NGSO into the GSO specific receive earth station, either within the U.S. for domestic service or any points outside the U.S. for international service, as calculated using the ITU software for examining compliance with EPFD limits set forth in Article 22 of the ITU Radio Regulations exceeds −174.5 dB(W/(m2/40kHz)) for any percentage of time for NGSO systems with all satellites only operating at or below 2500 km altitude, or −202 dB(W/(m2/40kHz)) for any percentage of time for NGSO systems with any satellites operating above 2500 km altitude.

(3) If there is no ITU software for examining compliance with EPFD limits set forth in Article 22 of the ITU Radio Regulations, then the $EPFD_{down}$ coordination trigger is suspended and the requirement for coordination will be based on bandwidth overlap and the satellite network using the GSO has specific receive earth stations which meet all of the following conditions: earth station antenna maximum isotropic gain greater than or equal to 64 dBi; G/T of 44 dB/K or higher; and emission bandwidth of 250 MHz.

(g) *Operational power flux density, space-to-Earth direction, limits.* Ninety days prior to the initiation of service to the public, the NGSO FSS system licensee shall submit a technical showing for the NGSO FSS system in the band 12.2–12.7 GHz. The technical information shall demonstrate that the NGSO FSS system is capable of meeting the limits as specified in § 25.208(o). Licensees may not provide service to the public if they fail to demonstrate compliance with the PFD limits.

(h) System License. Applicants authorized to construct and launch a system of technically identical non-geostationary satellite orbit Fixed-Satellite Service satellites will be awarded a single ''blanket'' license covering a specified number of space stations to operate in a specified number of orbital planes.

(i) In addition to providing the information specified in § 25.114, each NGSO FSS applicant shall provide the following:

(1) A demonstration that the proposed system is capable of providing fixed-satellite services on a continuous basis throughout the fifty states, Puerto Rico and the U.S. Virgin Islands, U.S.; and

(2) A demonstration that the proposed system is capable of providing Fixed-Satellite Services to all locations as far north as 70° North Latitude and as far south as 55° South Latitude for at least 75 percent of every 24-hour period; and

(3) Sufficient information on the NGSO FSS system characteristics to properly model the system in computer sharing simulations, including, at a minimum, NGSO hand-over and satellite switching strategies, NGSO satellite antenna gain patterns, and NGSO earth station antenna gain patterns. In particular, each NGSO FSS applicant must explain the switching protocols it uses to avoid transmitting while passing through the geostationary satellite orbit arc, or provide an explanation as to how the PFD limits in § 25.208 are met without using geostationary satellite orbit arc avoidance. In addition, each NGSO FSS applicant must provide the orbital parameters contained in Section A.4 of Annex 2A to Appendix 4 of the ITU Radio Regulations (2008). Further, each NGSO FSS applicant must provide a sufficient technical showing to demonstrate that the proposed non-geostationary satellite orbit system meets the PFD limits contained in § 25.208, as applicable, and

(4) [Reserved]

(j)–(l) [Reserved]

(m) Replacement of Space Stations within the System License Term. Licensees of NGSO FSS systems in the 10.7–12.7 GHz, 12.75–13.25 GHz and 13.75–14.5 GHz frequency bands authorized through a blanket license pursuant to paragraph (g) of this section need not file separate applications to launch and operate technically identical replacement satellites within the term of the system authorization. However, the licensee shall certify to the Commission, at least thirty days prior to launch of such replacement(s) that:

(1) The licensee intends to launch a space station into the previously-authorized orbit that is technically identical to those authorized in its system authorization and

(2) Launch of this space station will not cause the licensee to exceed the total number of operating space stations authorized by the Commission.

[66 FR 10619, Feb. 16, 2001, as amended at 67 FR 53510, Aug. 16, 2002; 68 FR 16447, Apr. 4, 2003; 68 FR 43946, July 25, 2003; 68 FR 51505, Aug. 27, 2003; 69 FR 31302, June 3, 2004; 70 FR 59277, Oct. 12, 2005; 78 FR 8423, Feb. 6, 2013; 79 FR 8320, Feb. 12, 2014]

§ 25.147 Licensing provision for NGSO MSS feeder downlinks in the band 6700–6875 MHz.

If an NGSO MSS satellite transmitting in the band 6700–6875 MHz causes harmful interference to previously licensed co-frequency Public Safety facilities, then that satellite licensee is obligated to remedy the interference complaint.

[67 FR 17299, Apr. 10, 2002]

§ 25.148 Licensing provisions for the Direct Broadcast Satellite Service.

(a) *License terms.* License terms for DBS facilities are specified in § 25.121(a).

(b) *Due diligence.* (1) All persons granted DBS authorizations shall proceed with due diligence in constructing DBS systems. Permittees shall be required to complete contracting for construction of the satellite station(s) within one year of the grant of the authorization. The satellite stations shall also be required to be in operation within six years of the authorization grant.

(2) In addition to the requirements stated in paragraph (b)(1) of this section, all persons who receive new or additional DBS authorizations after January 19, 1996 shall complete construction of the first satellite in their respective DBS systems within four years of grant of the authorization. All satellite stations in such a DBS system shall be in operation within six years of the grant of the authorization.

(3) DBS licensees shall be required to proceed consistent with all applicable due diligence obligations, unless otherwise determined by the Commission upon proper showing in any particular case. Transfer of control of the authorization shall not be considered to justify extension of these deadlines.

(c) *Geographic service requirements.* Those entities acquiring DBS authorizations after January 19, 1996, or who after January 19, 1996 modify a previous DBS authorization to launch a replacement satellite, must provide DBS service to Alaska and Hawaii where such service is technically feasible from the authorized orbital location. This requirement does not apply to DBS satellites authorized to operate at the 61.5° W.L. orbital location. DBS applicants seeking to operate from locations other than 61.5° W.L. who do not provide service to Alaska and Hawaii, must provide technical analyses to the Commission demonstrating that such service is not feasible as a technical matter, or that while technically feasible such services would require so many compromises in satellite design and operation as to make it economically unreasonable.

(d) *DBS subject to competitive bidding.* Mutually exclusive initial applications to provide DBS are subject to competitive bidding procedures. The general competitive bidding procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this part.

(e) *DBS long form application.* Winning bidders are subject to the provisions of § 1.2107 of this chapter except that in lieu of a FCC Form 601 each winning bidder shall submit the long-form satellite service application (FCC Form 312) within thirty (30) days after being notified by Public Notice that it is the winning bidder. Each winning bidder

will also be required to submit by the same deadline the information described in § 25.215 (Technical) and § 25.601 (EEO), and in paragraph (f) of this section. Each winner also will be required to file, by the same deadline, a signed statement describing its efforts to date and future plans to come into compliance with any applicable spectrum limitations, if it is not already in compliance. Such information shall be submitted pursuant to the procedures set forth in § 25.114 and any associated Public Notices.

(f) *Technical qualifications.* DBS operations must be in accordance with the sharing criteria and technical characteristics contained in Appendices 30 and 30A of the ITU's Radio Regulations. Operation of systems using differing technical characteristics may be permitted, with adequate technical showing, and if a request has been made to the ITU to modify the appropriate Plans to include the system's technical parameters.

[67 FR 51113, Aug. 7, 2002]

§ 25.149 Application requirements for ancillary terrestrial components in Mobile-Satellite Service networks operating in the 1.5./1.6 GHz and 1.6/2.4 GHz Mobile-Satellite Service.

(a) Applicants for ancillary terrestrial component authority shall demonstrate that the applicant does or will comply with the following through certification or explanatory technical exhibit, as appropriate:

(1) ATC shall be deployed in the forward-band mode of operation whereby the ATC mobile terminals transmit in the MSS uplink bands and the ATC base stations transmit in the MSS downlink bands in portions of the 1626.5–1660.5 MHz/1525–1559 MHz bands (L-band) and the 1610–1626.5 MHz/2483.5–2500 MHz bands.

NOTE TO PARAGRAPH (a)(1): An L-band MSS licensee is permitted to apply for ATC authorization based on a non-forward-band mode of operation provided it is able to demonstrate that the use of a non-forward-band mode of operation would produce no greater potential interference than that produced as a result of implementing the rules of this section.

(2) ATC operations shall be limited to certain frequencies:

(i) [Resreved]

(ii) In the 1626.5–1660.5 MHz/1525–1559 MHz bands (L-band), ATC operations are limited to the frequency assignments authorized and internationally coordinated for the MSS system of the MSS licensee that seeks ATC authority.

(iii) In the 1610–1626.5 MHz/2483.5–2500 MHz bands, ATC operations are limited to the 1610–1617.775 MHz, 1621.35–1626.5 MHz, and 2483.5–2495 MHz bands and to the specific frequencies authorized for use by the MSS licensee that seeks ATC authority.

(3) ATC operations shall not exceed the geographical coverage area of the Mobile-Satellite Service network of the applicant for ATC authority.

(4) ATC base stations shall comply with all applicable antenna and structural clearance requirements established in part 17 of this chapter.

(5) ATC base stations and mobile terminals shall comply with part 1 of this chapter, Subpart I—Procedures Implementing the National Environmental Policy Act of 1969, including the guidelines for human exposure to radio frequency electromagnetic fields as defined in §§ 1.1307(b) and 1.1310 of this chapter for PCS networks.

(6) ATC base station operations shall use less than all available MSS frequencies when using all available frequencies for ATC base station operations would exclude otherwise available signals from MSS space-stations.

(b) Applicants for an ancillary terrestrial component shall demonstrate that the applicant does or will comply with the following criteria through certification:

(1) *Geographic and temporal coverage.*

(i) [Reserved]

(ii) For the L-band, an applicant must demonstrate that it can provide space-segment service covering all 50 states, Puerto Rico, and the U.S. Virgin Islands one-hundred percent of the time, unless it is not technically possible for the MSS operator to meet the coverage criteria from its orbital position.

(iii) For the 1.6/2.4 GHz Mobile-Satellite Service bands, an applicant must demonstrate that it can provide space-segment service to all locations as far north as 70° North latitude and as far

south as 55° South latitude for at least seventy-five percent of every 24-hour period, i.e., that at least one satellite will be visible above the horizon at an elevation angle of at least 5° for at least 18 hours each day, and on a continuous basis throughout the fifty states, Puerto Rico and the U.S. Virgin Islands, i.e., that at least one satellite will be visible above the horizon at an elevation angle of at least 5° at all times.

(2) *Replacement satellites.* (i) Operational NGSO MSS ATC systems shall maintain an in-orbit spare satellite.

(ii) Operational GSO MSS ATC systems shall maintain a spare satellite on the ground within one year of commencing operations and launch it into orbit during the next commercially reasonable launch window following a satellite failure.

(iii) All MSS ATC licensees must report any satellite failures, malfunctions or outages that may require satellite replacement within ten days of their occurrence.

(3) *Commercial availability.* Mobile-satellite service must be commercially available (*viz.*, offering services for a fee) in accordance with the coverage requirements that pertain to each band as a prerequisite to an MSS licensee's offering ATC service.

(4) *Integrated services.* MSS ATC licensees shall offer an integrated service of MSS and MSS ATC. Applicants for MSS ATC may establish an integrated service offering by affirmatively demonstrating that:

(i) The MSS ATC operator will use a dual-mode handset that can communicate with both the MSS network and the MSS ATC component to provide the proposed ATC service; or

(ii) Other evidence establishing that the MSS ATC operator will provide an integrated service offering to the public.

(5) *In-band operation.* (i) [Reserved]

(ii) In the 1.6/2.4 GHz Mobile-Satellite Service bands, MSS ATC is limited to no more than 7.775 MHz of spectrum in the L-band and 11.5 MHz of spectrum in the S-band. Licensees in these bands may implement ATC only on those channels on which MSS is authorized, consistent with the 1.6/2.4 GHz Mobile-Satellite Service band-sharing arrangement.

(iii) In the L-band, MSS ATC is limited to those frequency assignments available for MSS use in accordance with the Mexico City Memorandum of Understanding, its successor agreements or the result of other organized efforts of international coordination.

(c) *Equipment certification.* (1) Each ATC mobile station utilized for operation under this part and each transmitter marketed, as set forth in § 2.803 of this chapter, must be of a type that has been authorized by the Commission under its certification procedure for use under this part.

(2) Any manufacturer of radio transmitting equipment to be used in these services may request equipment authorization following the procedures set forth in subpart J of part 2 of this chapter. Equipment authorization for an individual transmitter may be requested by an applicant for a station authorization by following the procedures set forth in part 2 of this chapter.

(3) Licensees and manufacturers are subject to the radiofrequency radiation exposure requirements specified in §§ 1.1307(b), 2.1091, and 2.1093 of this chapter, as appropriate. MSS ATC base stations must comply with the requirements specified in § 1.1307(b) of this chapter for PCS base stations. MSS ATC mobile stations must comply with the requirements specified for mobile and portable PCS transmitting devices in § 1.1307(b) of this chapter. MSS ATC mobile terminals must also comply with the requirements in §§ 2.1091 and 2.1093 of this chapter for Satellite Communications Services devices. Applications for equipment authorization of mobile or portable devices operating under this section must contain a statement confirming compliance with these requirements for both fundamental emissions and unwanted emissions. Technical information showing the basis for this statement must be submitted to the Commission upon request.

(d) Applicants for an ancillary terrestrial component authority shall demonstrate that the applicant does or will comply with the provisions of § 1.924 of this chapter and §§ 25.203(e) through 25.203(g) and with § 25.253 or § 25.254, as

appropriate, through certification or explanatory technical exhibit.

(e) Except as provided for in paragraph (f) of this section, no application for an ancillary terrestrial component shall be granted until the applicant has demonstrated actual compliance with the provisions of paragraph (b) of this section. Upon receipt of ATC authority, all ATC licensees must ensure continued compliance with this section and § 25.253 or § 25.254, as appropriate.

(f) Special provision for operational MSS systems. Applicants for MSS ATC authority with operational MSS systems that are in actual compliance with the requirements prescribed in paragraphs (b)(1), (b)(2), and (b)(3) of this section at the time of application may elect to satisfy the requirements of paragraphs (b)(4) and (b)(5) of this section prospectively by providing a substantial showing in its certification regarding how the applicant will comply with the requirements of paragraphs (b)(4) and (b)(5) of this section. Notwithstanding § 25.117(f) and paragraph (e) of this section, the Commission may grant an application for ATC authority based on such a prospective substantial showing if the Commission finds that operations consistent with the substantial showing will result in actual compliance with the requirements prescribed in paragraphs (b)(4) and (b)(5) of this section. An MSS ATC applicant that receives a grant of ATC authority pursuant to this paragraph (f) shall notify the Commission within 30 days once it begins providing ATC service. This notification must take the form of a letter formally filed with the Commission in the appropriate MSS license docket and shall contain a certification that the MSS ATC service is consistent with its ATC authority.

(g) *Spectrum leasing.* Leasing of spectrum rights by MSS licensees or system operators to spectrum lessees for ATC use is subject to the rules for spectrum manager leasing arrangements (*see* § 1.9020) as set forth in part 1, subpart X of the rules (*see* § 1.9001 *et seq.*). In addition, at the time of the filing of the requisite notification of a spectrum manager leasing arrangement using Form 608 (*see* §§ 1.9020(e) and 1.913(a)(5)), both parties to the proposed arrangement must have a complete and accurate Form 602 (*see* § 1.913(a)(2)) on file with the Commission.

[68 FR 47859, Aug. 12, 2003, as amended at 69 FR 48162, Aug. 9, 2004; 70 FR 19318, Apr. 13, 2005, 73 FR 25592, May 7, 2008; 76 FR 31260, May 31, 2011; 78 FR 8267, Feb. 5, 2013; 78 FR 8424, Feb. 6, 2013; 79 FR 27502, May 14, 2014]

PROCESSING OF APPLICATIONS

§ 25.150 Receipt of applications.

Applications received by the Commission are given a file number and a unique station identifier for administrative convenience. Neither the assignment of a file number and/or other identifier nor the listing of the application on public notice as received for filing indicates that the application has been found acceptable for filing or precludes subsequent return or dismissal of the application if it is found to be defective or not in accordance with the Commission's rules.

[78 FR 8425, Feb. 6, 2013]

§ 25.151 Public notice period.

(a) At regular intervals, the Commission will issue public notices listing:

(1) The receipt of applications for new station authorizations;

(2) The receipt of applications for license or registration of receive-only earth stations;

(3) The receipt of applications for major modifications to station authorizations;

(4) The receipt of major amendments to pending applications;

(5) The receipt of applications to assign or transfer control of space station facilities, transmitting earth station facilities, or international receive-only earth station facilities;

(6) Significant Commission actions regarding applications;

(7) Information which the Commission in its discretion believes to be of public significance; and

(8) Special environmental considerations as required by part 1 of this chapter.

(b) Special public notices may also be issued at other times under special circumstances involving non-routine matters where speed is of the essence and efficiency of Commission process will be served thereby.

(c) A public notice will not normally be issued for receipt of any of the following applications:

(1) For authorization of a minor technical change in the facilities of an authorized station;

(2) For temporary authorization pursuant to § 25.120.

(3) For an authorization under any of the proviso clauses of section 308(a) of the Communications Act of 1934, as amended [47 U.S.C. 308(a)];

(4) For consent to an involuntary assignment or transfer of control of a transmitting earth station authorization; or

(5) For consent to an assignment or transfer of control of a space station authorization or a transmitting earth station authorization, where the assignment or transfer does not involve a substantial change in ownership or control; or

(6) For change in location of an earth station operating in the 4/6 GHz and 10.95–11.7 GHz bands by no more than 1″ in latitude and/or longitude and for change in location of an earth station operating in the 12/14 GHz bands by no more than 10″ in latitude and/or longitude.

(d) Except as specified in paragraph (e) of this section, no application that has appeared on public notice will be granted until the expiration of a period of thirty days following the issuance of the public notice listing the application, or any major amendment thereto. Any comments or petitions must be delivered to the Commission by that date in accordance with § 25.154.

(e)(1) Applicants seeking authority to operate a temporary fixed earth station pursuant to § 25.277 may consider their applications ''provisionally granted,'' and may initiate operations upon the placement of the complete FCC Form 312 application on public notice, provided that

(i) The temporary fixed earth station will operate only in the conventional Ku-band (14.0–14.5 GHz and 11.7–12.2 GHz bands);

(ii) The temporary fixed earth station's operations will be consistent with all routine-licensing requirements for the conventional Ku-band; and

(iii) The temporary fixed earth station's operations will be limited to satellites on the Permitted Space Station List.

(2) Applications for authority granted pursuant to paragraph (e)(1) of this section shall be placed on public notice pursuant to paragraph (a)(1) of this section. If no comments or petitions are filed within 30 days of the public notice date, the authority granted will be considered a regular temporary fixed earth station authorization as of 30 days after the public notice date. If a comment or petition is filed within 30 days of the public notice date, the applicant must suspend operations immediately pending resolution of the issues raised in that comment or petition.

[56 FR 24016, May 28, 1991, as amended at 58 FR 68061, Dec. 23, 1993; 70 FR 32254, June 2, 2005]

§ 25.152 Dismissal and return of applications.

(a) Any application may be dismissed without prejudice as a matter of right if the applicant requests its dismissal prior to final Commission action.

(b) The Commission will dismiss an application for failure to prosecute or for failure to respond substantially within a specified time period to official correspondence or requests for additional information. Dismissal will be without prejudice unless the application is mutually exclusive pursuant to § 25.155, in which case it will be dismissed with prejudice.

§ 25.153 Repetitious applications.

(a) Where an application has been denied or dismissed with prejudice, the Commission will not consider a like application involving service of the same kind to the same area by the same applicant, or by its successor or assignee, or on behalf of or for the benefit of any of the original parties in interest, until after the lapse of 12 months from the effective date of the Commission's action.

(b) Where an appeal has been taken from the action of the Commission denying a particular application, another application for the same class of station and for the same area, in whole or in part, filed by the same applicant or by his successor or assignee, or on behalf or for the benefit of the original

parties in interest, will not be considered until the final disposition of the appeal.

[56 FR 24016, May 28, 1991, as amended at 79 FR 8320, Feb. 12, 2014]

§ 25.154 Opposition to applications and other pleadings.

(a) Petitions to deny, petitions for other forms of relief, and other objections or comments must:

(1) Identify the application or applications (including applicant's name, station location, Commission file numbers, and radio service involved) with which it is concerned;

(2) Be filed within thirty (30) days after the date of public notice announcing the acceptance for filing of the application or major amendment thereto (unless the Commission otherwise extends the filing deadline);

(3) Filed in accordance with the pleading limitations, periods and other applicable provisions of §§1.41 through 1.52 of this chapter, except that such petitions must be filed electronically through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter;

(4) Contain specific allegations of fact (except for those of which official notice may be taken) to support the specific relief requested, which shall be supported by affidavit of a person or persons with personal knowledge thereof, and which shall be sufficient to demonstrate that the petitioner (or respondent) is a party of interest and that a grant of, or other Commission action regarding, the application would be prima facie inconsistent with the public interest; and

(5) Contain a certificate of service showing that it has been mailed to the applicant no later than the date the pleading is filed with the Commission.

(b) The Commission will classify as informal objections:

(1) Any pleading not filed in accordance with paragraph (a) of this section;

(2) Any pleading to which the thirty (30) day public notice period of §25.151 does not apply; or

(3) Any objections to the grant of an application when the objections do not conform to either paragraph (a) of this section or to other Commission rules and requirements.

(c) Except for opposition to petitions to deny an application filed pursuant to §25.220, oppositions to petitions to deny an application or responses to comments and informal objections regarding an application may be filed within 10 days after the petition, comment, or objection is filed and must be in accordance with other applicable provisions of §§1.41 through 1.52 of this chapter, except that such oppositions must be filed electronically through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter.

(d) Reply comments by a party that filed a petition to deny may be filed in response to pleadings filed pursuant to paragraph (c) or (e) of this section within 5 days after expiration of the time for filing oppositions unless the Commission extends the filing deadline and must be in accordance with other applicable provisions of §§1.41 through 1.52 of this chapter, except that such reply comments must be filed electronically through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter.

(e) Within 30 days after a petition to deny an application filed pursuant to §25.220 is filed, the applicant may file an opposition to the petition and must file a statement with the Commission, either in conjunction with, or in lieu of, such opposition, explaining whether the applicant has resolved all outstanding issues raised by the petitioner. This statement and any conjoined opposition must be in accordance with the provisions of §§1.41 through 1.52 of this chapter applicable to oppositions to petitions to deny, except that such reply comments must be filed electronically through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter.

[56 FR 24016, May 28, 1991, as amended at 69 FR 47795, Aug. 6, 2004; 70 FR 32254, June 2, 2005; 79 FR 8320, Feb. 12, 2014]

§ 25.155 Mutually exclusive applications.

(a) The Commission will consider applications to be mutually exclusive if their conflicts are such that the grant of one application would effectively preclude by reason of harmful electrical interference, or other practical reason, the grant of one or more other applications.

(b) An application for an NGSO-like space station license, within the meaning of § 25.157, will be entitled to comparative consideration with one or more conflicting applications only if:

(1) The application is mutually exclusive with another NGSO-like space station application; and

(2) The application is received by the Commission in a condition acceptable for filing by the ''cut-off'' date specified in a public notice.

(c) An application for a GSO-like space station license, within the meaning of § 25.158, will be entitled to comparative consideration with one or more conflicting applications only if:

(1) The application is mutually exclusive with another GSO-like space station application; and

(2) The application is received by the Commission in a condition acceptable for filing at the same millisecond as another GSO-like space station application with which it is mutually exclusive.

[68 FR 51505, Aug. 27, 2003]

§ 25.156 Consideration of applications.

(a) Applications for a radio station authorization, or for modification or renewal of an authorization, will be granted if, upon examination of the application, any pleadings or objections filed, and upon consideration of such other matters as it may officially notice, the Commission finds that the applicant is legally, technically, and otherwise qualified, that the proposed facilities and operations comply with all applicable rules, regulations, and policies, and that grant of the application will serve the public interest, convenience and necessity.

(b) Whenever the Commission grants any application in part, or subject to any terms or conditions other than those routinely applied to applications of the same type, the grant shall be considered final unless the Commission should revise its action (either by granting the application as originally requested, or by designating the application for hearing) in response to a petition for reconsideration which:

(1) Is filed by the applicant within thirty (30) days from the release date of the conditioned grant; and

(2) Rejects the grant as made and explains the reasons why the application should be granted as originally requested.

(c) Reconsideration or review of any final action taken by the Commission will be in accordance with subpart A of part 1 of this chapter.

(d)(1) Applications for NGSO-like satellite systems will be considered pursuant to the procedures set forth in § 25.157.

(2) Applications for GSO-like satellite systems will be considered pursuant to the procedures set forth in § 25.158.

(3) Applications for NGSO-like satellite and GSO-like systems employing two or more service bands will be treated like separate applications for each service band, and each service band request will be considered pursuant to § 25.157 or § 25.158, as appropriate.

(4) Applications for feeder link authority or intersatellite link authority will be treated like an application separate from its associated service band. Each feeder link request or intersatellite link request will be considered pursuant to the procedure for GSO-like service or NGSO-like service, as applicable.

(5) In cases where the Commission has not adopted frequency-band specific service rules, the Commission will not consider NGSO-like applications after it has granted a GSO-like application, and it will not consider GSO-like applications after it has granted an NGSO-like application, unless and until the Commission establishes NGSO/GSO sharing criteria for that frequency band. In the event that the Commission receives NGSO-like applications and GSO-like applications at the same time, and the Commission has not adopted sharing criteria in that band, the Commission will divide the spectrum between GSO-like and

NGSO-like licensees based on the proportion of qualified GSO-like and NGSO-like applicants.

(6) An application for DBS or DARS services will be entitled to comparative consideration with one or more conflicting applications only if:

(i) The application is mutually exclusive with another application; and

(ii) The application is received by the Commission in a condition acceptable for filing by the ''cut-off'' date specified in a public notice.

[56 FR 24016, May 28, 1991, as amended at 68 FR 51505, Aug. 27, 2003]

§ 25.157 Consideration of NGSO-like satellite applications.

(a) This section specifies the Commission's procedures for considering license applications for ''NGSO-like satellite systems.'' For purposes of this section, the term ''NGSO-like satellite system'' is defined as:

(1) All NGSO satellite systems, and

(2) All GSO MSS satellite systems, in which the satellites are designed to communicate with earth stations with omni-directional antennas.

(b) Each NGSO-like satellite system application will be reviewed to determine whether it is acceptable for filing within the meaning of § 25.112. Any application that is not acceptable for filing would be returned to the applicant.

(c) Each NGSO-like satellite system application that is acceptable for filing will be reviewed to determine whether it is a ''competing application,'' *i.e.*, filed in response to a public notice initiating a processing round, or a ''lead application,'' *i.e.*, all other NGSO-like satellite system applications.

(1) Competing applications that are acceptable for filing will be placed on public notice to provide interested parties an opportunity to file pleadings in response to the application pursuant to § 25.154.

(2) Lead applications that are acceptable for filing will be placed on public notice. This public notice will initiate a processing round, establish a cut-off date for competing NGSO-like satellite system applications, and provide interested parties an opportunity to file pleadings in response to the application pursuant to § 25.154.

(d) After review of each of the applications in the processing round, and all the pleadings filed in response to each application, the Commission will grant all the applications that meet the standards of § 25.156(a), and deny the other applications.

(e)(1) In the event that there is insufficient spectrum in the frequency band available to accommodate all the qualified applicants in a processing round, the available spectrum will be divided equally among the licensees whose applications are granted pursuant to paragraph (d) of this section, except as set forth in paragraph (e)(2) or (e)(3) of this section.

(2) In cases where there are only one or two applications in a processing round granted pursuant to paragraph (d) of this section, each applicant will be assigned ⅓ of the available spectrum, and the remaining spectrum will be made available to other licensees in an additional processing round pursuant to paragraph (c) of this section.

(3) In cases where there are three or more applications in a processing round granted pursuant to paragraph (d) of this section, and one or more applicants apply for less spectrum than they would be warranted under paragraph (e)(1) of this section, those applicants will be assigned the bandwidth amount they requested in their applications. In those cases, the remaining qualified applicants will be assigned the lesser of the amount of spectrum they requested in their applications and the amount spectrum that they would be assigned if the available spectrum were divided equally among the remaining qualified applicants.

(f)(1) Each licensee will be allowed to select the particular band segment it wishes to use no earlier than 60 days before they plan to launch the first satellite in its system, and no later than 30 days before that date, by submitting a letter to the Secretary of the Commission. The licensee shall serve copies of this letter to the other participants in the processing round pursuant to § 1.47 of this chapter.

(2) The licensee shall request contiguous bandwidth in both the uplink and downlink band. Each licensee's bandwidth selection in both the uplink and downlink band shall not preclude other

licensees from selecting contiguous bandwidth.

(3) If two or more licensees in a processing round request the same band segment, all licensees other than the first one to request that particular band segment will be required to make another selection.

(g)(1) In the event that an applicants' license is cancelled for any reason, the Commission will redistribute the bandwidth allocated to that applicant equally among the remaining applicants whose licenses were granted concurrently with the cancelled license, unless the Commission determines that such a redistribution would not result in a sufficient number of licensees remaining to make reasonably efficient use of the frequency band.

(2) In the event that the redistribution of bandwidth set forth in paragraph (g)(1) of this section would not result in a sufficient number of licensees remaining to make reasonably efficient use of the frequency band, the Commission will issue a public notice initiating a processing round, as set forth in paragraph (c) of this section, to invite parties to apply for an NGSO-like satellite system license to operate in a portion of the bandwidth made available as a result of the cancellation of the initial applicant's license. Parties already holding licenses to operate an NGSO-like satellite system in that frequency band will not be permitted to participate in that processing round.

(3) There is a presumption that three satellite licensees in a frequency band are sufficient to make reasonably efficient use of the frequency band.

(h) Services offered pursuant to an NGSO-like license in a frequency band granted before the Commission has adopted frequency-band-specific service rules for that band will be subject to the default service rules in § 25.217.

[68 FR 51505, Aug. 27, 2003]

§ 25.158 Consideration of GSO-like satellite applications.

(a) This section specifies the Commission's procedures for considering license applications for ''GSO-like satellite systems.'' For purposes of this section, the term ''GSO-like satellite system'' is defined as a GSO satellite designed to communicate with earth stations with directional antennas. Examples of GSO-like satellite systems are those which use earth stations with antennas with directivity towards the satellites, such as FSS, and MSS feeder links which use GSO satellites. GSO-like satellite systems are satellite systems that are not NGSO-like satellite systems within the meaning of § 25.157(a).

(b) Applications for GSO-like satellite system licenses will be placed in a queue and considered in the order that they are filed, pursuant to the following procedure:

(1) The application will be reviewed to determine whether it is acceptable for filing within the meaning of § 25.112. If not, the application will be returned to the applicant.

(2) If the application is acceptable for filing, the application will be placed on public notice pursuant to § 25.151, and interested parties will be given an opportunity to file pleadings pursuant to § 25.154.

(3) The application will be granted only if it meets each of the following criteria:

(i) After review of the application and any pleadings filed in response to that application, the Commission finds that the application meets the standards of § 25.156(a); and

(ii) The proposed satellite will not cause harmful interference to any previously licensed operations.

(c) An applicant for a GSO-like satellite system license is not allowed to transfer, assign, or otherwise permit any other entity to assume its place in any queue.

(d) In the event that two or more GSO-like satellite system license applications are mutually exclusive within the meaning of § 25.155(c), the Commission will consider those applications pursuant to the following procedure:

(1) Each application will be reviewed to determine whether it is acceptable for filing within the meaning of § 25.112. Any application not found acceptable for filing will be returned to the applicant.

(2) All applications that are acceptable for filing will be placed on public

notice pursuant to §25.151, and interested parties will be given an opportunity to file pleadings pursuant to §25.154.

(3) Each application will be granted if it meets the criteria of paragraph (b)(3) of this section, and otherwise will be denied.

(4) In the event that two or more applications are granted pursuant to paragraph (d)(3) of this section, the available bandwidth at the orbital location or locations in question will be divided equally among those licensees.

(5) Licensees whose licenses are granted pursuant to paragraph (d)(4) of this section will be allowed to select the particular band segment it wishes to use no earlier than 60 days before they plan to launch the first satellite in its system, and no later than 30 days before that date, by submitting a letter to the Secretary of the Commission. The licensee shall serve copies of this letter to the other participants in the processing round pursuant to §1.47 of this chapter.

(6) Licensees whose licenses are granted pursuant to paragraph (d)(4) of this section shall request contiguous bandwidth in both the uplink and downlink band. Each licensee's bandwidth selection shall not preclude other licensees from selecting contiguous bandwidth.

(7) If two or more licensees whose licenses are granted pursuant to paragraph (d)(4) of this section request the same band segment, all licensees other than the first one to request that particular band segment will be required to make another selection.

(e) Services offered pursuant to a GSO-like license in a frequency band granted before the Commission has adopted frequency-band-specific service rules for that band will be subject to the default service rules in §25.217.

[68 FR 51506, Aug. 27, 2003]

§25.159 Limits on pending applications and unbuilt satellite systems.

(a) Applicants with a total of five applications for GSO-like space station licenses on file with the Commission in a particular frequency band, or a total of five licensed-but-unbuilt GSO-like space stations in a particular frequency band, or a combination of pending GSO-like applications and licensed-but-unbuilt GSO-like space stations in a particular frequency band that equals five, will not be permitted to apply for another GSO-like space station license in that frequency band.

(b) Applicants with an application for one NGSO-like satellite system license on file with the Commission in a particular frequency band, or one licensed-but-unbuilt NGSO-like satellite system in a particular frequency band, will not be permitted to apply for another NGSO-like satellite system license in that frequency band.

(c) If an applicant has an attributable interest in one or more other entities seeking one or more space station licenses, the pending applications and licensed-but-unbuilt satellite systems filed by those other entities will be counted as filed by the applicant for purposes of the limits on the number of pending space station applications and licensed-but-unbuilt satellite systems in this paragraph. For purposes of this paragraph, an applicant has an ''attributable interest'' in another entity if:

(1) It holds equity (including all stockholdings, whether voting or nonvoting, common or preferred) and debt interest or interests, in the aggregate, exceed thirty-three (33) percent of the total asset value (defined as the aggregate of all equity plus all debt) of that entity, or

(2) It holds a controlling interest in that entity, or is the subsidiary of a party holding a controlling interest in that entity, within the meaning of 47 CFR 1.2110(b)(2).

(3) For purposes of paragraphs (c)(1) and (c)(2) of this section, ownership interests shall be calculated on a fully diluted basis, *i.e.*, all agreements, such as warrants, stock options, and convertible debentures, will generally be treated as if the rights thereunder already have been fully exercised.

(d) In the event that a licensee misses three or more milestones within any three-year period, the Commission will presume that the licensee obtained one or more of those licenses for speculative purposes. Unless the licensee rebuts this presumption, it will not be permitted to apply for a GSO-like satellite or an NGSO-like satellite system

in any frequency band if it has two or more satellite applications pending, or two licensed-but-unbuilt satellite systems of any kind. This limit will remain in effect until the licensee provides adequate information to demonstrate that it is very likely to construct its licensed facilities if it were allowed to file more applications.

(e) For purposes of this section, ''frequency band'' means one of the paired frequency bands available for satellite service listed in § 25.202.

[68 FR 51506, Aug. 27, 2003]

FORFEITURE, TERMINATION, AND REINSTATEMENT OF STATION AUTHORIZATION

§ 25.160 Administrative sanctions.

(a) A forfeiture may be imposed for failure to operate in conformance with the Communications Act, license specifications, any conditions imposed on an authorization, or any of the Commission's rules and regulations; or for failure to comply with Commission requests for information needed to complete international coordination or for failure to cooperate in Commission investigations with respect to international coordination.

(b) A forfeiture will be imposed and the station license may be terminated for the malicious transmissions of any signal that causes harmful interference with any other radio communications or signals.

(c) A station license may be revoked for any repeated and willful violation of the kind set forth in paragraphs (a) and (b) of this section.

(d) The sanctions specified in paragraphs (a), (b), and (c) of this section will be imposed only after the licensee has been provided an opportunity to be heard pursuant to titles III and V of the Communications Act of 1934, as amended.

(e) For purposes of this section, the term ''repeated'' and ''willful'' are defined as set out in section 312(f) of the Communications Act, 47 U.S.C. 312(f).

§ 25.161 Automatic termination of station authorization.

A station authorization shall be automatically terminated in whole or in part without further notice to the licensee upon:

(a)(1) Failure to meet any applicable milestone for implementation of the licensed satellite system specified in § 25.164(a) and/or (b), without demonstrating that the failure was caused by circumstances beyond the licensee's control, or

(2) If there are no applicable milestones for implementation of the licensed satellite system specified in § 25.164(a) and/or (b), the expiration of the required date of completion of construction or other required action specified in the authorization, or after any additional time authorized by the Commission, if a certification of completion of the required action has not been filed with the Commission unless a request for an extension of time has been filed with the Commission but has not been acted on.

(b) The expiration of the license term, unless, in the case of an earth station license, an application for renewal of the license has been filed with the Commission pursuant to § 25.121(e) or, in the case of a space station license, an application for extension of the license term has been filed with the Commission; or

(c) The removal or modification of the facilities which renders the station not operational for more than 90 days, unless specific authority is requested.

[56 FR 24016, May 28, 1991, as amended at 68 FR 51507, Aug. 27, 2003; 78 FR 8425, Feb. 6, 2013; 79 FR 8320, Feb. 12, 2014]

§ 25.162 Cause for termination of interference protection.

The protection from interference afforded by the registration of a receiving earth station shall be automatically terminated if:

(a) The request for registration is not submitted to the Commission within 3 months of the completion of the frequency coordination process, except as provided for in § 25.203;

(b) The receiving earth station is not constructed and placed into service within 6 months after completion of coordination;

(c) The Commission finds that the station has been used less than 50% of the time during any 12 month period;

(d) The Commission finds that the station has been used for an unlawful purpose or otherwise in violation of the Commission's rules, regulations or policies;

(e) The Commission finds that the actual use of the facility is inconsistent with what was set forth in the registrant's application; or

(f) The Commission finds that the frequency coordination exhibit, upon which the granted registration is based, is incomplete or does not conform with established coordination procedures.

§ 25.163 Reinstatement.

(a) A station authorization terminated in whole or in part under the provisions of § 25.161 may be reinstated if the Commission, in its discretion, determines that reinstatement would best serve the public interest, convenience and necessity. Petitions for reinstatement will be considered only if:

(1) The petition is filed within 30 days after the expiration date set forth in § 25.161(a) or § 25.161(b), whichever is applicable;

(2) The petition explains the failure to file a timely notification or renewal application; and

(3) The petition sets forth with specificity the procedures which have been established to insure timely filings in the future.

(b) A special temporary authorization shall automatically terminate upon the expiration date specified therein, or upon failure of the grantee to comply with any special terms or conditions set forth in the authorization. Temporary operation may be extended beyond the termination date only upon application to the Commission.

§ 25.164 Milestones.

(a) Licensees of geostationary orbit satellite systems other than DBS and DARS satellite systems, including GSO MSS satellite systems, licensed on or after August 27, 2003 will be required to comply with the schedule set forth in paragraphs (a)(1) through (a)(4) of this section in implementing their satellite systems, unless a different schedule is established by Title 47, Chapter I, or by Commission Order, or by Order adopted pursuant to delegated authority. These dates are to be measured from the date the license is issued.

(1) *One year:* Enter into a binding non-contingent contract to construct the licensed satellite system.

(2) *Two years:* Complete the critical design review of the licensed satellite system.

(3) *Three years:* Begin the construction of the satellite.

(4) *Five years:* Launch the space station, position it in its assigned orbital location, and operate it in accordance with the station authorization.

(b) Licensees of non-geostationary orbit satellite systems other than DBS and DARS satellite systems licensed on or after September 11, 2003, will be required to comply with the schedule set forth in paragraphs (b)(1) through (b)(5) of this section in implementing their satellite systems, unless a different schedule is established by Title 47, Chapter I, or by Commission Order, or by Order adopted pursuant to delegated authority. These dates are to be measured from the date the license is issued.

(1) *One year:* Enter into a binding non-contingent contract to construct the licensed satellite system.

(2) *Two years:* Complete the critical design review of the licensed satellite system.

(3) *Two years, six months:* Begin the construction of the first satellite in the licensed satellite system.

(4) *Three years, six months:* Launch the first space station, place it in the authorized orbit, and operate it in accordance with the station authorization.

(5) *Six years:* Bring all the satellites in the licensed satellite system into operation.

(c) Licensees of all satellite systems, other than DBS and DARS satellite systems, must either submit a copy of a binding non-contingent satellite construction contract with the Commission or notify the Commission in writing that they have not entered into such a contract, no later than 15 days after the milestone date for entering into such a contract.

(d) Licensees of all satellite systems, other than DBS and DARS satellite

systems, must either submit information to the Commission sufficient to demonstrate that the licensee has completed the critical design review of the licensed satellite system or notify the Commission in writing that critical design review has not been completed, no later than 15 days after the milestone date for completion of such design review.

(e) Licensees of all satellite systems, other than DBS and DARS satellite systems, must either submit information to the Commission sufficient to demonstrate that the licensee has commenced physical construction of its licensed spacecraft or notify the Commission in writing that such construction has not commenced, no later than 15 days after the milestone date for such commencement.

(f) Licensees of all satellite systems, other than DBS and SDARS systems, must either demonstrate compliance with an applicable deadline for operation or launch and operation specified in paragraph (a) or (b) of this section or notify the Commission in writing that launch and commencement of operation has not occurred, no later than 15 days after the deadline. Compliance with a milestone requirement in paragraph (a)(4), (b)(4), or (b)(5) of this section may be demonstrated by certifying pursuant to §25.121(d) that the space station, or stations, has, or have, been launched and placed in the authorized orbital location or non-geostationary orbit(s) and that in-orbit operation of the space station or stations has been tested and found to be consistent with the terms of the authorization.

(g) Licensees of satellite systems that include both non-geostationary orbit satellites and geostationary orbit satellites, other than DBS and DARS satellite systems, will be required to comply with the schedule in paragraph (a) of this section with respect to the geostationary orbit satellites, and with the schedule set forth in paragraph (b) of this section with respect to the non-geostationary orbit satellites.

(h) In cases where the Commission grants a satellite authorization in different stages, such as a license for a satellite system using feeder links or inter-satellite links, the earliest of the milestone schedules will be applied to the entire satellite system.

[68 FR 51507, Aug. 27, 2003, as amended at 69 FR 51587, Aug. 20, 2004; 79 FR 8320, Feb. 12, 2014]

§25.165 Posting of bonds.

(a) For all satellite licenses issued after September 20, 2004, other than DBS licenses, DARS licenses, and replacement satellite licenses as defined in paragraph (e), the licensee is required to post a bond within 30 days of the grant of its license. Failure to post a bond will render the license null and void automatically.

(1) NGSO licensees are required to post a bond in the amount of $5 million.

(2) GSO licensees are required to post a bond in the amount of $3 million.

(3) Licensees of satellite systems including both NGSO satellites and GSO satellites that operate in the same frequency bands as the NGSO satellites are required to post a bond in the amount of $5 million.

(b) The licensee must use a surety company deemed acceptable within the meaning of 31 U.S.C. 9304 *et seq.* (*See, e.g.*, Department of Treasury Fiscal Service, Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and As Acceptable Reinsurance Companies, 57 FR 29356, July 1, 1992.) The bond must name the U.S. Treasury as beneficiary in the event of the licensee's default. The licensee must provide the Commission with a copy of the performance bond, including all details and conditions.

(c) A licensee will be considered to be in default if it fails to meet any milestone deadline set forth in §25.164, and, at the time of milestone deadline, the licensee has not provided a sufficient basis for extending the milestone.

(d) A GSO licensee will be permitted to reduce the amount of the bond by $750,000 upon successfully meeting a milestone deadline set forth in section 25.164(a) of this chapter. An NGSO licensee will be permitted to reduce the amount of the bond by $1 million upon successfully meeting a milestone deadline set forth in section 25.164(b) of this chapter.

(e) A replacement satellite is one that is:

(1) Authorized to be operated at the same orbit location, in the same frequency bands, and with the same coverage area as one of the licensee's existing satellites, and

(2) Scheduled to be launched so that it will be brought into use at approximately the same time as, but no later than, the existing satellite is retired.

[68 FR 51507, Aug. 27, 2003, as amended at 69 FR 51587, Aug. 20, 2004]

REPORTING REQUIREMENTS FOR SPACE STATION OPERATORS

§ 25.170 Annual reporting requirements.

All operators of U.S.-licensed space stations and operators of non-U.S.-licensed space stations granted U.S. market access must, on June 30 of each year, file a report with the International Bureau containing the following information:

(a) Identification of any space station(s) not available for service or otherwise not performing to specifications as of May 31 of the current year, any spectrum within the scope of the part 25 license or market access grant that the space station is unable to use, the cause(s) of these difficulties, and the date when the space station was taken out of service or the malfunction was identified; and

(b) A current listing of the names, titles, addresses, email addresses, and telephone numbers of the points of contact for resolution of interference problems and for emergency response. Contact personnel should include those responsible for resolution of short term, immediate interference problems at the system control center, and those responsible for long term engineering and technical design issues.

(c) Construction progress and anticipated launch dates for authorized replacement satellites.

NOTE TO §25.170: Space station operators may also be subject to outage reporting requirements in part 4 of this chapter.

[79 FR 8321, Feb. 12, 2014]

§ 25.171 Contact information reporting requirements.

If contact information filed in space station application or pursuant to §25.170(b) or §25.172(a)(1) changes, the operator must file corrected information electronically in the Commission's International Bureau Filing System (IBFS), in the ''Other Filings'' tab of the station's current authorization file. The operator must file the updated information within 10 days.

[79 FR 8321, Feb. 12, 2014]

§ 25.172 Requirements for reporting space station control arrangements.

(a) The operator of any space station licensed by the Commission or granted U.S. market access must file the following information with the Commission prior to commencing operation with the space station, or, in the case of a non-U.S.-licensed space station, prior to commencing operation with U.S. earth stations.

(1) The information required by §25.170(b).

(2) The call signs of any telemetry, tracking, and command earth station(s) communicating with the space station from any site in the United States.

(3) The location, by city and country, of any telemetry, tracking, and command earth station that communicates with the space station from any point outside the United States.

(4) Alternatively, instead of listing the call signs and/or locations of earth stations currently used for telemetry, tracking, and command, the space station operator may provide 24/7 contact information for a satellite control center and a list of the call signs of any U.S. earth stations, and the locations of any non-U.S. earth stations, that are used or may be used for telemetry, tracking, and command communication with the space station(s) in question.

(b) The information required by paragraph (a) of this section must be filed electronically in the Commission's International Bureau Filing System (IBFS), in the ''Other Filings'' tab of the space station's current authorization file. If call sign or location information provided pursuant to paragraph

(a) of this section becomes invalid due to a change of circumstances, the space station operator must file updated information in the same manner within 30 days, except with respect to changes less than 30 days in duration, for which no update is necessary.

[79 FR 8321, Feb. 12, 2014]

§ 25.173 Results of in-orbit testing.

(a) Space station operators must measure the co-polarized and cross-polarized performance of space station antennas through in-orbit testing and submit the measurement data to the Commission upon request.

(b) Within 15 days after completing in-orbit testing of a space station licensed under this part, the operator must notify the Commission that such testing has been completed and certify that the space station's measured performance is consistent with the station authorization and that the space station is capable of using its assigned frequencies or inform the Commission of any discrepancy. The licensee must also indicate in the filing whether the space station has been placed in the assigned geostationary orbital location or non-geostationary orbit. If the licensee files a certification pursuant to this paragraph before the space station has been placed in its assigned orbit or orbital location, the licensee must separately notify the Commission that the space station has been placed in such orbit or orbital location within 3 days after such placement and that the station's measured performance is consistent with the station authorization.

[79 FR 8321, Feb. 12, 2014]

Subpart C—Technical Standards

SOURCE: 30 FR 7176, May 28, 1965; 36 FR 2562, Feb. 6, 1971, unless otherwise noted.

§ 25.201 [Reserved]

§ 25.202 Frequencies, frequency tolerance, and emission limits.

(a)(1) *Frequency band.* The following frequencies are available for use by the Fixed-Satellite Service. Precise frequencies and bandwidths of emission shall be assigned on a case-by-case basis. Refer to the U.S. Table of Frequency Allocations, 47 CFR 2.106, including relevant footnotes, for band-specific use restrictions and coordination requirements. Restrictions and coordination conditions not mentioned in the Table of Frequency Allocations are set forth in the annotations to the following list:

Space-to-earth (GHz)	Earth-to-space (GHz)
3.6–3.65	5.091–5.25
3.65–3.7	5.85–5.925
3.7–4.2	5.925–6.425
4.5–4.8	6.425–6.525
6.7–7.025	6.525–6.7
7.025–7.075	6.7–7.025
10.7–11.7	7.025–7.075
11.7–12.2	12.7–12.75
12.2–12.7	12.75–13.25
18.3–18.58[1 2]	13.75–14
18.58–18.8	14–14.2
18.8–19.3	14.2–14.5
19.3–19.7	15.43–15.63
19.7–20.2	17.3–17.8
37.5–40[3]	24.75–25.05
40–42	25.05–25.25
	[2] 27.5–28.35
	[4] 28.35–28.6
	[5] 28.6–29.1
	[6] 29.1–29.25
	[7] 29.25–29.5
	[4] 29.5–30.0
	47.2–50.2

[1] The 18.3–18.58 GHz band is shared co-equally with existing terrestrial radiocommunication systems until November 19, 2012.
[2] FSS is secondary to LMDS in this band.
[3] Use of this band by the Fixed-Satellite Service is limited to gateway earth station operations, provided the licensee under this part obtains a license under part 101 of this chapter or an agreement from a part 101 licensee for the area in which an earth station is to be located. Satellite earth station facilities in this band may not be ubiquitously deployed and may not be used to serve individual consumers.
[4] This band is primary for GSO FSS and secondary for NGSO FSS.
[5] This band is primary for NGSO FSS and secondary for GSO FSS.
[6] This band is primary for MSS feeder links and LMDS hub-to-subscriber transmission.
[7] This band is primary for MSS feeder links and GSO FSS.

(2) [Reserved]

(3) The following frequencies are available for use by the non-voice, non-geostationary mobile-satellite service:

137–138 MHz: Space-to-Earth
148–150.05 MHz: Earth-to-space
399.9–400.05 MHz: Earth-to-space
400.15–401 MHz: Space-to-Earth

(4)(i) The following frequencies are available for use by the 1.6/2.4 GHz Mobile-Satellite Service:

1610–1626.5 MHz: User-to-Satellite Link
1613.8–1626.5 MHz: Satellite-to-User Link (secondary)
2483.5–2500 MHz: Satellite-to-User Link

(ii) The following frequencies are available for use by the 2 GHz Mobile-Satellite Service: 2000–2020 MHz: User-

to-Satellite Link; 2180–2200 MHz: Satellite-to-User Link.

(iii)(A) The following frequencies are available for use by the 1.5/1.6 GHz Mobile-Satellite Service:

1525–1559 MHz: space-to-Earth
1626.5–1660.5 MHz: Earth-to-space

(B) The use of the frequencies 1544–1545 MHz and 1645.5–1646.5 MHz is limited to distress and safety communications.

(5) The following frequencies are available for use by the inter-satellite service:

22.55–23.00 GHz
23.00–23.55 GHz
24.45–24.65 GHz
24.65–24.75 GHz
54.25–56.90 GHz
57.00–58.20 GHz
65.00–71.00 GHz

(6) The following frequencies are available for use by the Satellite Digital Audio Radio Service (SDARS), and for any associated terrestrial repeaters: 2320–2345 MHz (space-to-Earth)

(7) The following frequencies are available for use by the Direct Broadcast Satellite service:

12.2–12.7 GHz: Space-to-Earth.

12.2–12.7 GHz: Space-to-Earth.

(8) The following frequencies are available for use by ESVs:

3700–4200 MHz (space-to-Earth)
5925–6425 MHz (Earth-to-space)
10.95–11.2 GHz (space-to-Earth)
11.45–11.7 GHz (space-to-Earth)
11.7–12.2 GHz (space-to-Earth)
14.0–14.5 GHz (Earth-to-space)

ESVs shall be authorized and coordinated as set forth in §§ 25.221 and 25.222. ESV operators, collectively, may coordinate up to 180 megahertz of spectrum in the 5925–6425 MHz (Earth-to-space) band for all ESV operations at any given location subject to coordination.

(9) The following frequencies are available for use by the Broadcasting-Satellite Service after 1 April 2007:

17.3–17.7 GHz (space-to-Earth)
17.7–17.8 GHz (space-to-Earth)

NOTE 1 TO PARAGRAPH (a)(9): Use of the 17.3–17.7 GHz band by the broadcasting-satellite service is limited to geostationary satellite orbit systems.

NOTE 2 TO PARAGRAPH (a)(9): Use of the 17.7–17.8 GHz band (space-to-Earth) by the broadcasting-satellite service is limited to transmissions from geostationary satellite orbit systems to receiving earth stations located outside of the United States and its Possessions. In the United States and its Possessions, the 17.7–17.8 GHz band is allocated on a primary basis to the Fixed Service.

(10)(i) The following frequencies are available for use by Vehicle-Mounted Earth Stations (VMESs):

10.95–11.2GHz (space-to-Earth)
11.45–11.7GHz (space-to-Earth)
11.7–12.2GHz (space-to-Earth)
14.0–14.5GHz (Earth-to-space)

(ii) VMESs shall be authorized as set forth in § 25.226.

(11)(i) The following frequencies are available for use by Earth Stations Aboard Aircraft (ESAA):

10.95–11.2 GHz (space-to-Earth)
11.45–11.7 GHz (space-to-Earth)
11.7–12.2 GHz (space-to-Earth)
14.0–14.5 GHz (Earth-to-space)

(ii) ESAAs shall be authorized as set forth in § 25.227.

(b) Other frequencies and associated bandwidths of emission may be assigned on a case-by-case basis to space systems under this part in conformance with § 2.106 of this chapter and the Commission's rules and policies.

(c) [Reserved]

(d) *Frequency tolerance, Earth stations.* The carrier frequency of each earth station transmitter authorized in these services shall be maintained within 0.001 percent of the reference frequency.

(e) *Frequency tolerance, space stations.* The carrier frequency of each space station transmitter authorized in these services shall be maintained within 0.002 percent of the reference frequency.

(f) *Emission limitations.* Except for SDARS terrestrial repeaters and as provided for in paragraph (i), the mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the schedule set forth in paragraphs (f)(1) through (f)(4) of this section. The out-of-band emissions of SDARS terrestrial repeaters shall be attenuated in accordance with the schedule set forth in paragraph (h) of this section.

(1) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 50

percent up to and including 100 percent of the authorized bandwidth: 25 dB;

(2) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: 35 dB;

(3) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: An amount equal to 43 dB plus 10 times the logarithm (to the base 10) of the transmitter power in watts;

(4) In any event, when an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in paragraphs (f) (1), (2) and (3) of this section.

(g) Telemetry, tracking and command functions must be conducted at either or both edges of the allocated band(s). Frequencies, polarization and coding shall be selected to minimize interference into other satellite networks and within their own satellite system.

(h) *Out-of-band emission limitations for SDARS terrestrial repeaters.* (1) Any SDARS terrestrial repeater operating at a power level greater than 2-watt average EIRP is required to attenuate its out-of-band emissions below the transmitter power P by a factor of not less than 90 + 10 log (P) dB in a 1-megahertz bandwidth outside the 2320–2345 MHz band, where P is average transmitter output power in watts.

(2) Any SDARS terrestrial repeater operating at a power level equal to or less than 2-watt average EIRP is required to attenuate its out-of-band emissions below the transmitter power P by a factor of not less than 75 + 10 log (P) dB in a 1-megahertz bandwidth outside the 2320–2345 MHz band, where P is average transmitter output power in watts.

(3) SDARS repeaters are permitted to attenuate out-of-band emissions less than the levels specified in paragraphs (h)(1) and (h)(2), of this section unless a potentially affected WCS licensee provides written notice that it intends to commence commercial service within the following 365 days. Starting 180 days after receipt of such written notice, SDARS repeaters within the area notified by the potentially affected WCS licensee must attenuate out-of-band emissions to the levels specified in paragraphs (h)(1) and (h)(2) of this section.

(4) For the purpose of this section, a WCS licensee is potentially affected if it is authorized to operate a base station in the 2305–2315 MHz or 2350–2360 MHz bands within 25 kilometers of a repeater seeking to operate with an out of band emission attenuation factor less than those prescribed in paragraphs (h)(1) or (2) of this section.

(i) The WCS licensee is authorized to operate a base station in the 2305–2315 MHz or 2350–2360 MHz bands in the same Major Economic Area (MEA) as that in which a SDARS terrestrial repeater is located.

(ii) The WCS licensee is authorized to operate a base station in the 2315–2320 MHz or 2345–2350 MHz bands in the same Regional Economic Area Grouping (REAG) as that in which a SDARS terrestrial repeater is located.

(iii) A SDARS terrestrial repeater is located within 5 kilometers of the boundary of an MEA or REAG in which the WCS licensee is authorized to operate a WCS base station.

(i) The following unwanted emissions power limits for non-geostationary satellites operating in the inter-satellite service that transmit in the 22.55–23.55 GHz band shall apply in any 200 MHz of the 23.6–24 GHz passive band, based on the date that complete advance publication information is received by the ITU's Radiocommunication Bureau:

(1) For information received before January 1, 2020: −36 dBW.

(2) For information received on or after January 1, 2020: −46 dBW.

(j) For earth stations in the Fixed-Satellite Service (Earth-to-space) that transmit in the 49.7–50.2 GHz and 50.4–50.9 GHz bands, the unwanted emission power in the 50.2–50.4 GHz band shall not exceed −20 dBW/200 MHz (measured at the input of the antenna), except that the maximum unwanted emission power may be increased to −10 dBW/200 MHz for earth stations having an antenna gain greater than or equal to 57 dBi. These limits apply under clear-sky conditions. During fading conditions, the limits may be exceeded by earth

stations when using uplink power control.

[30 FR 7176, May 28, 1965]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 25.202, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at *www.fdsys.gov*.

§ 25.203 Choice of sites and frequencies.

(a) Sites and frequencies for earth stations, other than ESVs, operating in frequency bands shared with equal rights between terrestrial and space services, shall be selected, to the extent practicable, in areas where the surrounding terrain and existing frequency usage are such as to minimize the possibility of harmful interference between the sharing services.

(b) An applicant for an earth station authorization, other than an ESV, in a frequency band shared with equal rights with terrestrial microwave services shall compute the great circle coordination distance contour(s) for the proposed station in accordance with the procedures set forth in § 25.251. The applicant shall submit with the application a map or maps drawn to appropriate scale and in a form suitable for reproduction indicating the location of the proposed station and these contours. These maps, together with the pertinent data on which the computation of these contours is based, including all relevant transmitting and/or receiving parameters of the proposed station that is necessary in assessing the likelihood of interference, an appropriately scaled plot of the elevation of the local horizon as a function of azimuth, and the electrical characteristics of the earth station antenna(s), shall be submitted by the applicant in a single exhibit to the application. The coordination distance contour plot(s), horizon elevation plot, and antenna horizon gain plot(s) required by this section may also be submitted in tabular numerical format at 5° azimuthal increments instead of graphical format. At a minimum, this exhibit shall include the information listed in paragraph (c)(2) of this section. An earth station applicant shall also include in the application relevant technical details (both theoretical calculations and/or actual measurements) of any special techniques, such as the use of artificial site shielding, or operating procedures or restrictions at the proposed earth station which are to be employed to reduce the likelihood of interference, or of any particular characteristics of the earth station site which could have an effect on the calculation of the coordination distance.

(c) Prior to the filing of its application, an applicant for operation of an earth station, other than an ESV, VMES or ESAA, shall coordinate the proposed frequency usage with existing terrestrial users and with applicants for terrestrial station authorizations with previously filed applications in accordance with the following procedure:

(1) An applicant for an earth station authorization shall perform an interference analysis in accordance with the procedures set forth in § 25.251 for each terrestrial station, for which a license or construction permit has been granted or for which an application has been accepted for filing, which is or is to be operated in a shared frequency band to be used by the proposed earth station and which is located within the great circle coordination distance contour(s) of the proposed earth station.

(2) The earth station applicant shall provide each such terrestrial station licensee, permittee, and prior filed applicant with the technical details of the proposed earth station and the relevant interference analyses that were made. At a minimum, the earth station applicant shall provide the terrestrial user with the following technical information:

(i) The geographical coordinates of the proposed earth station antenna(s),

(ii) Proposed operating frequency band(s) and emission(s),

(iii) Antenna center height above ground and ground elevation above mean sea level,

(iv) Antenna gain pattern(s) in the plane of the main beam,

(v) Longitude range of geostationary satellite orbit (GSO) satellites at which antenna may be pointed, for proposed earth station antenna(s) accessing GSO satellites,

(vi) Horizon elevation plot,

(vii) Antenna horizon gain plot(s) determined in accordance with § 25.251 for satellite longitude range specified in paragraph (c)(2)(v) of this section, taking into account the provisions of § 25.251 for earth stations operating with non-geostationary satellites,

(viii) Minimum elevation angle,

(ix) Maximum equivalent isotropically radiated power (e.i.r.p.) density in the main beam in any 4 kHz band, (dBW/4 kHz) for frequency bands below 15 GHz or in any 1 MHz band (dBW/MHz) for frequency band above 15 GHz,

(x) Maximum available RF transmit power density in any 1 MHz band and in any 4 kHz band at the input terminals of the antenna(s),

(xi) Maximum permissible RF interference power level as determined in accordance with § 25.251 for all applicable percentages of time, and

(xii) A plot of great circle coordination distance contour(s) and rain scatter coordination distance contour(s) as determined by § 25.251.

(3) The coordination procedures specified in § 101.103 of this chapter and § 25.251 shall be applicable except that the information to be provided shall be that set forth in paragraph (c)(2) of this section, and that the 30-day period allowed for response to a request for coordination may be increased to a maximum of 45 days by mutual consent of the parties.

(4) Where technical problems are resolved by an agreement or operating arrangement between the parties that would require special procedures be taken to reduce the likelihood of harmful interference (such as the use of artificial site shielding) or would result in lessened quality or capacity of either system, the details thereof shall be contained in the application.

(5) The Commission may, in the course of examining any application, require the submission of additional showings, complete with pertinent data and calculations in accordance with § 25.251, showing that harmful interference is not likely to result from the proposed operation.

(d) An applicant for operation of an earth station, other than an ESV, VMES or an ESAA, shall also ascertain whether the great circle coordination distance contours and rain scatter coordination distance contours, computed for those values of parameters indicated in § 25.251 (Appendix 7 of the ITU RR) for international coordination, cross the boundaries of another Administration. In this case, the applicant shall furnish the Commission copies of these contours on maps drawn to appropriate scale for use by the Commission in effecting coordination of the proposed earth station with the Administration(s) affected.

(e) Protection for Table Mountain Radio Receiving Zone, Boulder County, Colorado.

(1) Applicants for a station authorization to operate in the vicinity of Boulder County, Colorado under this part are advised to give due consideration, prior to filing applications, to the need to protect the Table Mountain Radio Receiving Zone from harmful interference. These are the research laboratories of the Department of Commerce, Boulder County, Colorado. To prevent degradation of the present ambient radio signal level at the site, the Department of Commerce seeks to ensure that the field strengths of any radiated signals (excluding reflected signals) received on this 1800 acre site (in the vicinity of coordinates 40°07′50″ N Latitude, 105°14′40″ W Longitude) resulting from new assignments (other than mobile stations) or from the modification or relocation of existing facilities do not exceed the following values:

Frequency range	In authorized bandwidth of service	
	Field strength (mV/m)	Power flux density[1] (dBW/m^2)
Below 540 kHz	10	−65.8
540 to 1600 kHz	20	−59.8
1.6 to 470 MHz	10	[2] −65.8
470 to 890 MHz	30	[2] −56.2
Above 890 MHz	1	[2] −85.8

[1] Equivalent values of power flux density are calculated assuming free space characteristic impedance of 376.7 = 120π ohms.

[2] Space stations shall conform to the power flux density limits at the earth's surface specified in appropriate parts of the FCC rules, but in no case should exceed the above levels in any 4 kHz band for all angles of arrival.

(2) Advance consultation is recommended particularly for those applicants who have no reliable data which indicates whether the field strength or power flux density figures in the above

table would be exceeded by their proposed radio facilities (except mobile stations). In such instances, the following is a suggested guide for determining whether coordination is recommended:

(i) All stations within 2.5 kilometers;

(ii) Stations within 5 kilometers with 50 watts or more average effective radiated power (ERP) in the primary plane of polarization in the azimuthal direction of the Table Mountain Radio Receiving Zone;

(iii) Stations within 15 kilometers with 1 kW or more average ERP in the primary plane of polarization in the azimuthal direction of Table Mountain Receiving Zone;

(iv) Stations within 80 kilometers with 25 kW or more average ERP in the primary plane of polarization in the azimuthal direction of Table Mountain Receiving Zone.

(3) Applicants concerned are urged to communicate with the Radio Frequency Management Coordinator, Department of Commerce, Research Support Services, NOAA R/E5X2, Boulder Laboratories, Boulder, CO 80303; telephone (303) 497–6548, in advance of filing their applications with the Commission.

(4) The Commission will not screen applications to determine whether advance consultation has taken place. However, applicants are advised that such consultation can avoid objections from the Department of Commerce or proceedings to modify any authorization which may be granted which, in fact, delivers a signal at the site in excess of the field strength specified herein.

(f) *Notification to the National Radio Astronomy Observatory:* In order to minimize possible harmful interference at the National Radio Astronomy Observatory site at Green Bank, Pocahontas County, W. Va., and at the Naval Radio Research Observatory site at Sugar Grove, Pendleton County, W. Va., any applicant for operating authority under this part for a new station, other than a mobile or temporary fixed station, within the area bounded by 39°15′ N. on the north, 78°30′ W. on the east, 37°30′ N. on the south and 80°30′ W. on the west or for modification of an existing license for such station to change the station's frequency, power, antenna height or directivity, or location must, when filing the application with the Commission, simultaneously notify the Director, National Radio Astronomy Observatory, P.O. Box No. 2, Green Bank, W. Va. 24944, in writing, of the technical particulars of the proposed station. Such notification shall include the geographical coordinates of the antenna, antenna height, antenna directivity if any, proposed frequency, type of emission, and power. In addition, the applicant shall indicate in his application to the Commission the date notification was made to the observatory. After receipt of such applications, the Commission will allow a period of 20 days for comments or objections in response to the notifications indicated. If an objection to the proposed operation is received during the 20-day period from the National Radio Astronomy Observatory for itself or on behalf of the Naval Radio Research Observatory, the Commission will consider all aspects of the problem and take whatever action is deemed appropriate.

(g) Protection for Federal Communications Commission monitoring stations:

(1) Applicants in the vicinity of an FCC monitoring station for a radio station authorization to operate new transmitting facilities or changed transmitting facilities which would increase the field strength produced over the monitoring station over that previously authorized are advised to give consideration, prior to filing applications, to the possible need to protect the FCC stations from harmful interference. Geographical coordinates of the facilities which require protection are listed in §0.121(c) of the Commission's Rules. Applications for stations (except mobile stations) which will produce on any frequency a direct wave fundamental field strength of *greater than 10 mV/m* in the authorized bandwidth of service (-65.8 dBW/m^2 power flux density assuming a free space characteristic impedance of 120 ohms) at the referenced coordinates, may be examined to determine extent of possible interference. Depending on the

theoretical field strength value and existing root-sum-square or other ambient radio field signal levels at the indicated coordinates, a clause protecting the monitoring station may be added to the station authorization.

(2) In the event that the calculated value of the expected field strength exceeds 10 mV/m (-65.8 dBW/m^2) at the reference coordinates, or if there is any question whether field strength levels might exceed the threshold value, advance consultation with the FCC to discuss any protection necessary should be considered. See §0.401 of this chapter for contact information.

(3) Advance consultation is suggested particularly for those applicants who have no reliable data which indicates whether the field strength or power flux density figure indicated would be exceeded by their proposed radio facilities (except mobile stations). In such instances, the following is a suggested guide for determining whether an applicant should coordinate:

(i) All stations within 2.5 kilometers;

(ii) Stations within 5 kilometers with 50 watts or more average effective radiated power (ERP) in the primary plane of polarization in the azimuthal direction of the Monitoring Station;

(iii) Stations within 15 kilometers with 1 kW or more average ERP in the primary plane of polarization in the azimuthal direction of the Monitoring Station;

(iv) Stations within 80 kilometers with 25 kW or more average ERP in the primary plane of polarization in the azimuthal direction of the Monitoring Station.

(4) Advance coordination for stations operating above 1000 MHz is recommended only where the proposed station is in the vicinity of a monitoring station designated as a satellite monitoring facility in §0.121(c) of this chapter and also meets the criteria outlined in paragraphs (g)(2) and (3) of this section.

(5) The Commission will not screen applications to determine whether advance consultation has taken place. However, applicants are advised that such consultation can avoid objections from the Federal Communications Commission or modification of any authorization which will cause harmful interference.

(h) Sites and frequencies for GSO and NGSO earth stations, operating in a frequency band where both have a co-primary allocation, shall be selected to avoid earth station antenna mainlobe-to-satellite antenna mainlobe coupling, between NGSO systems and between NGSO and GSO systems, in order to minimize the possibility of harmful interference between these services. Prior to filing an earth station application, in bands with co-primary allocations to NGSO and GSO earth stations, the applicant shall coordinate the proposed site and frequency usage with existing earth station licensees and with current earth station authorization applicants.

(i) Any applicant for a new permanent transmitting fixed earth station to be located on the island of Puerto Rico, Desecheo, Mona, Vieques, or Culebra, or for modification of an existing authorization to change the frequency, power, antenna height, directivity, or location of such a station on one of these islands in a way that would increase the likelihood of causing interference, must notify the Interference Office, Arecibo Observatory, HC3 Box 53995, Arecibo, Puerto Rico 00612, in writing or electronically, of the technical parameters of the proposal. Applicants may wish to consult interference guidelines, which will be provided by Cornell University. Applicants who choose to transmit information electronically should e-mail to: *prcz@naic.edu*.

(1) The notification to the Interference Office, Arecibo Observatory shall be made prior to, or simultaneously with, the filing of the application with the Commission. The notification must specify the geographical coordinates of the antenna (NAD–83 datum), antenna height above ground, ground elevation at the antenna, antenna directivity and gain, proposed frequency, relevant FCC rule part, type of emission, effective radiated power, and whether the proposed use is itinerant. Generally, submission of the information in the technical portion of the FCC license application is adequate notification. In addition, the applicant shall indicate in its application to the

Commission the date notification was made to the Arecibo Observatory.

(2) After receipt of such applications, the Commission will allow the Arecibo Observatory a period of 20 days for comments or objections in response to the notification indicated. The applicant will be required to make reasonable efforts in order to resolve or mitigate any potential interference problem with the Arecibo Observatory and to file either an amendment to the application or a modification application, as appropriate. If the Commission determines that an applicant has satisfied its responsibility to make reasonable efforts to protect the Observatory from interference, its application may be granted.

(3) The provisions of this paragraph do not apply to operations that transmit on frequencies above 15 GHz.

(j) Applicants for non-geostationary 1.6/2.4 GHz Mobile-Satellite Service/Radiodetermination-Satellite Service feeder links in the 17.7–20.2 GHz and 27.5–30.0 GHz bands shall indicate the frequencies and spacecraft antenna gain contours towards each feeder-link earth station location and will coordinate with licensees of other Fixed-Satellite Service and terrestrial-service systems sharing the band to determine geographic protection areas around each non-geostationary Mobile-Satellite Service/Radiodetermination-Satellite Service feeder-link earth station.

(k) An applicant for operation of an earth station, other than an ESV, VMES or an ESAA, that will operate with a geostationary satellite or non-geostationary satellite in a shared frequency band in which the non-geostationary system is (or is proposed to be) licensed for feeder links, shall demonstrate in its applications that its proposed earth station will not cause unacceptable interference to any other satellite network that is authorized to operate in the same frequency band, or certify that the operations of its earth station shall conform to established coordination agreements between the operator(s) of the space station(s) with which the earth station is to communicate and the operator(s) of any other space station licensed to use the band.

(l) Applicants for feeder link earth station facilities operating in the 25.05–25.25 GHz band may be licensed only in Economic Areas where no existing FS licensee has been authorized, and shall coordinate their operations with 24 GHz fixed service operations if the power flux density of their transmitted signal at the boundary of the fixed service license area is equal to or greater than -114 dBW/m^2 in any 1 MHz.

(1) When uplink adaptive power control is used, the EIRP used for calculation of the power flux density level should be the maximum possible, taking into account the adaptive power increase.

(2) The power flux density levels should be calculated based on the actual off-axis gain characteristics of the earth station antenna, and should assume free space propagation conditions.

(3) When determining whether the power flux density threshold limit is exceeded at the 24 GHz FS licensing boundary, a feeder link earth station applicant must take into account not only the transmissions from its own antenna(s), but also those from any previously authorized feeder link earth stations. Thus, if the cumulative power flux density level at the FS license boundary is in excess of -114 dBW/m^2/MHz, the earth station applicant must either modify its proposed operations such that this value is not exceeded, or enter into coordination with the affected FS licensee.

[30 FR 7176, May 28, 1965]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 25.203, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at *www.fdsys.gov*.

§ 25.204 Power limits for earth stations.

(a) In bands shared coequally with terrestrial radio communication services, the equivalent isotropically radiated power transmitted in any direction towards the horizon by an earth station, other than an ESV, operating in frequency bands between 1 and 15 GHz, shall not exceed the following limits except as provided for in paragraph (c) of this section:

+ 40 dBW in any 4 kHz band for $\theta \leq 0°$

+ 40 + 3θ dBW in any 4 kHz band for 0° <θ ≤5°

where θ is the angle of elevation of the horizon viewed from the center of radiation of the antenna of the earth station and measured in degrees as positive above the horizontal plane and negative below it.

(b) In bands shared coequally with terrestrial radiocommunication services, the equivalent isotropically radiated power transmitted in any direction towards the horizon by an earth station operating in frequency bands above 15 GHz shall not exceed the following limits except as provided for in paragraph (c) of this section:

+ 64 dBW in any 1 MHz band for θ ≤0°
+ 64 + 3 θ dBW in any 1 MHz band for 0° <θ ≤5°

where θ is as defined in paragraph (a) of this section.

(c) For angles of elevation of the horizon greater than 5° there shall be no restriction as to the equivalent isotropically radiated power transmitted by an earth station towards the horizon.

(d) Notwithstanding the e.i.r.p. and e.i.r.p. density limits specified in the station authorization, each earth station transmission shall be conducted at the lowest power level that will provide the required signal quality as indicated in the application and further amended by coordination agreements.

(e) To the extent specified in paragraphs (e)(1) through (e)(4) of this section, earth stations in the Fixed-Satellite Service may employ uplink adaptive power control or other methods of fade compensation to facilitate transmission of uplinks at power levels required for desired link performance while minimizing interference between networks.

(1) Except when paragraphs (e)(2) through (e)(4) of this section apply, transmissions from FSS earth stations in frequencies above 10 GHz may exceed the uplink EIRP and EIRP density limits specified in the station authorization under conditions of uplink fading due to precipitation by an amount not to exceed 1 dB above the actual amount of monitored excess attenuation over clear sky propagation conditions. EIRP levels must be returned to normal as soon as the attenuating weather pattern subsides. The maximum power level for power control purposes must be coordinated with adjacent satellite operators.

(2) An FSS earth station transmitting to a geostationary space station in the 13.77–13.78 GHz band must not generate more than 71 dBW EIRP in any 6 MHz band. An FSS earth station transmitting to a non-geostationary space station in the 13.77–13.78 GHz band must not generate more than 51 dBW EIRP in any 6 MHz band. Automatic power control may be used to increase the EIRP density in a 6 MHz uplink band in this frequency range to compensate for rain fade, provided that the power flux-density at the space station does not exceed the value that would result when transmitting with an EIRP of 71 dBW or 51 dBW, as appropriate, in that 6 MHz band in clear-sky conditions.

(3) FSS earth stations transmitting to geostationary space stations in the 28.35–28.6 GHz and/or 29.25–30.0 GHz bands may employ uplink adaptive power control or other methods of fade compensation. For stations employing uplink power control, the values in paragraphs (a)(1), (a)(2), and (a)(4) of §25.138 may be exceeded by up to 20 dB under conditions of uplink fading due to precipitation. The amount of such increase in excess of the actual amount of monitored excess attenuation over clear sky propagation conditions must not exceed 1.5 dB or 15 percent of the actual amount of monitored excess attenuation in dB, whichever is larger, with a confidence level of 90 percent except over transient periods accounting for no more than 0.5 percent of the time during which the excess is no more than 4.0 dB.

(4) Transmissions in the 24.75–25.25 GHz band from 17/24 GHz BSS feederlink earth stations employing power control may exceed the values in paragraphs (b)(1), (b)(2), and (b)(4) of §25.223 by up to 20 dB under conditions of uplink fading due to precipitation. The amount of such increase in excess of the actual amount of monitored excess attenuation over clear sky propagation conditions must not exceed 1.5 dB or 15

percent of the actual amount of monitored excess attenuation in dB, whichever is larger, with a confidence level of 90 percent except over transient periods accounting for no more than 0.5 percent of the time during which the excess is no more than 4.0 dB.

(f) An earth station in the Fixed-Satellite Service transmitting in the 13.75–14 GHz band must have a minimum antenna diameter of 4.5 m, and the EIRP of any emission in that band should be at least 68 dBW and should not exceed 85 dBW.

(g) [Reserved]

(h) ESV transmissions in the 5925–6425 MHz (Earth-to-space) band shall not exceed an e.i.r.p. spectral density towards the radio-horizon of 17 dBW/MHz, and shall not exceed an e.i.r.p. towards the radio-horizon of 20.8 dBW. The ESV network shall shut-off the ESV transmitter if the e.i.r.p. spectral density towards the radio-horizon or e.i.r.p. towards the radio-horizon are exceeded.

(i) Within 125 km of the TDRSS sites identified in §25.222(d), ESV transmissions in the 14.0–14.2 GHz (Earth-to-space) band shall not exceed an e.i.r.p. spectral density towards the horizon of 12.5 dBW/MHz, and shall not exceed an e.i.r.p. towards the horizon of 16.3 dBW.

(j) Within 125 km of the Tracking and Data Relay System Satellite (TDRSS) sites identified in §25.226(c), VMES transmissions in the 14.0–14.2 GHz (Earth-to-space) band shall not exceed an EIRP spectral density towards the horizon of 12.5 dBW/MHz, and shall not exceed an EIRP towards the horizon of 16.3 dBW.

(k) Within radio line-of-sight of the Tracking and Data Relay System Satellite (TDRSS) sites identified in §25.227(c), ESAA transmissions in the 14.0–14.2 GHz (Earth-to-space) band shall not exceed an EIRP spectral density towards or below the horizon of 12.5 dBW/MHz, and shall not exceed an EIRP towards or below the horizon of 16.3 dBW.

[48 FR 40255, Sept. 6, 1983, as amended at 58 FR 13420, Mar. 11, 1993; 61 FR 52307, Oct. 7, 1996; 62 FR 61457, Nov. 18, 1997; 66 FR 10623, Feb. 16, 2001; 70 FR 4784, Jan. 31, 2005; 70 FR 32255, June 2, 2005; 72 FR 50029, Aug. 29, 2007; 74 FR 57098, Nov. 4, 2009; 78 FR 8427, Feb. 6, 2013; 78 FR 14927, Mar. 8, 2013; 79 FR 8322, Feb. 12, 2004]

§25.205 Minimum angle of antenna elevation.

(a) Earth station antennas shall not normally be authorized for transmission at angles less than 5° measured from the horizontal plane to the direction of maximum radiation. However, upon a showing that the transmission path will be seaward and away from land masses or upon special showing of need for lower angles by the applicant, the Commission will consider authorizing transmissions at angles between 3° and 5° in the pertinent directions. In certain instances, it may be necessary to specify minimum angles greater than 5° because of interference considerations.

(b) ESVs making a special showing requesting angles of elevation less than 5° measured from the horizontal plane to the direction of maximum radiation pursuant to (a) of this Section must still meet the effective isotropically radiated power (e.i.r.p.) and e.i.r.p. density towards the horizon limits contained in §25.204(h) and (i).

(c) VMESs making a special showing requesting angles of elevation less than 5° measured from the horizontal plane to the direction of maximum radiation pursuant to (a) of this section must still meet the EIRP and EIRP density towards the horizon limits contained in §25.204(j).

(d) While on the ground, ESAAs shall not be authorized for transmission at angles less than 5° measured from the plane of the horizon to the direction of maximum radiation. While in flight there is no minimum angle of antenna elevation.

[70 FR 4784, Jan. 31, 2005, as amended at 74 FR 57099, Nov. 4, 2009; 78 FR 14927, Mar. 8, 2013]

§25.206 Station identification.

The requirement to transmit station identification is waived for all radio stations licensed under this part with the exception of earth stations subject to the requirements of §25.281.

[79 FR 8322, Feb. 12, 2014]

§25.207 Cessation of emissions.

Space stations shall be made capable of ceasing radio emissions by the use of

appropriate devices (battery life, timing devices, ground command, etc.) that will ensure definite cessation of emissions.

§ 25.208 Power flux density limits.

(a) In the band 3650–4200 MHz, the power flux density at the Earth's surface produced by emissions from a space station for all conditions and for all methods of modulation shall not exceed the following values:

−152 dB(W/m²) in any 4 kHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;
−152 + (δ−5)/2 dB(W/m²) in any 4 kHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane; and
−142 dB(W/m²) in any 4 kHz band for angles of arrival between 25 and 90 degrees above the horizontal plane

These limits relate to the power flux density which would be obtained under assumed free-space propagation conditions.

(b) In the bands 10.95–11.2 and 11.45–11.7 GHz for GSO FSS space stations and 10.7–11.7 GHz for NGSO FSS space stations, the power flux-density at the Earth's surface produced by emissions from a space station for all conditions and for all methods of modulation shall not exceed the lower of the following values:

(1) −150 dB(W/m²) in any 4 kHz band for angles of arrival between 0 and 5 degrees above the horizontal plane; −150 + (δ−5)/2 dB(W/m²) in any 4 kHz band for angles of arrival (δ) (in degrees) between 5 and 25 degrees above the horizontal plane; and −140 dB(W/m²) in any 4 kHz band for angles of arrival between 25 and 90 degrees above the horizontal plane; or

(2) −126 dB(W/m²) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane; −126 + (δ−5)/2 dB(W/m²) in any 1 MHz band for angles of arrival (δ) (in degrees) between 5 and 25 degrees above the horizontal plane; and −116 dB(W/m²) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

NOTE TO PARAGRAPH (b): These limits relate to the power flux density, which would be obtained under assumed free-space propagation conditions.

(c) In the 17.7–17.8 GHz, 18.3–18.8 GHz, 19.3–19.7 GHz, 22.55–23.00 GHz, 23.00–23.55 GHz, and 24.45–24.75 GHz frequency bands, the power flux density at the Earth's surface produced by emissions from a space station for all conditions for all methods of modulation shall not exceed the following values:

(1) −115 dB (W/m²) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane.

(2) −115 + 0.5 (δ-5) dB (W/m²) in any 1 MHz band for angles of arrival d (in degrees) between 5 and 25 degrees above the horizontal plane.

(3) −105 dB (W/m²) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

(d) In addition to the limits specified in paragraph (c) of this section, the power flux-density across the 200 MHz band 18.6–18.8 GHz produced at the Earth's surface by emissions from a space station under assumed free-space propagation conditions shall not exceed −95 dB (W/m²) for all angles of arrival. This limit may be exceeded by up to 3 dB for no more than 5% of the time.

(e) In the 18.8–19.3 GHz frequency band, the power flux-density at the Earth's surface produced by emissions from a space station for all conditions and for all methods of modulation shall not exceed the following values:

$-115-X$ dB(W/m² ÷ MHz)	for $0° \le \delta < 5°$
$-115-X+((10+X)/20)(\delta-5)$ dB(W/m² ÷ MHz)	for $5° \le \delta < 25°$
−105 dB(W/m² ÷ MHz)	for $25° \le \delta < 90°$

Where:

δ: is the angle of arrival above the horizontal plane; and

X is defined as a function of the number of satellites in the non-GSO FSS constellation, n, as follows:

for n ≤50	X = 0 (dB)
for 50 <n ≤288	X = (5/119) (n − 50) (dB)

for n >288 ..... X = (1/69) (n + 402) (dB)

(f) [Reserved]

(g) In the 10.7–11.7 GHz and 11.7–12.2 GHz bands, the single-entry equivalent power-flux density in the space-to-Earth direction ($EPFD_{down}$), at any point on the Earth's surface, produced by emissions from all co-frequency space stations of a single non-geostationary-satellite orbit (NGSO) system operating in the Fixed-Satellite Service (FSS) shall not exceed the following limits for the given percentages of time. Tables 1G and 2G follow:

TABLE 1G—SINGLE-ENTRY $EPFD_{down}$ LIMITS FOR PROTECTION OF 0.6, 1.2, 3 AND 10 METER GSO FSS EARTH STATION ANTENNAS [1] [2]

Frequency band (GHz) for International Allocations	Single-entry $EPFD_{down}$ dB(W/m^2)	Percentage of time during which $EPFD_{down}$ level may not be exceeded	Reference bandwidth (kHz)	Reference antenna diameter and reference radiation pattern [3]
10.7–11.7 in all Regions; 11.7–12.2 in Region 2; 12.2–12.5 in Region 3; and 12.5–12.75 in Regions 1 and 3.	−175.4	0	40	60 cm, Recommendation ITU-R S.1428.
	−174	90		
	−170.8	99		
	−165.3	99.73		
	−160.4	99.991		
	−160	99.997		
	−160	100		
10.7–11.7 in all Regions; 11.7–12.2 in Region 2; 12.2–12.5 in Region 3; and 12.5–12.75 in Regions 1 and 3.	−181.9	0	40	1.2 m, Recommendation ITU-R S.1428.
	−178.4	99.5		
	−173.4	99.74		
	−173	99.857		
	−164	99.954		
	−161.6	99.984		
	−161.4	99.991		
	−160.8	99.997		
	−160.5	99.997		
	−160	99.9993		
	−160	100		
10.7–11.7 in all Regions; 11.7–12.2 in Region 2; 12.2–12.5 in Region 3; and 12.5–12.75 in Regions 1 and 3.	−190.45	0	40	3 m, Recommendation ITU-R S.1428.
	−189.45	90		
	−187.45	99.5		
	−182.4	99.7		
	−182	99.855		
	−168	99.971		
	−164	99.988		
	−162	99.995		
	−160	99.999		
	−160	100		
10.7–11.7 in all Regions; 11.7–12.2 in Region 2; 12.2–12.5 in Region 3; and 12.5–12.75 in Regions 1 and 3.	−195.45	0	40	10 m, Recommendation ITU-R S.1428.
	−195.45	99		
	−190	99.65		
	−190	99.71		
	−172.5	99.99		
	−160	99.998		
	−160	100		

[1] In addition to the limits shown in Table 1G, the limits shown in Table 2G shall apply to all antenna sizes greater than 60 cm in the frequency bands listed in Table 1G.

[2] For each reference antenna diameter, the limit consists of the complete curve on a plot which is linear in decibels for the EPFD levels and logarithmic for the time percentages, with straight lines joining the data points.

[3] The earth station antenna reference radiation patterns are to be used only for the calculation of interference from NGSO FSS systems into GSO FSS systems.

TABLE 2G—SINGLE-ENTRY $EPFD_{down}$ LIMITS RADIATED BY NON-GSO FSS SYSTEMS AT CERTAIN LATITUDES

100% of the time $EPFD_{down}$ dB($W/(m^2/40$ kHz))	Latitude (North or South in degrees)
–160	0 <| Latitude | ≤57.5.
–160 + 3.4 (57.5 − | Latitude |)/4	57.5 <| Latitude | ≤63.75
–165.3	63.75 ≤| Latitude |

NOTE TO PARAGRAPH (g): These limits relate to the equivalent power flux density, which would be obtained under free-space propagation conditions, for all conditions and for all methods of modulation.

(h) In the 10.7–11.7 GHz and 11.7–12.2 GHz bands, the aggregate equivalent power-flux density in the space-to-Earth direction ($EPFD_{down}$), at any point on the Earth's surface, produced by emissions from all co-frequency space stations of all non-geostationary-satellite orbit systems operating in the Fixed-Satellite Service (FSS) shall not exceed the following limits for the given percentages of time. Tables 1H and 2H follow:

TABLE 1H—AGGREGATE $EPFD_{down}$ LIMITS FOR PROTECTION OF 0.6, 1.2, 3 AND 10 METER GSO FSS EARTH STATION ANTENNAS [1]

Frequency band (GHz) for International Allocations	Aggregate $EPFD_{down}$ dB(W/m^2)	Percentage of time during which $EPFD_{down}$ may not be exceeded	Reference bandwidth (kHz)	Reference antenna diameter and reference radiation pattern [2]
10.7–11.7 in all Regions; 11.7–12.2 in Region 2; 12.2–12.5 in Region 3; and 12.5–12.75 in Regions 1 and 3.	−170	0	40	60 cm, Recommendation ITU-R S.1428.
	−168.6	90		
	−165.3	99		
	−160.4	99.97		
	−160	99.99		
	−160	100		
10.7–11.7 in all Regions; 11.7–12.2 in Region 2; 12.2–12.5 in Region 3; and 12.5–12.75 in Regions 1 and 3.	−176.5	0	40	1.2 m, Recommendation ITU-R S.1428.
	−173	99.5		
	−164	99.84		
	−161.6	99.945		
	−164.4	99.97		
	−160.8	99.99		
	−160.5	99.99		
	−160	99.9975		
	−160	100		
10.7–11.7 in all Regions; 11.7–12.2 in Region 2; 12.2–12.5 in Region 3; and 12.5–12.75 in Regions 1 and 3.	−185	0	40	3 m, Recommendation ITU-R S.1428.
	−184	90		
	−182	99.5		
	−168	99.9		
	−164	99.96		
	−162	99.982		
	−160	99.997		
	−160	100		
10.7–11.7 in all Regions; 11.7–12.2 in Region 2; 12.2–12.5 in Region 3; and 12.5–12.75 in Regions 1 and 3.	−190	0	40	10 m, Recommendation ITU-R S.1428.
	−190	99		
	−166	99.99		
	−160	99.998		
	−160	100		

[1] In addition to the limits shown in Table 1H, the aggregate $EPFD_{down}$ limits shown in Table 2H shall apply to all antenna sizes greater than 60 cm in the frequency bands listed in Table 1H.

[2] The earth station antenna reference patterns are to be used only for the calculation of interference from NGSO FSS systems into GSO FSS systems.

TABLE 2H—SINGLE-ENTRY $EPFD_{down}$ LIMITS RADIATED BY NON-GSO FSS SYSTEMS AT CERTAIN LATITUDES

100% of the time $EPFD_{down}$ dB(W/(m^2/40 kHz))	Latitude (North or South in degrees)
–160	0 <| Latitude | ≤57.5
–160 + 3.4 (57.5 − | Latitude |)/4	57.5 <| Latitude | ≤63.75
–165.3	63.75 ≤| Latitude |

NOTE TO PARAGRAPH (h): These limits relate to the equivalent power flux density, which would be obtained under free-space propagation conditions, for all conditions and for all methods of modulation.

(i) In the 10.7–11.7 GHz and 11.7–12.2 GHz bands, the additional operational equivalent power-flux density, in the space-to-Earth direction, (additional operational $EPFD_{down}$) at any point on

the Earth's surface, produced by actual operational emissions from all co-frequency space stations of a non-geostationary-satellite orbit (NGSO) system operating in the Fixed-Satellite Service (FSS) shall not exceed the following operational limits for the given percentages of time:

ADDITIONAL OPERATIONAL LIMITS ON THE $EPFD_{down}$ RADIATED BY NON-GSO FSS SYSTEMS INTO 3 M AND 10 M GSO FSS EARTH STATION ANTENNAS

$EPFD_{down}$ dB(W/(m^2/40 kHz))	Percentage of time during which $EPFD_{down}$ may not be exceeded	Receive GSO earth station antenna diameter (m)
−182	99.9.	
−179	99.94.	
−176	99.97.	
−171	99.98.	
−168	99.984	3.
−165	99.993.	
−163	99.999.	
−161.25	99.99975.	
−161.25	100.	
−185	99.97.	
−183	99.98.	
−179	99.99.	
−175	99.996.	
−171	99.998	10.
−168	99.999.	
−166	99.9998.	
−166	100.	

NOTE TO PARAGRAPH (i): These limits relate to the equivalent power flux density, which is obtained under free-space propagation conditions, for all conditions and for all methods of modulation.

(j) In the 10.7–11.7 GHz and 11.7–12.2 GHz bands, the operational equivalent power-flux density, in the space-to-Earth direction, (operational $EPFD_{down}$) at any point on the Earth's surface, produced by actual operational emissions from the in-line co-frequency space station of a non-geostationary-satellite orbit (NGSO) system operating in the Fixed-Satellite Service (FSS) shall not exceed the following operational limits for 100% of the time:

OPERATIONAL LIMITS TO THE $EPFD_{down}$ RADIATED BY NON-GSO FSS SYSTEMS IN CERTAIN FREQUENCY BANDS [1]

Frequency band (GHz) for International allocations	$EPFD_{down}$ dB(W/m^2)	Percentage of time during which $EPFD_{down}$ may not be exceeded	Reference bandwidth (kHz)	Receive GSO earth station antenna diameter [2] (m)	Orbital inclination of GSO satelite (degrees)
Prior to 31 December 2005: 10.7–11.7 in all Regions; 11.7–12.2 in Regions 2; 12.2–12.5 in Region 3; and 12.5;–12.75 in Regions 1 and 3	−163	3			
	−166	6			
	−167.5	9			
	−169.5	≥18			
	100	≤2.5			
	40				
Prior to 31 December 2005: 10.7–11.7 in all Regions; 11.7–12.2 in Region 2; 12.2–12.5 in Region 3; and 12.5–12.75 in Regions 1 and 3	−160	3			
	−163	6			
	−164.5	9			
	−166.5	≥18			
	100	>2.5 and			
	40	≤4.5			

OPERATIONAL LIMITS TO THE $EPFD_{down}$ RADIATED BY NON-GSO FSS SYSTEMS IN CERTAIN FREQUENCY BANDS [1]—Continued

Frequency band (GHz) for International allocations	$EPFD_{down}$ dB(W/m^2)	Percentage of time during which $EPFD_{down}$ may not be exceeded	Reference bandwidth (kHz)	Receive GSO earth station antenna diameter [2] (m)	Orbital inclination of GSO satelite (degrees)
From 31 December 2005: 10.7–11.7 in all Regions; 11.7–12.2 in Region 2; 12.2–12.5 in Region 3; and 12.5–12.75 in Regions 1 and 3	−161.25	3			
	−164	6			
	−165.5	9			
	−167.5	≥18			
	100	≤2.5			
	40				
From 31 December 2005: 10.7–11.7 in all Regions; 11.7–12.2 in Region 2; 12.2–12.5 in Region 3; and 12.5–12.75 in Regions 1 and 3	−158.25	3			
	−161	6			
	−162.5	9			
	−164.5	≥18			
	100	>2.5 and			
	40	≤4.5			

[1] The operational limits on the $EPFD_{down}$ radiated by non-GSO FSS systems shall be the values given in Table 2G or this table, whichever are the more stringent.
[2] For antenna diameters between the values given in this table, the limits are given by linear interpolation using a linear scale for $EPFD_{down}$ in decibels and a logarithmic scale for antenna diameter in meters.

NOTE TO PARAGRAPH (j): These limits relate to the operational equivalent power flux-density which would be obtained under free-space propagation conditions, for all conditions, for all methods of modulation and for the specified inclined GSO FSS operations.

(k) In the 12.75–13.15 GHz, 13.2125–13.25 GHz and 13.75–14.5 GHz bands, the equivalent power flux-density, in the Earth-to-space direction, ($EPFD_{up}$) produced at any point on the geostationary satellite orbit (GSO) by the emissions from all co-frequency earth stations in a non-geostationary satellite orbit Fixed-Satellite Service (NGSO FSS) system, for all conditions and for all methods of modulation, shall not exceed the following limits for the specified percentages of time limits:

LIMITS TO THE $EPFD_{up}$ RADIATED BY NGSO FSS SYSTEMS IN CERTAIN FREQUENCY BANDS

Frequency band (GHz) for International Allocations	$EPFD_{up}$ dB(W/m^2)	Percentage of time during which $EPFD_{up}$ may not be exceeded	Reference bandwidth (kHz)	Reference antenna beamwidth and reference radiation pattern [1]
12.5–12.75; 12.75–13.25; 13.75–14.5	−160	100	40	4° ITU-R S.672–4, Ls=−20

[1] For the case of $L_s = -10$, the values a = 1.83 and b = 6.32 should be used in the equations in the Annex of Recommendation ITU-R S.672–4 for single-feed circular beams. In all cases of L_s, the parabolic main beam equation should start at zero.

NOTE TO PARAGRAPH (k): These limits relate to the uplink equivalent power flux density, which would be obtained under free-space propagation conditions, for all conditions and for all methods of modulation.

(l) In the 11.7–12.2 GHz and 12.5–12.75 GHz bands in Region 3, 11.7–12.5 GHz bands in Region 1, and 12.2–12.7 GHz band in Region 2, the single-entry equivalent power-flux density, in the space-to-Earth direction, ($EPFD_{down}$), at any point on the Earth's surface, produced by emissions from all co-frequency space stations of a single non-geostationary-satellite orbit (NGSO) system operating in the Fixed-Satellite

Service (FSS) shall not exceed the following limits in Tables 1L and 2L for the given percentages of time:

TABLE 1L—SINGLE-ENTRY $EPFD_{down}$ LIMITS FOR PROTECTION OF 30, 45, 60, 90, 120, 180, 240 AND 300 CM GSO BSS EARTH STATION ANTENNAS [1 2 3 5]

Frequency band (GHz) for international allocations	$EPDF_{down}$ dB(W/m^2)	Percentage of time during which $EPFD_{down}$ level may not be exceeded	Reference bandwidth (kHz)	Reference antenna diameter and reference radiation pattern [4]
11.7–12.5 in Region 1; 1.7–12.2 and 12.5–12.75 in Region 3; 12.2–12.7 in Region 2.	−165.841	0	40	30 cm Recommendation ITU-R BO.1443 Annex 1
	−165.541	25		
	−164.041	96		
	−158.6	98.857		
	−158.6	99.429		
	−158.33	99.429		
	−158.33	99.429		
		100		
11.7–12.5 in Region 1; 1.7–12.2 and 12.5–12.75 in Region 3; 12.2–12.7 in Region 2.	−175.441	0	40	45 cm Recommendation ITU-R BO.1443 Annex 1
	−172.441	66		
	−169.441	97.75		
	−164	99.357		
	−160.75	99.809		
	−160	99.986		
	−160	100		
11.7–12.5 in Region 1; 1.7–12.2 and 12.5–12.75 in Region 3; 12.2–12.7 in Region 2.	−176.441	0	40	60 cm Recommendation ITU-R BO. 1443 Annex 1
	−173.191	97.8		
	−167.75	99.371		
	−162	99.886		
	−161	99.943		
	−160.2	99.971		
	−160	99.997		
	−160	100		
11.7–12.5 in Region 1; 1.7–12.2 and 12.5–12.75 in Region 3; 12.2–12.7 in Region 2.	−178.94	0	40	90 cm Recommendation ITU-R BO.1443 Annex 1
	−178.44	33		
	−176.44	98		
	−171	99.429		
	−165.5	99.714		
	−163	99.857		
	−161	99.943		
	−160	99.991		
	−160	100		
11.7–12.5 in Region 1; 1.7–12.2 and 12.5–12.75 in Region 3; 12.2–12.7 in Region 2.	−182.44	0	40	120 cm Recommendation ITU-R BO.1443 Annex 1
	−180.69	90		
	−179.19	98.9		
	−178.44	98.9		
	−174.94	99.5		
	−173.75	99.68		
	−173	99.68		
	−169.5	99.85		
	−167.8	99.915		
	−164	99.94		
	−161.9	99.97		
	−161	99.99		
	−160.4	99.998		
	−160	100		
11.7–12.5 in Region 1; 1.7–12.2 and 12.5–12.75 in Region 3; 12.2–12.7 in Region 2.	−184.941	0	40	180 cm [3] Recommendation ITU-R BO.1443 Annex 1
	−184.101	33		
	−181.691	98.5		
	−176.25	99.571		
	−163.25	99.946		
	−161.5	99.974		
	−160.35	99.993		
	−160	99.999		
	−160	100		

TABLE 1L—SINGLE-ENTRY EPFD $_{down}$ LIMITS FOR PROTECTION OF 30, 45, 60, 90, 120, 180, 240 AND 300 CM GSO BSS EARTH STATION ANTENNAS [1] [2] [3] [5]—Continued

Frequency band (GHz) for international allocations	EPDF $_{down}$ dB(W/m^2)	Percentage of time during which EPFD$_{down}$ level may not be exceeded	Reference bandwidth (kHz)	Reference antenna diameter and reference radiation pattern [4]
11.7–12.5 in Region 1; 1.7–12.2 and 12.5–12.75 in Region 3; 12.2–12.7 in Region 2.	−187.441	0	40	240 cm [2] Recommendation ITU-R BO.1443 Annex 1
	−186.341	33		
	−183.441	99.25		
	−178	99.786		
	−161.4	99.957		
	−161.9	99.983		
	−160.5	99.994		
	−160	99.999		
	−160	100		
11.7–12.5 in Region 1; 1.7–12.2 and 12.5–12.75 in Region 3; 12.2–12.7 in Region 2.	−191.941	0	40	300 cm Recommendation ITU-R BO.1443 Annex 1
	−189.441	33		
	−185.941	99.5		
	−180.5	99.857		
	−173	99.914		
	−167	99.951		
	−162	99.983		
	−160	99.991		
	−160	100		

[1] For BSS antenna diameters 180 cm, 240 cm and 300 cm, in addition to the single-entry limits shown in Table 1L, the limits in Table 2L shall also apply in the frequency band listed in Table 1L.

[2] For 240 cm GSO BSS earth station antennas located in Alaska, communicating with GSO BSS satellites at the 91° W.L., 101° W.L., 110° W.L., 119° W.L. and 148° W.L. nominal orbital locations with elevation angles greater than 5°, −167 dB(W/(m^2/40 kHz)) single-entry 100% of the time operational EPFD$_{down}$ limit also applies to receive antennas.

[3] For 180 cm GSO BSS earth station antennas located in Hawaii communicating with GSO BSS satellites that are operational as of December 30, 1999 at the 110° W.L., 119° W.L. and 148° W.L. nominal orbital positions, −162.5 dB(W/(m^2/40 kHz)) single-entry 100% of the time operational EPFD$_{down}$ limit also applies.

[4] Under the section reference pattern of Annex 1 to Recommendation ITU-R BO.1443 shall be used only for the calculation of interference from non-GSO FSS systems into BSS systems.

[5] For each reference antenna diameter, the limit consists of the complete curve on a plot which is linear in decibels for the EPFD levels and logarithmic for the time percentages, with straight line joining the data points.

TABLE 2L—SINGLE-ENTRY EPFD$_{down}$ LIMITS RADIATED BY NON-GSO FSS SYSTEMS AT CERTAIN LATITUDES

100% of the time EPFD$_{down}$ dB(W/(m^2/40 kHz))	Latitude (North or South in degrees)
−160.0	0 ≤| Latitude | ≤57.5
−160.0 + 3.4 (57.5 − | Latitude |)/4	57.5 ≤| Latitude | ≤63.75
−165.3	63.75 ≤| Latitude |

NOTE TO PARAGRAPH (l): These limits relate to the equivalent power flux density, which would be obtained under free-space propagation conditions, for all conditions and for all methods of modulation.

(m) In the 11.7–12.2 GHz and 12.5–12.75 GHz bands in Region 3, 11.7–12.5 GHz bands in Region 1, and 12.2–12.7 GHz band in Region 2, the aggregate equivalent power-flux density, in the space-to-Earth direction, (EPFD$_{down}$) at any point on the Earth's surface, produced by emissions from all co-frequency space stations of all non-geostationary-satellite orbit systems operating in the Fixed-Satellite Service (FSS) shall not exceed the following limits in Tables 1M and 2M for the given percentages of time:

TABLE 1M—AGGREGATE $EPFD_{down}$ LIMITS FOR PROTECTION OF 30, 45, 60, 90, 120, 180, 240 AND 300 CM GSO BSS EARTH STATION ANTENNAS [1 2 3 5]

Frequency band (GHz) for international allocations	$EPFD_{down}$ dB (W/m^2)	Percentage of time during which $EPFD_{down}$ level may not be exceeded	Reference bandwidth (kHz)	Reference antenna diameter, and reference radiation pattern [4]
11.7–12.5 in Region 1; 11.7–12.2 and 12.5–12.75 in Region 3; 12.2–12.7 in Region 2.	−160.4 −160.1 −158.6 −158.6 −158.33 −158.33	0 25 96 98 98 100	40	30 cm Recommendation ITU-R BO.1443 Annex 1.
11.7–12.5 in Region 1; 11.7–12.2 and 12.5–12.75 in Region 3; 12.2–12.7 in Region 2.	−170 −167 −164 −160.75 −160 −160	0 66 97.75 99.33 99.95 100	40	45 cm Recommendation ITU-R BO.1443 Annex 1.
11.7–12.5 in Region 1; 11.7–12.2 and 12.5–12.75 in Region 3; 12.2–12.7 in Region 2.	−171 −168.75 −167.75 −162 −161 −160.2 −160 −160	0 90 97.8 99.6 99.8 99.9 99.99 100	40	60 cm Recommendation ITU-R BO.1443 Annex 1.
11.7–12.5 in Region 1; 11.7–12.2 and 12.5–12.75 in Region 3; 12.2–12.7 in Region 2.	−173.75 −173 −171 −165.5 −163 −161 −160 −160	0 33 98 99.1 99.5 99.8 99.97 100	40	90 cm Recommendation ITU-R BO.1443 Annex 1.
11.7–12.5 in Region 1; 11.7–12.2 and 12.5–12.75 in Region 3; 12.2–12.7 in Region 2.	−177 −175.25 −173.75 −173 −169.5 −167.8 −164 −161.9 −161 −160.4 −160	0 90 98.9 98.9 99.5 99.7 99.82 99.9 99.965 99.993 100	40	120 cm Recommendation ITU-R BO.1443 Annex 1.
11.7–12.5 in Region 1; 11.7–12.2 and 12.5–12.75 in Region 3; 12.2–12.7 in Region 2.	−179.5 −178.66 −176.25 −163.25 −161.5 −160.35 −160 −160	0 33 98.5 99.81 99.91 99.975 99.995 100	40	180 cm Recommendation ITU-R BO.1443 Annex 1.
11.7–12.5 in Region 1; 11.7–12.2 and 12.5–12.75 in Region 3; 12.2–12.7 in Region 2.	−182 −180.9 −178 −164.4 −161.9 −160.5 −160 −160	0 33 99.25 99.85 99.94 99.98 99.995 100	40	240 cm Recommendation ITU-R BO.1443 Annex 1.

TABLE 1M—AGGREGATE $EPFD_{down}$ LIMITS FOR PROTECTION OF 30, 45, 60, 90, 120, 180, 240 AND 300 CM GSO BSS EARTH STATION ANTENNAS [1] [2] [3] [5]—Continued

Frequency band (GHz) for international allocations	$EPFD_{down}$ dB (W/m^2)	Percentage of time during which $EPFD_{down}$ level may not be exceeded	Reference bandwidth (kHz)	Reference antenna diameter, and reference radiation pattern [4]
11.7–12.5 in Region 1; 11.7–12.2 and 12.5–12.75 in Region 3; 12.2–12.7 in Region 2.	−186.5	0		300 cm
	−184	33	40	Recommendation ITU-R
	−180.5	99.5		BO.1443
	−173	99.7		Annex 1.
	−167	99.83		
	−162	99.94		
	−160	99.97		
	−160	100		

[1] For BSS antenna diameters 180 cm, 240 cm and 300 cm, in addition to the aggregate limit shown in Table 1M, the limits in Table 2M shall also apply.

[2] For 240 cm GSO BSS earth station antennas located in Alaska, communicating with GSO BSS satellites at the 91° W.L., 101° W.L., 110° W.L., 119° W.L. and 148° W.L. nominal orbital locations with elevation angles greater than 5°, −167 dB($W/(m^2$/40 kHz)) aggregate 100% of the time operational $EPFD_{down}$ limit also applies to receive antennas.

[3] For 180 cm GSO BSS earth station antennas located in Hawaii communicating with GSO BSS satellites that are operational as of December 30, 1999 at the 110° W.L., 119° W.L. and 148° W.L. nominal orbital positions, −162.5 dB($W/(m^2$/40 kHz)) aggregate 100% of the time operational $EPFD_{down}$ limit also applies.

[4] Under the section reference pattern of Annex 1 to Recommendation ITU-R BO.1443 shall be used only for the calculation of interference from non-GSO FSS systems into GSO BSS systems.

[5] For each reference antenna diameter, the limit consists of the complete curve on a plot which is linear in decibels for the EPFD levels and logarithmic for the time percentages, with straight line joining the data points.

TABLE 2M—AGGREGATE $EPFD_{down}$ LIMITS RADIATED BY NON-GSO FSS SYSTEMS AT CERTAIN LATITUDES

00% of the time $EPFD_{down}$ dB($W/(m^2$/40 kHz))	Latitude (North or South in degrees)
160.0	0 ≤| Latitude | ≤57.5.
160.0 + 3.4 (57.5 − | Latitude |)/4	57.5 ≤| Latitude | ≤63.75.
165.3	63.75 ≤| Latitude |.

NOTE TO PARAGRAPH (m): These limits relate to the equivalent power flux density, which would be obtained under free-space propagation conditions, for all conditions and for all methods of modulation.

(n) The power-flux density at the Earth's surface produced by emissions from a space station in the Fixed-Satellite Service (space-to-Earth), for all conditions and for all methods of modulation, shall not exceed the limits given in Table N. These limits relate to the power flux-density which would be obtained under assumed free-space conditions.

TABLE N—LIMITS OF POWER-FLUX DENSITY FROM SPACE STATIONS IN THE BAND 6700–7075 MHZ

Frequency band	Limit in dB (W/m^2) for angle of arrival (δ) above the horizontal plane			Reference bandwidth
	0°–5°	5°–25°	25°–90°	
6700–6825 MHz	−137	−137 + 0.5(δ − 5)	−127	1 MHz.
6825–7075 MHz	−154	−154 + 0.5(δ − 5)	−144	4 kHz.
	and	and	and	
	−134	−134 + 0.5(δ − 5)	−124	1 MHz.

(o) In the band 12.2–12.7 GHz, for NGSO FSS space stations, the specified low-angle power flux-density at the Earth's surface produced by emissions from a space station shall not be exceeded into an operational MVDDS receiver:

(1) −158 dB(W/m^2) in any 4 kHz band for angles of arrival between 0 and 2 degrees above the horizontal plane; and

(2) −158 + 3.33(δ − 2) dB(W/m^2) in any 4 kHz band for angles of arrival (δ) (in degrees) between 2 and 5 degrees above the horizontal plane.

NOTE TO PARAGRAPH (o): These limits relate to the power flux density, which would be obtained under assumed free-space propagation conditions.

(p) The power flux-density at the Earth's surface produced by emissions from a space station in either the Earth exploration-satellite service in the band 25.5–27 GHz or the inter-satellite service in the band 25.25–27.5 GHz for all conditions and for all methods of modulation shall not exceed the following values:

-115 dB(W/m^2) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

$-115 + 0.5(-5)$ dB(W/m^2) in any 1 MHz band for angles of arrival between 5 and 25 degrees above the horizontal plane;

-105 dB(W/m^2) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

These limits relate to the power flux-density which would be obtained under assumed free-space propagation conditions.

(q) In the band 37.5–40.0 GHz, the power flux-density at the Earth's surface produced by emissions from a geostationary space station for all methods of modulation shall not exceed the following values.

(1) This limit relates to the power flux-density which would be obtained under assumed free space conditions (that is, when no allowance is made for propogation impairments such as rain-fade):

-139 dB(W/m^2) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

$-139 + 4/3\ (\delta - 5)$ dB(W/m^2) in any 1 MHz band for angles of arrival δ (in degrees) between 5 and 20 degrees above the horizontal plane; and

$-119 + 0.4\ (\delta - 20)$ dB(W/m^2) in any 1 MHz band for angles of arrival δ (in degrees) between 20 and 25 degrees above the horizontal plane;

-117 dB(W/m^2) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane;

(2) This limit relates to the maximum power flux-density which would be obtained anywhere on the surface of the Earth during periods when FSS system raises power to compensate for rain-fade conditions at the FSS Earth station:

-127 dB(W/m^2) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

$-127 + 4/3\ (\delta - 5)$ dB(W/m^2) in any 1 MHz band for angles of arrival δ (in degrees) between 5 and 20 degrees above the horizontal plane; and

$-107 + 0.4\ (\delta - 20)$ dB(W/m^2) in any 1 MHz band for angles of arrival δ (in degrees) between 20 and 25 degrees above the horizontal plane;

-105 dB(W/m^2) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

NOTE TO PARAGRAPH (q): The conditions under which satellites may exceed the power flux-density limits for normal free space propagation described in paragraph (p)(1) to compensate for the effects of rain fading are under study and have therefore not yet been defined. Such conditions and the extent to which these limits can be exceeded will be the subject of a further rulemaking by the Commission on the satellite service rules.

(r) In the band 37.5–40.0 GHz, the power flux-density at the Earth's surface produced by emissions from a non-geostationary space station for all methods of modulation shall not exceed the following values:

(1) This limit relates to the power flux-density which would be obtained under assumed free space conditions (that is, when no allowance is made for propogation impairments such as rain-fade):

-132 dB(W/m^2) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

$-132 + 0.75\ (\delta - 5)$ dB(W/m^2) in any 1 MHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane; and

-117 dB(W/m^2) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane;

(2) This limit relates to the maximum power flux-density which would be obtained anywhere on the surface of the Earth during periods when FSS system raises power to compensate for rain-fade conditions at the FSS Earth station:

-120 dB(W/m^2) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

−120 + 0.75 (δ−5) dB(W/m²) in any 1 MHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane; and

−105 dB(W/m²) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

NOTE TO PARAGRAPH (r): The conditions under which satellites may exceed these power flux-density limits for normal free space propagation described in paragraph (q)(1) to compensate for the effects of rain fading are under study and have therefore not yet been defined. Such conditions and the extent to which these limits can be exceeded will be the subject of a further rulemaking by the Commission on the satellite service rules.

(s) In the 40.0–40.5 GHz band, the power flux density at the Earth's surface produced by emissions from a space station for all conditions and for all methods of modulation shall not exceed the following values:

−115 dB(W/m²) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

−115 + 0.5 (δ−5) dB(W/m²) in any 1 MHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane; and

−105 dB(W/m²) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane;

NOTE TO PARAGRAPH (s): These limits relate to the power flux-density that would be obtained under assumed free-space propagation conditions.

(t) In the band 40.5–42.0 GHz, the power flux density at the Earth's surface produced by emissions from a non-geostationary space station for all conditions and for all methods of modulation shall not exceed the following values:

−115 dB(W/m²) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

−115 + 0.5 (δ−5) dB(W/m²) in any 1 MHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane; and

−105 dB(W/m²) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane;

NOTE TO PARAGRAPH (t): These limits relate to the power flux density that would be obtained under assumed free-space propagation conditions.

(u) In the band 40.5–42.0 GHz, the power flux-density at the Earth's surface produced by emissions from a geostationary space station for all conditions and for all methods of modulation shall not exceed the following values:

−120 dB(W/m²) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

−120 + (δ−5) dB(W/m²) in any 1 MHz band for angles of arrival δ (in degrees) between 5 and 15 degrees above the horizontal plane;

−110 + 0.5 (δ−15) dB(W/m²) in any 1 MHz band for angles of arrival δ (in degrees) between 15 and 25 degrees above the horizontal plane; and

−105 dB(W/m²) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane;

NOTE TO PARAGRAPH (u): These limits relate to the power flux-density that would be obtained under assumed free-space propagation conditions.

(v) In the band 2496–2500 MHz, the power flux-density at the Earth's surface produced by emissions from non-geostationary space stations for all conditions and all methods of modulation shall not exceed the following values (these values are obtained under assumed free-space propagation conditions):

(1) −144 dB (W/m^2) in 4 kHz for all angles of arrival between 0 and 5 degrees above the horizontal plane; −144 dB (W/m^2) + 0.65(δ −5) in 4 kHz for all angles of arrival between 5 and 25 degrees above the horizontal plane; and

−131 dB (W/m^2) in 4 kHz and for all angles of arrival between 25 and 90 degrees above the horizontal plane.

(2) −126 dB (W/m^2) in 1 MHz for all angles of arrival between 0 and 5 degrees above the horizontal plane; −126 dB (W/m^2) + 0.65(δ −5) in 1 MHz for all angles of arrival between 5 and 25 degrees above the horizontal plane; and

−113 dB (W/m^2) in 1 MHz and for all angles of arrival between 25 and 90 degrees above the horizontal plane.

(w) The power flux density at the Earth's surface produced by emissions from a 17/24 GHz BSS space station operating in the 17.3–17.7 GHz band for all conditions and all methods of modulation must not exceed the regional power flux density levels prescribed in

paragraphs (w)(1) through (4) of this section.

(1) In the region of the contiguous United States, located south of 38° North Latitude and east of 100 West Longitude: −115 dBW/m²/MHz.

(2) In the region of the contiguous United States, located north of 38° North Latitude and east of 100° West Longitude: −118 dBW/m²/MHz.

(3) In the region of the contiguous United States, located west of 100 West Longitude: −121 dBW/m²/MHz.

(4) For all regions outside of the contiguous United States including Alaska and Hawaii: −115 dBW/m²/MHz.

NOTE TO PARAGRAPH (w): These limits pertain to the power flux-density that would be obtained under assumed free-space propagation conditions.

[48 FR 40255, Sept. 6, 1983]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 25.208, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at *www.fdsys.gov*.

§ 25.209 Earth station antenna performance standards.

(a) Except as provided in paragraph (f) of this section, the gain of any antenna to be employed in transmission from an earth station in the Fixed-Satellite Service shall lie below the relevant envelope defined in paragraphs (a)(1) through (4) of this section:

(1) In the plane of the geostationary satellite orbit as it appears at the particular earth station location, for earth stations not operating in the 20/30 GHz band or conventional Ku-band:

$29–25\log_{10}\theta$	dBi	For	$1.5° \leq \theta \leq 7°$
8	dBi	For	$7° < \theta \leq 9.2°$
$32–25\log_{10}\theta$	dBi	For	$9.2° < \theta \leq 48°$
−10	dBi	For	$48° < \theta \leq 180°$

where θ is the angle in degrees from the axis of the main lobe, and dBi refers to dB relative to an isotropic radiator. For the purposes of this section, the peak gain of an individual sidelobe may not exceed the envelope defined above for θ between 1.5 and 7.0 degrees. For θ greater than 7.0 degrees, the envelope may be exceeded by no more than 10% of the sidelobes, provided no individual sidelobe exceeds the gain envelope given above by more than 3 dB.

(2) In the plane of the geostationary satellite orbit as it appears at the particular earth station location, for earth stations operating in the 20/30 GHz band or conventional Ku-band:

$29–25\log_{10}\theta$	dBi	For	$1.5° \leq \theta \leq 7°$
8	dBi	For	$7° < \theta \leq 9.2°$
$32–25\log_{10}\theta$	dBi	For	$9.2° < \theta \leq 48°$
−10	dBi	For	$48° < \theta \leq 85°$
0	dBi	For	$85° < \theta \leq 180°$

(3) In all other directions, or in the plane of the horizon including any out-of-plane potential terrestrial interference paths, for all earth stations not operating in the 20/30 GHz band or conventional Ku-band:

Outside the main beam, the gain of the antenna shall lie below the envelope defined by:

$32–25\log_{10}\theta$	dBi	For	$3° < \theta \leq 48°$
−10	dBi	For	$48° < \theta \leq 180°$

where θ and dBi are defined above. For the purposes of this section, the envelope may be exceeded by no more than 10% of the sidelobes provided no individual sidelobe exceeds the gain envelope given above by more than 6 dB. The region of the main reflector

spillover energy is to be interpreted as a single lobe and shall not exceed the envelope by more than 6 dB.

(4) In all other directions, or in the plane of the horizon including any out-of-plane potential terrestrial interference paths, for all earth stations operating in the 20/30 GHz band or conventional Ku-band:

Outside the main beam, the gain of the antenna shall lie below the envelope defined by:

$32-25\log_{10}\theta$.	dBi	For	$3° < \theta \leq 48°$
−10	dBi	For	$48° < \theta \leq 85°$
0	dBi	For	$85° < \theta \leq 180°$

where θ and dBi are defined above. For the purposes of this section, the envelope may be exceeded by no more than 10% of the sidelobes provided no individual sidelobe exceeds the gain envelope given above by more than 6 dB. The region of the main reflector spillover energy is to be interpreted as a single lobe and shall not exceed the envelope by more than 6 dB.

(5) Elliptical earth station antennas may be operated only when the major axis of the antenna is aligned with the plane of the geostationary satellite orbit as it appears at the particular earth station location.

(b) Except as provided in paragraph (f) of this section, the off-axis cross-polarization gain of any antenna to be employed in transmission from an earth station to a space station in the Fixed-Satellite Service shall be defined as follows:

(1) In the plane of the geostationary satellite orbit as it appears at the particular earth station location:

$19-25\log_{10}\theta$.	dBi	For	$1.8° < \theta \leq 7°$
−2	dBi	For	$7° < \theta \leq 9.2°$

where θ is the angle in degrees from the axis of the main lobe, and dBi refers to dB relative to an isotropic radiator.

(2) In all other directions, or in the plane of the horizon including any out-of-plane potential terrestrial interference paths:

$19-25\log_{10}\theta$.	dBi	For	$3° < \theta \leq 7°$
−2	dBi	For	$7° < \theta \leq 9.2°$

where θ and dBi are defined above.

(c)(1) Earth station antennas licensed for reception of radio transmissions from a space station in the Fixed-Satellite Service are protected from radio interference caused by other space stations only to the degree to which harmful interference would not be expected to be caused to an earth station employing an antenna conforming to the referenced patterns defined in paragraphs (a) and (b) of this section, and protected from radio interference caused by terrestrial radio transmitters identified by the frequency coordination process only to the degree to which harmful interference would not be expected to be caused to an earth station conforming to the reference pattern defined in paragraphs (a)(3) and (4) of this section.

(2) 17/24 GHz BSS telemetry earth stations are protected from harmful interference caused by other space stations to the extent set forth in paragraph (c)(1) of this section. Receive-only earth stations in the 17/24 GHz BSS are protected from harmful interference caused by other space stations to the extent set forth in § 25.224 of this part.

(d) [Reserved]

(e) The operations of any earth station with an antenna not conforming to the standards of paragraphs (a) and (b) of this section shall impose no limitations upon the operation, location or design of any terrestrial station, any other earth station, or any space station beyond those limitations that would be expected to be imposed by an earth station employing an antenna conforming to the reference patterns defined in paragraphs (a) and (b) of this section.

(f) An earth station with an antenna not conforming to relevant standards in paragraphs (a) and (b) of this section will be authorized only if the applicant demonstrates that the antenna will not cause unacceptable interference. For ESVs in the C-band, this demonstration must comply with the procedures set forth in § 25.221. For ESVs in the

Ku-band, this demonstration must comply with the procedures set forth in § 25.222. For VMES, this demonstration shall comply with the procedures set forth in § 25.226. For ESAAs, this demonstration shall comply with the procedures set forth in § 25.227. For feederlink earth stations in the 17/24 GHz BSS, this demonstration must comply with the procedures set forth in § 25.223. For other FSS earth stations, this demonstration must comply with the requirements in § 25.138, § 25.218, or § 25.220. In any case, the Commission will impose appropriate terms and conditions in its authorization of such facilities and operations.

(g) [Reserved]

(h)(1) The gain of any transmitting gateway earth station antenna operating in the 10.7–11.7 GHz, 12.75–13.15 GHz, 13.2125–13.25 GHz, 13.8–14.0 GHz, and 14.4–14.5 GHz bands and communicating with NGSO FSS satellites must lie below the envelope defined as follows:

$29–25\log_{10}(\theta)$ dBi for $1° \leq \theta \leq 36°$
–10 dBi for $36° < \theta \leq 180°$

Where:

θ is the angle in degrees from the axis of the main lobe, and dBi means dB relative to an isotropic radiator.

(2) For the purposes of this section, the peak gain of an individual sidelobe may not exceed the envelope defined in paragraph (h)(1) of this section.

[48 FR 40255, Sept. 6, 1983, as amended at 50 FR 2675, Jan. 18, 1985; 50 FR 39004, Sept. 26, 1985; 58 FR 13420, Mar. 11, 1993; 66 FR 10630, Feb. 16, 2001; 70 FR 32255, June 2, 2005; 72 FR 50029, Aug. 29, 2007; 73 FR 70901, Nov. 24, 2008; 74 FR 57099, Nov. 4, 2009; 78 FR 8427, Feb. 6, 2013; 78 FR 14927, Mar. 8, 2013; 79 FR 8322, Feb. 12, 2014]

§ 25.210 Technical requirements for space stations.

(a) All space stations in the Fixed-Satellite Service used for domestic service in the 3700–4200 MHz and 5925–6425 MHz frequency bands shall:

(1) Use orthogonal linear polarization with one of the planes defined by the equatorial plane;

(2) Be designed so that the polarization sense of uplink transmissions is opposite to that of downlink transmissions on the same transponder; and

(3) Shall be capable of switching polarization sense upon ground command.

(b) [Reserved]

(c) Space station antennas operating in the Direct Broadcast Satellite Service or operating in the Fixed-Satellite Service for reception of feeder links for Direct Broadcast Satellite Service must be designed to provide a cross-polarization isolation such that the ratio of the on-axis co-polar gain to the cross-polar gain of the antenna in the assigned frequency band is at least 27 dB within the primary coverage area.

(d)–(e) [Reserved]

(f) All space stations in the Fixed-Satellite Service operating in any portion of the 3600–4200 MHz, 5091–5250 MHz, 5850–7025 MHz, 10.7–12.7 GHz, 12.75–13.25 GHz, 13.75–14.5 GHz, 15.43–15.63 GHz, 18.3–20.2 GHz, 24.75–25.25 GHz, or 27.5–30.0 GHz bands, including feeder links for other space services, and in the Broadcasting-Satellite Service in the 17.3–17.8 GHz band (space-to-Earth), shall employ state-of-the-art full frequency reuse, either through the use of orthogonal polarizations within the same beam and/or the use of spatially independent beams. This requirement does not apply to telemetry, tracking, and command operation.

(g)–(h) [Reserved]

(i)(1) Space station antennas in the Fixed-Satellite Service, other than antennas in the 17/24 GHz BSS, must be designed to provide a cross-polarization isolation such that the ratio of the on axis co-polar gain to the cross-polar gain of the antenna in the assigned frequency band shall be at least 30 dB within its primary coverage area.

(2) Space station antennas in the 17/24 GHz Broadcasting Satellite Service must be designed to provide a cross-polarization isolation such that the ratio of the on axis co-polar gain to the cross-polar gain of the antenna in the assigned frequency band shall be at least 25 dB within its primary coverage area.

(j) Space stations operated in the geostationary satellite orbit must be maintained within 0.05° of their assigned orbital longitude in the east/west direction, unless specifically authorized by the Commission to operate with a different longitudinal tolerance,

and except as provided in Section 25.283(b) (End-of-life Disposal).

[58 FR 13420, Mar. 11, 1993, as amended at 61 FR 9952, Mar. 12, 1996; 62 FR 5931, Feb. 10, 1997; 62 FR 61457, Nov. 18, 1997; 68 FR 51508, Aug. 27, 2003; 69 FR 54587, Sept. 9, 2004; 70 FR 32256, June 2, 2005; 72 FR 50029, Aug. 29, 2007; 78 FR 8428, Feb. 6, 2013; 79 FR 8323, Feb. 12, 2014]

§ 25.211 Analog video transmissions in the Fixed-Satellite Services.

(a) Downlink analog video transmissions in the band 3700–4200 MHz shall be transmitted only on a center frequency of 3700 + 20N MHz, where N = 1 to 24. The corresponding uplink frequency shall be 2225 MHz higher.

(b) All 4/6 GHz analog video transmissions shall contain an energy dispersal signal at all times with a minimum peak-to-peak bandwidth set at whatever value is necessary to meet the power flux density limits specified in § 25.208(a) and successfully coordinated internationally and accepted by adjacent U.S. satellite operators based on the use of state of the art space and earth station facilities. Further, all transmissions operating in frequency bands described in § 25.208 (b) and (c) shall also contain an energy dispersal signal at all times with a minimum peak-to-peak bandwidth set at whatever value is necessary to meet the power flux density limits specified in § 25.208(b) and (c) and successfully coordinated internationally and accepted by adjacent U.S. satellite operators based on the use of state of the art space and earth station facilities. The transmission of an unmodulated carrier at a power level sufficient to saturate a transponder is prohibited, except by the space station licensee to determine transponder performance characteristics. All 12/14 GHz video transmissions for TV/FM shall identify the particular carrier frequencies for necessary coordination with adjacent U.S. satellite systems and affected satellite systems of other administrations.

(c) All initial analog video transmissions shall be preceded by a video test transmission at an uplink e.i.r.p. at least 10 dB below the normal operating level. The earth station operator shall not increase power until receiving notification from the satellite network control center that the frequency and polarization alignment are satisfactory pursuant to the procedures specified in § 25.272. The stationary earth station operator that has successfully transmitted an initial video test signal to a satellite pursuant to this paragraph is not required to make subsequent video test transmissions if subsequent transmissions are conducted using exactly the same parameters as the initial transmission.

(d) An earth station may be routinely licensed for transmission of full-transponder analog video services in the 5925–6425 MHz band or 14.0–14.5 GHz band provided:

(1) The application includes certification, pursuant to § 25.132(a)(1), of conformance with the antenna performance standards in § 25.209(a) and (b);

(2) An antenna with an equivalent diameter of 4.5 meters or greater will be used for such transmission in the 5925–6425 MHz band, and the input power into the antenna will not exceed 26.5 dBW;

(3) An antenna with an equivalent diameter of 1.2 meters or greater will be used for such transmission in the 14.0–14.5 GHz band, and the input power into the antenna will not exceed 27 dBW.

(e) Applications for authority for analog video uplink transmission in the Fixed-Satellite Service not eligible for routine licensing under paragraph (d) of this section are subject to the provisions of § 25.220.

[58 FR 13421, Mar. 11, 1993, as amended at 61 FR 9952, Mar. 12, 1996; 62 FR 5931, Feb. 10, 1997; 70 FR 32256, June 2, 2005; 78 FR 8428, Feb. 6, 2013; 79 FR 8323, Feb. 12, 2014]

§ 25.212 Narrowband analog transmissions and digital transmissions in the GSO Fixed Satellite Service.

(a) Except as otherwise provided by this part, criteria for unacceptable levels of interference caused by other satellite networks shall be established on the basis of nominal operating conditions and with the objective of minimizing orbital separations between satellites.

(b) Emissions with an occupied bandwidth of less than 2 MHz are not protected from interference from wider bandwidth transmissions if the r.f. carrier frequency of the narrowband signal

is within ±1 MHz of one of the frequencies specified in § 25.211(a).

(c)(1) An earth station that is not subject to licensing under § 25.134, § 25.222, § 25.226, or § 25.227 may be routinely licensed for analog transmissions in the 14.0–14.5 GHz band with bandwidths up to 200 kHz (or up to 1 MHz for command carriers at the band edge) if the equivalent diameter of the transmitting antenna is 1.2 meters or greater, input power spectral density into the antenna will not exceed −8 dBW/4 kHz, transmitted satellite carrier EIRP density will not exceed 17 dBW/4 kHz, and the application includes certification pursuant to § 25.132(a)(1) of conformance with the antenna performance standards in § 25.209(a) and (b).

(2) An earth station that is not subject to licensing under § 25.134, § 25.222, § 25.226, or § 25.227 may be routinely licensed for digital transmission, including digital video transmission, in the 14.0–14.5 GHz band if the equivalent diameter of the transmitting antenna is 1.2 meters or greater, input power spectral density into the antenna will not exceed −14 dBW/4 kHz, transmitted satellite carrier EIRP density will not exceed + 10.0 dBW/4 kHz, and the application includes certification pursuant to § 25.132(a)(1) of conformance with the antenna performance standards in § 25.209(a) and (b).

(d) An earth station that is not subject to licensing under § 25.134 or § 25.221 may be routinely licensed for digital transmission in the 5925–6425 MHz band or analog transmission in that band with carrier bandwidths up to 200 kHz (or up to 1 MHz for command carriers at the band edge) if the equivalent diameter of the transmit antenna is 4.5 meters or greater, the application includes certification pursuant to § 25.132(a)(1) of conformance with the antenna performance standards in § 25.209(a) and (b), and maximum power density into the antenna will not exceed + 0.5 dBW/4 kHz for analog carriers or $-2.7 - 10\log(N)$ dBW/4 kHz for digital carriers. For digital transmission with frequency division multiple access (FDMA) or time division multiple access (TDMA), N is equal to one. For digital transmission with code division multiple access (CDMA), N is the maximum number of co-frequency simultaneously transmitting earth stations in the same satellite receiving beam.

(e) An applicant for authority for an earth station in the Fixed-Satellite Service proposing to transmit digital signals or analog signals in bandwidths up to 200 kHz (or up to 1 MHz for command carriers at the band edge) and to operate with transmitted satellite carrier EIRP densities, and/or maximum antenna input power densities in excess of those specified in applicable provisions of paragraph (c) or (d) of this section or operate with a smaller antenna than specified in a relevant provision of those paragraphs must comply with the requirements in § 25.218 or § 25.220, unless the application is subject to licensing pursuant to § 25.221, § 25.222, § 25.226, or § 25.227.

(f) In the 24.75–25.25 GHz band, an earth station that meets the antenna gain pattern requirements set forth in § 25.209(a) and (b) of this part may be routinely licensed if the maximum power density into the antenna does not exceed 3.5 dBW/MHz.

[58 FR 13421, Mar. 11, 1993, as amended at 62 FR 5931, Feb. 10, 1997; 62 FR 51378, Oct. 1, 1997; 70 FR 32256, June 2, 2005; 70 FR 33376, June 8, 2005; 72 FR 50030, Aug. 29, 2007; 73 FR 70902, Nov. 24, 2008; 78 FR 8428, Feb. 6, 2013; 79 FR 8323, Feb. 12, 2014]

§ 25.213 Inter-Service coordination requirements for the 1.6/2.4 GHz Mobile-Satellite Service.

(a) Protection of the radio astronomy service in the 1610.6–1613.8 MHz band against interference from 1.6/2.4 GHz Mobile-Satellite Service systems.

(1) *Protection zones.* All 1.6/2.4 GHz Mobile-Satellite Service systems shall be capable of determining the position of the user transceivers accessing the space segment through either internal radiodetermination calculations or external sources such as LORAN–C or the Global Positioning System.

(i) In the band 1610.6–1613.8 MHz, within a 160 km radius of the following radio astronomy sites:

Observatory	Latitude (DMS)	Longitude (DMS)
Arecibo, PR	18 20 46	66 45 11
Green Bank Telescope, WV	38 25 59	79 50 24
	38 26 09	79 49 42

Observatory	Latitude (DMS)	Longitude (DMS)
Very Large Array, NM	34 04 43	107 37 04
Owens Valley, CA	37 13 54	118 17 36
Ohio State, OH	40 15 06	83 02 54

(ii) In the band 1610.6–1613.8 MHz, within a 50 km radius of the following sites:

Observatory	Latitude (DMS)	Longitude (DMS)
Pile Town, NM	34 18 04	108 07 07
Los Alamos, NM	35 46 30	106 14 42
Kitt Peak, AZ	31 57 22	111 36 42
Ft. Davis, TX	30 38 06	103 56 39
N. Liberty, IA	41 46 17	91 34 26
Brewster, WA	48 07 53	119 40 55
Owens Valley, CA	37 13 54	118 16 34
St. Croix, VI	17 45 31	64 35 03
Mauna Kea, HI	19 48 16	155 27 29
Hancock, NH	42 56 01	71 59 12

(iii) Out-of-band emissions of a mobile earth station licensed to operate within the 1610.0–1626.5 MHz band shall be attenuated so that the power flux density it produces in the 1610.6–1613.8 MHz band at any radio astronomy site listed in paragraph (a)(1) (i) or (ii) of this section shall not exceed the emissions of a mobile earth station operating within the 1610.6–1613.8 MHz band at the edge of the protection zone applicable for that site. As an alternative, a mobile earth station shall not operate during radio astronomy observations within the 1613.8–1615.8 MHz band within 100 km of the radio astronomy sites listed in paragraph (a)(1)(i) of this section, and within 30 km of the sites listed in paragraph (a)(1)(ii) of this section, there being no restriction on a mobile earth station operating within the 1615.8–1626.5 MHz band.

(iv) For airborne mobile earth stations operating in the 1610.0–1626.5 MHz band, the separation distance shall be the larger of the distances specified in paragraph (a)(1) (i), (ii) or (iii) of this section, as applicable, or the distance, d, as given by the formula:

d (km) = 4.1 square root of (h)

where h is the altitude of the aircraft in meters above ground level.

(v) Smaller geographic protection zones may be used in lieu of the areas specified in paragraphs (a)(1) (i), (ii), (iii), and (iv) of this section if agreed to by the Mobile-Satellite Service licensee and the Electromagnetic Spectrum Management Unit (ESMU), National Science Foundation, Washington, D.C. upon a showing by the Mobile-Satellite Service licensee that the operation of a mobile earth station will not cause harmful interference to a radio astronomy observatory during periods of observation.

(vi) The ESMU shall notify Mobile-Satellite Service space station licensees authorized to operate mobile earth stations in the 1610.0–1626.5 MHz band of periods of radio astronomy observations. The Mobile-Satellite systems shall be capable of terminating operations within the frequency bands and protection zones specified in paragraphs (a)(1)(i) through (iv) of this section, as applicable, after the first position fix of the mobile earth station either prior to transmission or, based upon its location within the protection zone at the time of initial transmission of the mobile earth station. Once the Mobile-Satellite Service system determines that a mobile earth station is located within an RAS protection zone, the Mobile-Satellite Service system shall immediately initiate procedures to relocate the mobile earth station operations to a non-RAS frequency.

(vii) A beacon-actuated protection zone may be used in lieu of fixed protection zones in the 1610.6–1613.8 MHz band if a coordination agreement is reached between a mobile-satellite system licensee and the ESMU on the specifics of beacon operations.

(viii) Additional radio astronomy sites, not located within 100 miles of the 100 most populous urbanized areas as defined by the United States Census Bureau at the time, may be afforded similar protection one year after notice to the mobile-satellite system licensees by issuance of a public notice by the Commission.

(2) Mobile-Satellite Service space stations transmitting in the 1613.8–1626.5 MHz band shall take whatever steps necessary to avoid causing harmful interference to the radio astronomy facilities listed in paragraphs (a)(1)(i) and (ii) of this section during periods of observation.

(3) Mobile-Satellite Service space stations operating in the 2483.5–2500 MHz frequency band shall limit spurious emission levels in the 4990–5000

MHz band so as not to exceed −241 dB ($W/m^2/Hz$) at the surface of the Earth.

(4) The Radioastronomy Service shall avoid scheduling radio astronomy observations during peak MSS/RDSS traffic periods to the greatest extent practicable.

(b) If a Mobile-Satellite Service space station operator in the 2496–2500 MHz band intends to operate at powers levels that exceed the PFD limits in §25.208(v), or if actual operations routinely exceed these PFD limits, we require the Mobile-Satellite Service operator to receive approval from each operational BRS system in the affected geographical region.

[59 FR 53329, Oct. 21, 1994, as amended at 61 FR 9945, Mar. 12, 1996; 67 FR 61816, Oct. 2, 2002; 71 FR 35188, June 19, 2006; 78 FR 8428, Feb. 6, 2013]

§ 25.214 Technical requirements for space stations in the Satellite Digital Audio Radio Service and associated terrestrial repeaters.

(a) [Reserved]

(b) Each system authorized under this section will be conditioned upon construction, launch and operation milestones as outlined in §25.144(b). The failure to meet any of the milestones contained in an authorization will result in its cancellation, unless such failure is due to circumstances beyond the licensee's control or unless otherwise determined by the Commission upon proper showing by the licensee in any particular case.

(c) Frequency assignments will be made for each satellite DARS system as follows:

(1) Exclusive SDARS licenses are limited to the 2320–2345 MHz segment of the 2310–2360 MHz allocated bandwidth for SDARS;

(2) Two, 12.5 MHz frequency assignments are available for satellite DARS: 2320.0–2332.5 MHz and 2332.5–2345.0 MHz;

(3) Satellite DARS licensees may reduce their assigned bandwidth occupancy to provide telemetry beacons in their exclusive frequency assignments;

(4) Each licensee may employ cross polarization within its exclusive frequency assignment and/or may employ cross polarized transmissions in frequency assignments of other satellite DARS licensees under mutual agreement with those licensees. Licensees who come to mutual agreement to use cross-polarized transmissions shall apply to the Commission for approval of the agreement before coordination is initiated with other administrations by the licensee of the exclusive frequency assignment; and

(5) Feeder uplink networks are permitted in the following Fixed-Satellite Service frequency bands: 7025–7075 MHz and 6725–7025 MHz (101° W.L. orbital location only).

(d) *Power limit for SDARS terrestrial repeaters.* (1) SDARS terrestrial repeaters must be operated at a power level less than or equal to 12-kW average EIRP, with a maximum peak-to-average power ratio of 13 dB.

(2) SDARS repeaters are permitted to operate at power levels above 12-kW average EIRP, unless a potentially affected WCS licensee provides written notice that it intends to commence commercial service within the following 365 days. Starting 180 days after receipt of such written notice, SDARS repeaters within the area notified by the potentially affected WCS licensee must be operated at a power level less than or equal to 12-kW average EIRP, with a maximum peak-to-average power ratio of 13 dB.

(3) For the purpose of this section, a WCS licensee is potentially affected if it is authorized to operate a base station in the 2305–2315 MHz or 2350–2360 MHz bands within 25 kilometers of a repeater seeking to operate with a power level greater than that prescribed in paragraph (d)(1) of this section.

[62 FR 11106, Mar. 11, 1997, as amended at 75 FR 45068, Aug. 2, 2010; 78 FR 8429, Feb. 6, 2013; 78 FR 9619, Feb. 11, 2013; 79 FR 8323, Feb. 12, 2014]

§ 25.215 [Reserved]

§ 25.216 Limits on emissions from mobile earth stations for protection of aeronautical radionavigation-satellite service.

(a) The e.i.r.p. density of emissions from mobile earth stations placed in service on or before July 21, 2002 with assigned uplink frequencies between 1610 MHz and 1660.5 MHz shall not exceed −70 dBW/MHz, averaged over any 2 millisecond active transmission interval, in the band 1559–1587.42 MHz.

The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth generated by such stations shall not exceed −80 dBW, averaged over any 2 millisecond active transmission interval, in that band.

(b) The e.i.r.p. density of emissions from mobile earth stations placed in service on or before July 21, 2002 with assigned uplink frequencies between 1610 MHz and 1626.5 MHz shall not exceed −64 dBW/MHz, averaged over any 2 millisecond active transmission interval, in the band 1587.42–1605 MHz. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth generated by such stations shall not exceed −74 dBW, averaged over any 2 millisecond active transmission interval, in the 1587.42–1605 MHz band.

(c) The e.i.r.p. density of emissions from mobile earth stations placed in service after July 21, 2002 with assigned uplink frequencies between 1610 MHz and 1660.5 MHz shall not exceed −70 dBW/MHz, averaged over any 2 millisecond active transmission interval, in the band 1559–1605 MHz. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth from such stations shall not exceed −80 dBW, averaged over any 2 millisecond active transmission interval, in the 1559–1605 MHz band.

(d) As of January 1, 2005, the e.i.r.p. density of emissions from mobile earth stations placed in service on or before July 21, 2002 with assigned uplink frequencies between 1610 MHz and 1660.5 MHz (except Standard A and B Inmarsat terminals used as Global Maritime Distress and Safety System ship earth stations) shall not exceed −70dBW/MHz, averaged over any 2 millisecond active transmission interval, in the 1559–1605 MHz band. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth from such stations shall not exceed −80 dBW, averaged over any 2 millisecond active transmission interval, in the 1559–1605 MHz band. Standard A Inmarsat terminals used as Global Maritime Distress and Safety System ship earth stations that do not meet the e.i.r.p. density limits specified in this paragraph may continue operation until December 31, 2007. Inmarsat-B terminals manufactured more than six months after FEDERAL REGISTER publication of the rule changes adopted in FCC 03–283 must meet these limits. Inmarsat B terminals manufactured before then are temporarily grandfathered under the condition that no interference is caused by these terminals to aeronautical satellite radio-navigation systems. The full-compliance deadline for grandfathered Inmarsat-B terminals is December 31, 2012.

(e) The e.i.r.p density of emissions from mobile earth stations with assigned uplink frequencies between 1990 MHz and 2025 MHz shall not exceed −70 dBW/MHz, averaged over any 2 millisecond active transmission interval, in frequencies between 1559 MHz and 1610 MHz. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth from such stations between 1559 MHz and 1605 MHz shall not exceed −80 dBW, averaged over any 2 millisecond active transmission interval. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth from such stations between 1605 MHz and 1610 MHz manufactured more than six months after FEDERAL REGISTER publication of the rule changes adopted in FCC 03–283 shall not exceed −80 dBW, averaged over any 2 millisecond active transmission interval.

(f) Mobile earth stations placed in service after July 21, 2002 with assigned uplink frequencies in the 1610–1660.5 MHz band shall suppress the power density of emissions in the 1605–1610 MHz band to an extent determined by linear interpolation from −70 dBW/MHz at 1605 MHz to −10 dBW/MHz at 1610 MHz.

(g) Mobile earth stations manufactured more than six months after FEDERAL REGISTER publication of the rule changes adopted in FCC 03–283 with assigned uplink frequencies in the 1610–1626.5 MHz band shall suppress the power density of emissions in the 1605–1610 MHz band-segment to an extent determined by linear interpolation from −70 dBW/MHz at 1605 MHz to −10 dBW/MHz at 1610 MHz averaged over any 2 millisecond active transmission interval. The e.i.r.p of discrete emissions of less than 700 Hz bandwidth from such stations shall not exceed a level determined by linear interpolation from −80 dBW at 1605 MHz to −20 dBW at 1610 MHz, averaged over any 2

millisecond active transmission interval.

(h) Mobile earth stations manufactured more than six months after FEDERAL REGISTER publication of the rule changes adopted in FCC 03–283 with assigned uplink frequencies in the 1626.5–1660.5 MHz band shall suppress the power density of emissions in the 1605–1610 MHz band-segment to an extent determined by linear interpolation from −70 dBW/MHz at 1605 MHz to −46 dBW/MHz at 1610 MHz, averaged over any 2 millisecond active transmission interval. The e.i.r.p of discrete emissions of less than 700 Hz bandwidth from such stations shall not exceed a level determined by linear interpolation from −80 dBW at 1605 MHz to −56 dBW at 1610 MHz, averaged over any 2 millisecond active transmission interval.

(i) The e.i.r.p density of carrier-off state emissions from mobile earth stations manufactured more than six months after FEDERAL REGISTER publication of the rule changes adopted in FCC 03–283 with assigned uplink frequencies between 1 and 3 GHz shall not exceed -80 dBW/MHz in the 1559–1610 MHz band averaged over any two millisecond interval.

(j) A Root-Mean-Square detector shall be used for all power density measurements.

[69 FR 5710, Feb. 6, 2004, as amended at 70 FR 19318, Apr. 13, 2005]

§ 25.217 Default service rules.

(a) The technical rules in this section apply only to licenses to operate a satellite system in a frequency band granted after a domestic frequency allocation has been adopted for that frequency band, but before any frequency-band-specific service rules have been adopted for that frequency band.

(b)(1) For all NGSO-like satellite licenses for which the application was filed pursuant to the procedures set forth in § 25.157 after August 27, 2003, authorizing operations in a frequency band for which the Commission has not adopted frequency band-specific service rules at the time the license is granted, the licensee will be required to comply with the following technical requirements, notwithstanding the frequency bands specified in these rule provisions: §§ 25.142(d), 25.143(b)(2)(ii), 25.143(b)(2)(iii), 25.204(e), 25.210(d), 25.210(f), and 25.210(i).

(2) In addition to the requirements set forth in paragraph (b)(1) of this section, the Commission will coordinate with the National Telecommunications and Information Administration (NTIA) regarding the operations of any licensees authorized to operate in a shared government/non-government frequency band, pursuant to the procedure set forth in § 25.142(b)(2)(ii).

(3) Mobile earth station licensees authorized to operate with one or more space stations subject to paragraph (b)(1) of this section must comply with the requirements in §§ 25.285 and 25.287, notwithstanding the frequency bands specified in those sections. In addition, earth station licensees authorized to operate with one or more space stations described in paragraph (b)(1) of this section in frequency bands shared with terrestrial wireless services shall comply with the requirements in § 25.203(c).

(c)(1) For all GSO-like satellite licenses for which the application was filed pursuant to the procedures set forth in § 25.158 after August 27, 2003, authorizing operations in a frequency band for which the Commission has not adopted frequency band-specific service rules at the time the license is granted, the licensee will be required to comply with the following technical requirements, notwithstanding the frequency bands specified in these rule provisions: §§ 25.142(d), 25.143(b)(2)(iv), 25.204(e), 25.210(d), 25.210(f), 25.210(i), and 25.210(j).

(2) In addition to the requirements set forth in paragraph (c)(1) of this section, the Commission will coordinate with the National Telecommunications and Information Administration (NTIA) regarding the operations of any licensees authorized to operate in a shared government/non-government frequency band, pursuant to the procedure set forth in § 25.142(b)(2)(ii).

(3) Earth station licensees authorized to operate with one or more space stations described in paragraph (c)(1) of this section shall comply with the earth station antenna performance verification requirements in § 25.132, and the antenna gain pattern requirements in § 25.209(a) and (b). In addition,

earth station licensees authorized to operate with one or more space stations described in paragraph (c)(1) of this paragraph in frequency bands shared with terrestrial wireless services shall comply with the requirements in § 25.203(c).

(4) In addition to the requirements set forth in paragraph (c)(3) of this section, earth station licensees with a gain equivalent or higher than the gain of a 1.2 meter antenna operating in the 14.0–14.5 GHz band, authorized to operate with one or more space stations described in paragraph (c)(1) of this paragraph in frequency bands greater than 14.5 GHz shall be required to comply with the antenna input power density requirements set forth in § 25.212(c).

(d) [Reserved]

(e) In the event that the Commission adopts frequency band-specific service rules for a particular frequency band after it has granted one or more space station or earth station licenses for operations in that frequency band, those licensees will be required to come into compliance with the frequency band-specific service rules within 30 days of the effective date of those rules, unless otherwise specified by either Commission or Bureau Order.

[68 FR 51508, Aug. 27, 2003, as amended at 70 FR 59277, Oct. 12, 2005; 79 FR 8323, Feb. 12, 2014]

§ 25.218 Off-axis EIRP density envelopes for FSS earth stations transmitting in certain frequency bands.

(a) This section applies to all applications for Fixed-Satellite Service earth stations transmitting to geostationary space stations in the C band, Ku band, or extended Ku band, except for:

(1) ESV, VMES, and ESAA applications, and

(2) Analog video earth station applications.

(b) Earth station applications subject to this section are eligible for routine processing if they meet the applicable off-axis EIRP density envelope set forth in this section below. The terms ''conventional Ku band'' and ''extended Ku band are defined in § 25.103.

(c) *C-band analog earth station operations.* (1) In the plane of the geostationary satellite orbit as it appears at the particular earth station location:

$29.5–25\log_{10}\theta$	dBW/4 kHz	For	$1.5° \leq \theta \leq 7°$
8.5	dBW/4 kHz	For	$7° < \theta \leq 9.2°$
$32.5–25\log_{10}\theta$	dBW/4 kHz	For	$9.2° < \theta \leq 48°$
−9.5	dBW/4 kHz	For	$48° < \theta \leq 180°$

where θ is the angle in degrees from the line connecting the focal point of the antenna to the target satellite, and the geostationary orbit plane is determined by the focal point of the antenna and the line tangent to the arc of the geostationary satellite orbit at the position of the target satellite. For the purposes of this section, the peak EIRP density of an individual sidelobe may not exceed the envelope defined above for θ between 1.5° and 7.0°. For θ greater than 7.0°, the envelope may be exceeded by no more than 10% of the sidelobes, provided no individual sidelobe exceeds the envelope given above by more than 3 dB.

(2) In all other directions, or in the plane of the horizon including any out-of-plane potential terrestrial interference paths:

$32.5–25\log_{10}\theta$	dBW/4 kHz	For	$3° \leq \theta \leq 48°$
−9.5	dBW/4 kHz	For	$48° < \theta \leq 180°$

where θ is the angle in degrees from the line connecting the focal point of the antenna to the target satellite, within any plane that includes that line, with the exception of the plane determined by the focal point of the antenna and the line tangent to the arc of the geostationary satellite orbit at the position of the target satellite. For the purposes of this section, the envelope may be exceeded by no more than 10% of the sidelobes provided no individual sidelobe exceeds the envelope given above by more than 6 dB. The region of the main reflector spillover energy

is to be interpreted as a single lobe and shall not exceed the envelope by more than 6 dB.

(d) *C-band digital earth station operations.* (1) In the plane of the geostationary satellite orbit as it appears at the particular earth station location:

$26.3–10\log_{10}(N)–25\log_{10}\theta$	dBW/4 kHz	For	$1.5° \leq \theta \leq 7°$
$5.3–10\log_{10}(N)$	dBW/4 kHz	For	$7° < \theta \leq 9.2°$
$29.3 – 10\log_{10}(N) – 25\log_{10}\theta$	dBW/4 kHz	For	$9.2° < \theta \leq 48°$
$–12.7–10\log_{10}(N)$	dBW/4 kHz	For	$48° < \theta \leq 180°$

where θ and the plane of the geostationary satellite orbit are defined in paragraph (c)(1) of this section, and N is defined below. For the purposes of this section, the peak EIRP density of an individual sidelobe may not exceed the envelope defined above for θ between 1.5° and 7.0°. For θ greater than 7.0°, the envelope may be exceeded by no more than 10% of the sidelobes, provided no individual sidelobe exceeds the envelope given above by more than 3 dB. For digital SCPC using frequency division multiple access (FDMA) or time division multiple access (TDMA) technique, N is equal to one. For digital SCPC using code division multiple access (CDMA) technique, N is the maximum number of co-frequency simultaneously transmitting earth stations in the same satellite receiving beam.

(2) In all other directions, or in the plane of the horizon including any out-of-plane potential terrestrial interference paths:

$29.3–10\log_{10}(N)–25\log_{10}\theta$	dBW/4 kHz	For	$3° \leq \theta \leq 48°$
$–12.7–10\log_{10}(N)$	dBW/4 kHz	For	$48° < \theta \leq 180°$

where θ is defined in paragraph (c)(2) of this section, and N is defined in paragraph (d)(1) of this section. For the purposes of this section, the envelope may be exceeded by no more than 10% of the sidelobes provided no individual sidelobe exceeds the envelope given above by more than 6 dB. The region of the main reflector spillover energy is to be interpreted as a single lobe and shall not exceed the envelope by more than 6 dB.

(e) *Conventional Ku-band analog earth station operations.* (1) In the plane of the geostationary satellite orbit as it appears at the particular earth station location:

$21–25\log_{10}\theta$	dBW/4 kHz	For	$1.5° \leq \theta \leq 7°$
0	dBW/4 kHz	For	$7° < \theta \leq 9.2°$
$24–25\log_{10}\theta$	dBW/4 kHz	For	$9.2° < \theta \leq 48°$
−18	dBW/4 kHz	For	$48° < \theta \leq 85°$
−8	dBW/4 kHz	For	$85° < \theta \leq 180°$

where θ and the plane of the geostationary satellite are defined in paragraph (c)(1) of this section. For the purposes of this section, the peak EIRP density of an individual sidelobe may not exceed the envelope defined above for θ between 1.5° and 7.0°. For θ greater than 7.0°, the envelope may be exceeded by no more than 10% of the sidelobes, provided no individual sidelobe exceeds the envelope given above by more than 3 dB.

(2) In all other directions, or in the plane of the horizon including any out-of-plane potential terrestrial interference paths:

$24–25\log_{10}\theta$	dBW/4 kHz	For	$3° \leq \theta \leq 48°$
−18	dBW/4 kHz	For	$48° < \theta \leq 85°$
−8	dBW/4 kHz	For	$85° < \theta \leq 180°$

where θ is defined in paragraph (c)(2) of this section. For the purposes of this section, the envelope may be exceeded by no more than 10% of the sidelobes provided no individual sidelobe exceeds the envelope given above by more than 6 dB. The region of the main reflector spillover energy is to be interpreted as a single lobe and shall not exceed the envelope by more than 6 dB.

(f) *Conventional Ku-band digital earth station operations.* (1) In the plane of the geostationary satellite orbit as it appears at the particular earth station location:

$15-10\log_{10}(N)-25\log_{10}\theta$	dBW/4 kHz	For	$1.5° \leq \theta \leq 7°$
$-6-10\log_{10}(N)$	dBW/4 kHz	For	$7° < \theta \leq 9.2°$
$18-10\log_{10}(N)-25\log_{10}\theta$	dBW/4 kHz	For	$9.2° < \theta \leq 48°$
$-24-10\log_{10}(N)$	dBW/4 kHz	For	$48° < \theta \leq 85°$
$-14-10\log_{10}(N)$	dBW/4 kHz	For	$85° < \theta \leq 180°$

where θ and the plane of the geostationary satellite orbit are defined in paragraph (c)(1) of this section, and N is defined below. For the purposes of this section, the peak EIRP density of an individual sidelobe may not exceed the envelope defined above for θ between 1.5° and 7.0°. For θ greater than 7.0°, the envelope may be exceeded by no more than 10% of the sidelobes, provided no individual sidelobe exceeds the envelope given above by more than 3 dB. For digital SCPC using frequency division multiple access (FDMA) or time division multiple access (TDMA) technique, N is equal to one. For digital SCPC using code division multiple access (CDMA) technique, N is the maximum number of co-frequency simultaneously transmitting earth stations in the same satellite receiving beam.

(2) In all other directions, or in the plane of the horizon including any out-of-plane potential terrestrial interference paths:

$18-10\log_{10}(N)-25\log_{10}\theta$	dBW/4 kHz	For	$3° \leq \theta \leq 48°$
$-24-10\log_{10}(N)$	dBW/4 kHz	For	$48° < \theta \leq 85°$
$-14-10\log_{10}(N)$	dBW/4 kHz	For	$85° < \theta \leq 180°$

where θ is defined in paragraph (c)(2) of this section, and N is defined in paragraph (f)(1) of this section. For the purposes of this section, the envelope may be exceeded by no more than 10% of the sidelobes provided no individual sidelobe exceeds the envelope given above by more than 6 dB. The region of the main reflector spillover energy is to be interpreted as a single lobe and shall not exceed the envelope by more than 6 dB.

(g) *Extended Ku-band analog earth station operations.* (1) In the plane of the geostationary satellite orbit as it appears at the particular earth station location:

$21-25\log_{10}\theta$	dBW/4 kHz	For	$1.5° \leq \theta \leq 7°$
0	dBW/4 kHz	For	$7° < \theta \leq 9.2°$
$24-25\log_{10}\theta$	dBW/4 kHz	For	$9.2° < \theta \leq 48°$
−18	dBW/4 kHz	For	$48° < \theta \leq 180°$

where θ and the plane of the geostationary satellite orbit are defined in paragraph (c)(1) of this section. For the purposes of this section, the peak EIRP density of an individual sidelobe may not exceed the envelope defined above for θ between 1.5° and 7.0°. For θ greater than 7.0°, the envelope may be exceeded by no more than 10% of the sidelobes, provided no individual sidelobe exceeds the envelope given above by more than 3 dB.

(2) In all other directions, or in the plane of the horizon including any out-of-plane potential terrestrial interference paths:

$24-25\log_{10}\theta$	dBW/4 kHz	For	$3° \leq \theta \leq 48°$

−18	dBW/4 kHz	For	48° <θ ≤180°

where θ is defined in paragraph (c)(2) of this section. For the purposes of this section, the envelope may be exceeded by no more than 10% of the sidelobes provided no individual sidelobe exceeds the envelope given above by more than 6 dB. The region of the main reflector spillover energy is to be interpreted as a single lobe and shall not exceed the envelope by more than 6 dB.

(h) *Extended Ku-band digital earth station operations.* (1) In the plane of the geostationary satellite orbit as it appears at the particular earth station location:

$15–10\log_{10}(N)–25\log_{10}\theta$	dBW/4 kHz	For	1.5° ≤θ ≤7°
$-6–10\log_{10}(N)$	dBW/4 kHz	For	7° <θ ≤9.2°
$18–10\log_{10}(N)–25\log_{10}\theta$	dBW/4 kHz	For	9.2° <θ ≤48°
$-24–10\log_{10}(N)$	dBW/4 kHz	For	48° <θ ≤180°

where θ and the plane of the geostationary satellite orbit are defined in paragraph (c)(1) of this section, and N is defined below. For the purposes of this section, the peak EIRP density of an individual sidelobe may not exceed the envelope defined above for θ between 1.5° and 7.0°. For θ greater than 7.0°, the envelope may be exceeded by no more than 10% of the sidelobes, provided no individual sidelobe exceeds the envelope given above by more than 3 dB. For digital SCPC using frequency division multiple access (FDMA) or time division multiple access (TDMA) technique, N is equal to one. For digital SCPC using code division multiple access (CDMA) technique, N is the maximum number of co-frequency simultaneously transmitting earth stations in the same satellite receiving beam.

(2) In all other directions, or in the plane of the horizon including any out-of-plane potential terrestrial interference paths:

$18–10\log_{10}(N)–25\log_{10}\theta$	dBW/4 kHz	For	3° ≤θ ≤48°
$-24–10\log_{10}(N)$	dBW/4 kHz	For	48° <θ ≤85°

where θ is defined in paragraph (c)(2) of this section and N is defined in paragraph (h)(1) of this section. For the purposes of this section, the envelope may be exceeded by no more than 10% of the sidelobes provided no individual sidelobe exceeds the envelope given above by more than 6 dB. The region of the main reflector spillover energy is to be interpreted as a single lobe and shall not exceed the envelope by more than 6 dB.

[73 FR 70902, Nov. 24, 2008, as amended at 74 FR 57099, Nov. 4, 2009; 78 FR 8429, Feb. 6, 2013; 78 FR 14927, Mar. 8, 2013; 79 FR 8324, Feb. 12, 2014]

EFFECTIVE DATE NOTE: At 74 FR 9962, Mar. 9, 2009, §25.218, which contains information collection and recordkeeping requirements, became effective with approval by the Office of Management and Budget for a period of 3 years.

§ 25.219 [Reserved]

§ 25.220 Non-conforming transmit/receive earth station operations.

(a)(1) The requirements in this section apply to earth station applications of the types to which §25.218 applies but that propose operation outside of relevant off-axis EIRP density envelopes specified in §25.218. This section also applies to applications for full-transponder analog video earth stations that are ineligible for routine licensing under §25.211(d).

(2) The requirements for petitions to deny applications filed pursuant to this section are set forth in §25.154.

(b) If an antenna proposed for use by the applicant does not comply with the antenna performance standards contained in §25.209(a) and (b), the applicant must provide, as an exhibit to its FCC Form 312 application, the antenna gain patterns specified in §25.132(b).

(c) [Reserved]

(d)(1) The applicant must submit the certifications listed in paragraphs (d)(1)(i) through (d)(1)(iv) of this section. The applicant will be authorized to transmit only to the satellite systems included in the coordination agreements referred to in the certification required by paragraph (d)(1)(ii) of this section. The applicant will be granted protection from receiving interference only with respect to the satellite systems included in the coordination agreements referred to in the certification required by paragraph (d)(1)(ii) of this section, and only to the extent that protection from receiving interference is afforded by those coordination agreements.

(i) A statement from the satellite operator acknowledging that the proposed operation of the subject non-conforming earth station with its satellite(s) has the potential to receive interference from adjacent satellite networks that may be unacceptable.

(ii) A statement from the satellite operator that it has coordinated the operation of the subject non-conforming earth station accessing its satellite(s), including its required downlink power density based on the information contained in the application, with all adjacent satellite networks within 6° of orbital separation from its satellite(s), and the operations will operate in conformance with existing coordination agreement for its satellite(s) with other satellite systems, except as set forth in paragraph (d)(4) of this section.

(iii) A statement from the satellite operator that it will include the subject non-conforming earth station operations in all future satellite network coordinations, and

(iv) A statement from the earth station applicant certifying that it will comply with all coordination agreements reached by the satellite operator(s).

(2) A license granted pursuant to paragraph (d)(1) of this section will include, as a condition on that license, that if a good faith agreement cannot be reached between the satellite operator and the operator of a future 2° compliant satellite, the earth station operator shall accept the power density levels that would accommodate the 2° compliant satellite.

(3) In the event that a coordination agreement discussed in paragraph (d)(1)(ii) of this section is reached, but that coordination agreement does not address protection from interference for the earth station, that earth station will be protected from interference to the same extent that an earth station that meets the requirements of §25.209 of this title would be protected from interference.

(4) Notwithstanding paragraph (d)(1)(ii) of this section, a party applying for an earth station license pursuant to this section will not be required to certify that its target satellite operator has reached a coordination agreement with another satellite operator whose satellite is within 6° of orbital separation from its satellite in cases where the off-axis EIRP density level of the proposed earth station operations will be less than or equal to the levels specified by the applicable off-axis EIRP envelope set forth in §25.218 of this chapter in the direction of the part of the geostationary orbit arc within 1° of the nominal orbit location of the adjacent satellite.

(e)–(f) [Reserved]

(g) Applicants filing applications for earth stations pursuant to this section must provide the following information for the Commission's public notice:

(1) Detailed description of the service to be provided, including frequency bands and satellites to be used. The applicant must identify either the specific satellites with which it plans to operate, or the eastern and western boundaries of the geostationary satellite orbit arc it plans to coordinate.

(2) The diameter or equivalent diameter of the antenna.

(3) Proposed power and power density levels.

(4) Identification of any rule or rules for which a waiver is requested.

[70 FR 32256, June 2, 2005, as amended at 72 FR 50030, Aug. 29, 2007; 73 FR 70902, Nov. 24, 2008; 74 FR 57099, Nov. 4, 2009; 78 FR 14927, Mar. 8, 2013; 79 FR 8324, Feb. 12, 2014]

EFFECTIVE DATE NOTE: At 74 FR 9962, Mar. 9, 2009, §25.220 paragraphs (a) and (d), which contain information collection and recordkeeping requirements, became effective with

approval by the Office of Management and Budget for a period of 3 years.

§ 25.221 Blanket Licensing provisions for Earth Stations on Vessels (ESVs) receiving in the 3700–4200 MHz (space-to-Earth) band and transmitting in the 5925–6425 MHz (Earth-to-space) band, operating with GSO Satellites in the Fixed-Satellite Service.

(a) The following ongoing requirements govern all ESV licensees and operations in the 3700–4200 MHz (space-to-Earth) and 5925–6425 MHz (Earth-to-space) bands transmitting to GSO satellites in the Fixed-Satellite Service. ESV licensees must comply with the requirements in paragraph (a)(1), (a)(2) or (a)(3) of this section and all of the requirements set forth in paragraphs (a)(4) through (a)(13) of this section. Paragraph (b) of this section identifies items that must be included in the application for ESV operations to demonstrate that these ongoing requirements will be met.

(1) The following requirements shall apply to an ESV that uses transmitters with off-axis effective isotropically radiated power (EIRP) spectral-densities lower than or equal to the levels in paragraph (a)(1)(i) of this section. An ESV, or ESV system, operating under this section shall provide a detailed demonstration as described in paragraph (b)(1) of this section. The ESV transmitter must also comply with the antenna pointing and cessation of emission requirements in paragraphs (a)(1)(ii) and (a)(1)(iii) of this section.

(i) An ESV system shall not exceed the off-axis EIRP spectral-density limits and conditions defined in paragraphs (a)(1)(i)(A) through (a)(1)(i)(D) of this section.

(A) The off-axis EIRP spectral-density emitted from the ESV, in the plane of the GSO as it appears at the particular earth station location, shall not exceed the following values:

$26.3 - 10\log(N) - 25\log\theta$	dBW/4 kHz	for	$1.5° \leq \theta \leq 7°$
$5.3 - 10\log(N)$	dBW/4 kHz	for	$7° < \theta \leq 9.2°$
$29.3 - 10\log(N) - 25\log\theta$	dBW/4 kHz	for	$9.2° < \theta \leq 48°$
$-12.7 - 10\log(N)$	dBW/4 kHz	for	$48° < \theta \leq 180°$

Where theta (θ) is the angle in degrees from the line connecting the focal point of the antenna to the orbital location of the target satellite, the plane of the GSO is determined by the focal point of the antenna and the line tangent to the arc of the GSO at the orbital location of the target satellite. For an ESV network using frequency division multiple access (FDMA) or time division multiple access (TDMA) techniques, N is equal to one. For ESV networks using multiple co-frequency transmitters that have the same EIRP, N is the maximum expected number of co-frequency simultaneously transmitting ESV earth stations in the same satellite receiving beam. For the purpose of this section, the peak EIRP of an individual sidelobe may not exceed the envelope defined above for θ between 1.5° and 7.0°. For θ greater than 7.0°, the envelope may be exceeded by no more than 10% of the sidelobes, provided no individual sidelobe exceeds the envelope given above by more than 3 dB.

(B) In all directions other than along the GSO, the off-axis EIRP spectral-density for co-polarized signals emitted from the ESV shall not exceed the following values:

$29.3 - 10\log(N) - 25\log\theta$	dBW/4 kHz	for	$3.0° \leq \theta \leq 48°$
$-12.7 - 10\log(N)$	dBW/4 kHz	for	$48° < \theta \leq 180°$

Where θ and N are defined in paragraph (a)(1)(i)(A) of this section. This off-axis EIRP spectral-density applies in any plane that includes the line connecting the focal point of the antenna to the orbital location of the target satellite with the exception of the plane of the GSO as defined in paragraph (a)(1)(i)(A)

of this section. For the purpose of this section, the envelope may be exceeded by no more than 10% of the sidelobes provided no individual sidelobe exceeds the gain envelope given above by more than 6 dB. The region of the main reflector spillover energy is to be interpreted as a single lobe and shall not exceed the envelope by more than 6 dB.

(C) In all directions, the off-axis EIRP spectral-density for cross-polarized signals emitted from the ESV shall not exceed the following values:

$16.3 - 10\log(N) - 25\log\theta$	dBW/4 kHz	for	$1.8° \leq \theta \leq 7.0°$
$-4.7 - 10\log(N)$	dBW/4 kHz	for	$7.0° < \theta \leq 9.2°$

Where θ and N are defined as set forth in paragraph (a)(1)(i)(A) of this section. This EIRP spectral-density applies in any plane that includes the line connecting the focal point of the antenna to the orbital location of the target satellite.

(D) For non-circular ESV antennas, the major axis of the antenna will be aligned with the tangent to the arc of the GSO at the orbital location of the target satellite, to the extent required to meet the specified off-axis EIRP spectral-density criteria.

(ii) Except for ESV systems operating under paragraph (a)(3) of this section, each ESV transmitter must meet one of the following antenna pointing error requirements:

(A) Each ESV transmitter shall maintain a pointing error of less than or equal to 0.2° between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna, or

(B) Each ESV transmitter shall maintain the declared maximum antenna pointing error that may be greater than 0.2° provided that the ESV does not exceed the off-axis EIRP spectral-density limits in paragraph (a)(1)(i) of this section, taking into account the antenna pointing error.

(iii) Except for ESV systems operating under paragraph (a)(3) of this section, each ESV transmitter must meet one of the following cessation of emission requirements:

(A) For ESVs operating under paragraph (a)(1)(ii)(A) of this section, all emissions from the ESV shall automatically cease within 100 milliseconds if the angle between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna exceeds 0.5°, and transmission will not resume until such angle is less than or equal to 0.2°, or

(B) For ESV transmitters operating under paragraph (a)(1)(ii)(B) of this section, all emissions from the ESV shall automatically cease within 100 milliseconds if the angle between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna exceeds the declared maximum antenna pointing error and shall not resume transmissions until such angle is less than or equal to the declared maximum antenna pointing error.

(2) The following requirements shall apply to an ESV that uses off-axis EIRP spectral-densities in excess of the levels in paragraph (a)(1)(i) or (a)(3)(i) of this section. An ESV or ESV system operating under this paragraph (a)(2) shall file certifications and provide a detailed demonstration(s) as described in paragraph (b)(2) of this section.

(i) The ESV shall transmit only to the target satellite system(s) referred to in the certifications required by paragraph (b)(2) of this section.

(ii) If a good faith agreement cannot be reached between the target satellite operator and the operator of a future satellite that is located within 6 degrees longitude of the target satellite, the ESV operator shall accept the power-density levels that would accommodate that adjacent satellite.

(iii) The ESV shall operate in accordance with the off-axis EIRP spectral-densities that the ESV supplied to the target satellite operator in order to obtain the certifications listed in paragraph (b)(2) of this section. Except for ESVs with variable power systems, the ESV shall automatically cease emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP spectral-densities supplied to the

target satellite operator. For ESVs using variable power systems, the individual ESV transmitter shall automatically cease or reduce emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP-density limits supplied to the target satellite operator; the individual transmitter must be self-monitoring and capable of shutting itself off; and if one or more ESV transmitters causes the aggregate off-axis EIRP-densities to exceed the off-axis EIRP-density limits supplied to the target satellite operator, then the transmitter or transmitters shall cease or reduce emissions within 100 milliseconds of receiving a command from the system's central control and monitoring station.

(3) The following requirements shall apply to an ESV system that uses variable power-density control of individual simultaneously transmitting co-frequency ESV earth stations in the same satellite receiving beam unless that ESV system operates pursuant to paragraph (a)(2) of this section. An ESV system operating under this paragraph (a)(3) shall provide a detailed demonstration as described in paragraph (b)(3) of this section.

(i) The effective aggregate EIRP-density from all terminals shall be at least 1 dB below the off-axis EIRP-density limits defined in paragraph (a)(1)(i) of this section, with the value of N = 1. In this context the term ''effective'' means that the resultant co-polarized and cross-polarized EIRP-density experienced by any GSO or non-GSO satellite shall not exceed that produced by a single transmitter operating 1 dB below the off-axis EIRP-density limits defined in paragraph (a)(1)(i) of this section. An ESV system operating under this paragraph (a)(3) shall provide a detailed demonstration as described in paragraph (b)(3)(i) of this section.

(ii) The individual ESV transmitter shall automatically cease or reduce emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP-density limits specified in paragraph (a)(3)(i) of this section. The individual transmitter must be self-monitoring and capable of shutting itself off. If one or more ESV transmitters causes the aggregate off-axis EIRP-densities to exceed the off-axis EIRP-density limits specified in paragraph (a)(3)(i) of this section, then the transmitter or transmitters shall cease or reduce emissions within 100 milliseconds of receiving a command from the system's central control and monitoring station.

(4) There shall be a point of contact in the United States, with phone number and address, available 24 hours a day, seven days a week, with authority and ability to cease all emissions from the ESVs, either directly or through the facilities of a U.S. Hub or a Hub located in another country with which the United States has a bilateral agreement that enables such cessation of emissions.

(5) For each ESV transmitter, a record of the ship location (*i.e.*, latitude/longitude), transmit frequency, channel bandwidth and satellite used shall be time annotated and maintained for a period of not less than 1 year. Records will be recorded at time intervals no greater than every 20 minutes while the ESV is transmitting. The ESV operator will make this data available upon request to a coordinator, fixed system operator, Fixed-Satellite system operator, or the Commission within 24 hours of the request.

(6) ESV operators communicating with vessels of foreign registry must maintain detailed information on each vessel's country of registry and a point of contact for the relevant administration responsible for licensing ESVs.

(7) ESV operators shall control all ESVs by a hub earth station located in the United States, except that an ESV on U.S.-registered vessels may operate under control of a hub earth station location outside the United States provided the ESV operator maintains a point of contact within the United States that will have the capability and authority to cause an ESV on a U.S.-registered vessel to cease transmitting if necessary.

(8) ESV operators transmitting in the 5925–6425 MHz (Earth-to-space) frequency band to GSO satellites in the Fixed-Satellite Service (FSS) shall not seek to coordinate, in any geographic location, more than 36 megahertz of uplink bandwidth on each of no more than two GSO FSS satellites.

(9) ESVs shall not operate in the 5925–6425 MHz (Earth-to-space) and 3700–4200 MHz (space-to-Earth) frequency bands on vessels smaller than 300 gross tons.

(10) ESVs, operating while docked, that complete coordination with terrestrial stations in the 3700–4200 MHz band in accordance with § 25.251, shall receive protection from such terrestrial stations in accordance with the coordination agreements, for 180 days, renewable for 180 days.

(11) ESVs in motion shall not claim protection from harmful interference from any authorized terrestrial stations or lawfully operating satellites to which frequencies are either already assigned, or may be assigned in the future in the 3700–4200 MHz (space-to-Earth) frequency band.

(12) ESVs operating within 200 km from the baseline of the United States, or within 200 km from a U.S.-licensed fixed service offshore installation, shall complete coordination with potentially affected U.S.-licensed fixed service operators prior to operation. The coordination method and the interference criteria objective shall be determined by the frequency coordinator. The details of the coordination shall be maintained and available at the frequency coordinator, and shall be filed with the Commission electronically via the International Bureau Filing System (*http://licensing.fcc.gov/myibfs/*) to be placed on public notice. The coordination notifications must be filed in the form of a statement referencing the relevant call signs and file numbers. Operation of each individual ESV may commence immediately after the public notice is released that identifies the notification sent to the Commission. Continuance of operation of that ESV for the duration of the coordination term shall be dependent upon successful completion of the normal public notice process. If, prior to the end of the 30-day comment period of the public notice, any objections are received from U.S.-licensed Fixed Service operators that have been excluded from coordination, the ESV licensee must immediately cease operation of that particular station on frequencies used by the affected U.S.-licensed Fixed Service station until the coordination dispute is resolved and the ESV licensee informs the Commission of the resolution. As used in this section, ''baseline'' means the line from which maritime zones are measured. The baseline is a combination of the low-water line and closing lines across the mouths of inland water bodies and is defined by a series of baseline points that include islands and ''low-water elevations,'' as determined by the U.S. Department of State's Baseline Committee.

(13) ESV operators must automatically cease transmission if the ESV operates in violation of the terms of its coordination agreement, including, but not limited to, conditions related to speed of the vessel or if the ESV travels outside the coordinated area, if within 200 km from the baseline of the United States, or within 200 km from a U.S.-licensed fixed service offshore installation. Transmissions may be controlled by the ESV network. The frequency coordinator may decide whether ESV operators should automatically cease transmissions if the vessel falls below a prescribed speed within a prescribed geographic area.

(b) Applications for ESV operation in the 5925–6425 MHz (Earth-to-space) band to GSO satellites in the Fixed-Satellite Service must include, in addition to the particulars of operation identified on Form 312, and associated Schedule B, the applicable technical demonstrations in paragraphs (b)(1) or (2) of this section and the documentation identified in paragraphs (b)(3) through (5) of this section.

(1) An ESV applicant proposing to implement a transmitter under paragraph (a)(1) of this section must demonstrate that the transmitter meets the off-axis EIRP spectral-density limits contained in paragraph (a)(1)(i) of this section. To provide this demonstration, the application shall include the tables described in paragraph (b)(1)(i) of this section or the certification described in paragraph (b)(1)(ii) of this section. The ESV applicant also must provide the value N described in paragraph (a)(1)(i)(A) of this section. An ESV applicant proposing to implement a transmitter under paragraph (a)(1)(ii)(A) of this section must provide the certifications identified in

paragraph (b)(1)(iii) of this section. An ESV applicant proposing to implement a transmitter under paragraph (a)(1)(ii)(B) of this section must provide the demonstrations identified in paragraph (b)(1)(iv) of this section.

(i) Any ESV applicant filing an application pursuant to paragraph (a)(1) of this section must file three tables showing the off-axis EIRP density level of the proposed earth station antenna in the direction of the plane of the GSO; the co-polarized EIRP density in the elevation plane, that is, the plane perpendicular to the plane of the GSO; and cross polarized EIRP density. In each table, the EIRP density level must be provided at increments of 0.1° for angles between 0° and 10° off-axis, and at increments of 5° for angles between 10° and 180° off-axis.

(A) For purposes of the off-axis EIRP density table in the plane of the GSO, the off-axis angle is the angle in degrees from the line connecting the focal point of the antenna to the orbital position of the target satellite, and the plane of the GSO is determined by the focal point of the antenna and the line tangent to the arc of the GSO at the orbital position of the target satellite.

(B) For purposes of the off-axis co-polarized EIRP density table in the elevation plane, the off-axis angle is the angle in degrees from the line connecting the focal point of the antenna to the orbital position of the target satellite, and the elevation plane is defined as the plane perpendicular to the plane of the GSO defined in paragraph (b)(1)(i)(A) of this section.

(C) For purposes of the cross-polarized EIRP density table, the off-axis angle is the angle in degrees from the line connecting the focal point of the antenna to the orbital position of the target satellite and the plane of the GSO as defined in paragraph (b)(1)(i)(A) of this section will be used.

(ii) A certification, in Schedule B, that the ESV antenna conforms to the gain pattern criteria of § 25.209(a) and (b), that, combined with the maximum input power density calculated from the EIRP density less the antenna gain, which is entered in Schedule B, demonstrates that the off-axis EIRP spectral density envelope set forth in paragraphs (a)(1)(i)(A) through (C) of this section will be met under the assumption that the antenna is pointed at the target satellite. If an antenna proposed for use by the applicant does not comply with the antenna performance standards in § 25.209(a) and (b), the applicant must provide, as an exhibit to its application, antenna gain test plots pursuant to § 25.132(b)(3).

(iii) An ESV applicant proposing to implement a transmitter under paragraph (a)(1)(ii)(A) of this section, must provide a certification from the equipment manufacturer stating that the antenna tracking system will maintain a pointing error of less than or equal to 0.2° between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna and that the antenna tracking system is capable of ceasing emissions within 100 milliseconds if the angle between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna exceeds 0.5°.

(iv) An ESV applicant proposing to implement a transmitter under paragraph (a)(1)(ii)(B) of this section must:

(A) Declare, in its application, a maximum antenna pointing error and demonstrate that the maximum antenna pointing error can be achieved without exceeding the off-axis EIRP spectral-density limits in paragraph (a)(1)(i) of this section; and

(B) Demonstrate that the ESV transmitter can detect if the transmitter exceeds the declared maximum antenna pointing error and can cease transmission within 100 milliseconds if the angle between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna exceeds the declared maximum antenna pointing error, and will not resume transmissions until the angle between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna is less than or equal to the declared maximum antenna pointing error.

(2) An ESV applicant proposing to implement a transmitter under paragraph (a)(2) of this section and using off-axis EIRP spectral-densities in excess of the levels in paragraph (a)(1)(i) or (a)(3)(i) of this section shall provide

the following certifications and demonstration(s) as exhibits to its earth station application:

(i) A statement from the target satellite operator certifying that the proposed operation of the ESV has the potential to create harmful interference to satellite networks adjacent to the target satellite(s) that may be unacceptable.

(ii) A statement from the target satellite operator certifying that the power-density levels that the ESV applicant provided to the target satellite operator are consistent with the existing coordination agreements between its satellite(s) and the adjacent satellite systems within 6° of orbital separation from its satellite(s).

(iii) A statement from the target satellite operator certifying that it will include the power-density levels of the ESV applicant in all future coordination agreements.

(iv) Except for variable power ESV applicants, a demonstration from the ESV operator that the ESV system is capable of detecting and automatically ceasing emissions within 100 milliseconds when the transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator. Variable power ESV applicants shall provide a detailed showing that an individual ESV terminal is capable of automatically ceasing or reducing emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator; that the individual transmitter is self-monitoring and capable of shutting itself off; and that one or more transmitters are capable of automatically ceasing or reducing emissions within 100 milliseconds of receiving the appropriate command from the system's central control and monitoring station if the aggregate off-axis EIRP spectral-densities of the transmitter or transmitters exceed the off-axis EIRP spectral-densities supplied to the target satellite operator.

(v) A certification from the ESV operator that the ESV system complies with the power limits in § 25.204(h).

(3) An ESV applicant proposing to implement an ESV system under paragraph (a)(3) of this section and using variable power-density control of individual simultaneously transmitting co-frequency ESV earth stations in the same satellite receiving beam shall provide the information in paragraphs (b)(3)(i) and (b)(3)(ii) of this section as exhibits to its earth station application. The International Bureau will place these showings on Public Notice along with the application.

(i) The ESV applicant shall provide a detailed showing of the measures it intends to employ to maintain the effective aggregate EIRP-density from all simultaneously transmitting co-frequency terminals operating with the same satellite transponder at least 1 dB below the EIRP-density limits defined in paragraph (a)(1)(i) of this section. In this context the term ''effective'' means that the resultant co-polarized and cross-polarized EIRP-density experienced by any GSO or non-GSO satellite shall not exceed that produced by a single ESV transmitter operating at 1 dB below the limits defined in paragraph (a)(1)(i) of this section.

(ii) The ESV applicant shall provide a detailed showing that an individual ESV terminal is capable of automatically ceasing or reducing emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP-density limit specified in paragraph (a)(3)(i) of this section and that the individual transmitter is self-monitoring and capable of shutting itself off. The ESV applicant shall also provide a detailed showing that one or more transmitters are capable of automatically ceasing or reducing emissions within 100 milliseconds of receiving the appropriate command from the system's central control and monitoring station if the aggregate off-axis EIRP spectral-densities of the transmitter or transmitters exceed the off-axis EIRP-density limits specified in paragraph (a)(3)(i) of this section.

(4) There shall be an exhibit included with the application describing the geographic area(s) in which the ESVs will operate.

(5) The point of contact information referred to in paragraph (a)(3) of this section and, if applicable, paragraph (a)(6) of this section, must be included in the application.

(6) ESVs that exceed the radiation guidelines of §1.1310 of this chapter, Radiofrequency radiation exposure limits, must provide, with their environmental assessment, a plan for mitigation of radiation exposure to the extent required to meet those guidelines.

(7) Except for ESV systems operating pursuant to paragraph (a)(2) of this section, ESV systems authorized pursuant to this section shall be eligible for a license that lists Permitted List as an authorized point of communication.

[74 FR 47102, Sept. 15, 2009, as amended at 77 FR 50050, Aug. 20, 2012; 78 FR 8429, Feb. 6, 2013; 78 FR 29062, May 17, 2013; 79 FR 8324, Feb. 12, 2014]

§ 25.222 Blanket Licensing provisions for Earth Stations on Vessels (ESVs) receiving in the 10.95–11.2 GHz (space-to-Earth), 11.45–11.7 GHz (space-to-Earth), 11.7–12.2 GHz (space-to-Earth) bands and transmitting in the 14.0–14.5 GHz (Earth-to-space) band, operating with Geostationary Orbit (GSO) Satellites in the Fixed-Satellite Service.

(a) The following ongoing requirements govern all ESV licensees and operations in the 10.95–11.2 GHz (space-to-Earth), 11.45–11.7 GHz (space-to-Earth), 11.7–12.2 GHz (space-to-Earth) and 14.0–14.5 GHz (Earth-to-space) bands transmitting to GSO satellites in the Fixed-Satellite Service.ESV licensees must comply with the requirements in paragraph (a)(1), (a)(2) or (a)(3) of this section and all of the requirements set forth in paragraphs (a)(4) through (a)(8) of this section. Paragraph (b) of this section identifies items that must be included in the application for ESV operations to demonstrate that these ongoing requirements will be met.

(1) The following requirements shall apply to an ESV that uses transmitters with off-axis effective isotropically radiated power (EIRP) spectral-densities lower than or equal to the levels in paragraph (a)(1)(i)(A) of this section. An ESV, or ESV system, operating under this section shall provide a detailed demonstration as described in paragraph (b)(1) of this section. The ESV transmitter also must comply with the antenna pointing and cessation of emission requirements in paragraphs (a)(1)(ii) and (a)(1)(iii) of this section.

(i) An ESV system shall not exceed the off-axis EIRP spectral-density limits and conditions defined in paragraphs (a)(1)(i)(A) through (a)(1)(i)(D) of this section.

(A) The off-axis EIRP spectral-density emitted from the ESV, in the plane of the GSO as it appears at the particular earth station location, shall not exceed the following values:

$15-10\log(N)-25\log\theta$	dBW/4 kHz	for	$1.5° \le \theta \le 7°$
$-6-10\log(N)$	dBW/4 kHz	for	$7° < \theta \le 9.2°$
$18-10\log(N)-25\log\theta$	dBW/4 kHz	for	$9.2° < \theta \le 48°$
$-24-10\log(N)$	dBW/4 kHz	for	$48° < \theta \le 85°$
$-14-10\log(N)$	dBW/4 kHz	for	$85° < \theta \le 180°$

Where theta (θ) is the angle in degrees from the line connecting the focal point of the antenna to the orbital location of the target satellite, the plane of the GSO is determined by the focal point of the antenna and the line tangent to the arc of the GSO at the orbital location of the target satellite. For ESV networks using frequency division multiple access (FDMA) or time division multiple access (TDMA) techniques, N is equal to one. For ESV networks using multiple co-frequency transmitters that have the same EIRP, N is the maximum expected number of co-frequency simultaneously transmitting ESV earth stations in the same satellite receiving beam. For the purpose of this section, the peak EIRP of an individual sidelobe may not exceed the envelope defined above for θ between 1.5° and 7.0°. For θ greater than 7.0°, the envelope may be exceeded by no more than 10% of the sidelobes, provided no individual sidelobe exceeds the envelope given above by more than 3 dB.

(B) In all directions other than along the GSO, the off-axis EIRP spectral-density for co-polarized signals emitted from the ESV shall not exceed the following values:

$18-10\log(N)-25\log\theta$	dBW/4 kHz	for	$3.0° \leq \theta \leq 48°$
$-24-10\log(N)$	dBW/4 kHz	for	$48° < \theta \leq 85°$
$-14-10\log(N)$	dBW/4 kHz	for	$85° < \theta \leq 180°$

Where θ and N are defined in paragraph (a)(1)(i)(A) of this section. This off-axis EIRP spectral-density applies in any plane that includes the line connecting the focal point of the antenna to the orbital location of the target satellite with the exception of the plane of the GSO as defined in paragraph (a)(1)(i)(A) of this section. For the purpose of this section, the envelope may be exceeded by no more than 10% of the sidelobes provided no individual sidelobe exceeds the gain envelope given above by more than 6 dB. The region of the main reflector spillover energy is to be interpreted as a single lobe and shall not exceed the envelope by more than 6 dB.

(C) In all directions, the off-axis EIRP spectral-density for cross-polarized signals emitted from the ESV shall not exceed the following values:

$5-10\log(N)-25\log\theta$	dBW/4 kHz	for	$1.8° \leq \theta \leq 7.0°$
$-16-10\log(N)$	dBW/4 kHz	for	$7.0° < \theta \leq 9.2°$

Where θ and N are defined as set forth in paragraph (a)(1)(i)(A) of this section. This EIRP spectral-density applies in any plane that includes the line connecting the focal point of the antenna to the target satellite.

(D) For non-circular ESV antennas, the major axis of the antenna will be aligned with the tangent to the arc of the GSO at the orbital location of the target satellite, to the extent required to meet the specified off-axis EIRP spectral-density criteria.

(ii) Except for ESV systems operating under paragraph (a)(3) of this section, each ESV transmitter must meet one of the following antenna pointing error requirements:

(A) Each ESV transmitter shall maintain a pointing error of less than or equal to 0.2° between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna, or

(B) Each ESV transmitter shall declare a maximum antenna pointing error that may be greater than 0.2° provided that the ESV does not exceed the off-axis EIRP spectral-density limits in paragraph (a)(1)(i) of this section, taking into account the antenna pointing error.

(iii) Except for ESV systems operating under paragraph (a)(3) of this section, each ESV transmitter must meet one of the following cessation of emission requirements:

(A) For ESVs operating under paragraph (a)(1)(ii)(A) of this section, all emissions from the ESV shall automatically cease within 100 milliseconds if the angle between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna exceeds 0.5°, and transmission will not resume until such angle is less than or equal to 0.2°, or

(B) For ESV transmitters operating under paragraph (a)(1)(ii)(B) of this section, all emissions from the ESV shall automatically cease within 100 milliseconds if the angle between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna exceeds the declared maximum antenna pointing error and shall not resume transmissions until such angle is less than or equal to the declared maximum antenna pointing error.

(2) The following requirements shall apply to an ESV that uses off-axis EIRP spectral-densities in excess of the levels in paragraph (a)(1)(i) or (a)(3)(i) of this section. An ESV or ESV system operating under this paragraph (a)(2) shall file certifications and provide a detailed demonstration(s) as described in paragraph (b)(2) of this section.

(i) The ESV shall transmit only to the target satellite system(s) referred to in the certifications required by paragraph (b)(2) of this section.

(ii) If a good faith agreement cannot be reached between the target satellite operator and the operator of a future satellite that is located within 6 degrees longitude of the target satellite, the ESV operator shall accept the power-density levels that would accommodate that adjacent satellite.

(iii) The ESV shall operate in accordance with the off-axis EIRP spectral-densities that the ESV supplied to the target satellite operator in order to obtain the certifications listed in paragraph (b)(2) of this section. Except for ESVs with variable power systems, the ESV shall automatically cease emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator. For ESVs using variable power systems, the individual ESV transmitter shall automatically cease or reduce emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP-density limits supplied to the target satellite operator; the individual transmitter must be self-monitoring and capable of shutting itself off; and if one or more ESV transmitters causes the aggregate off-axis EIRP-densities to exceed the off-axis EIRP-density limits supplied to the target satellite operator, then the transmitter or transmitters shall cease or reduce emissions within 100 milliseconds of receiving a command from the system's central control and monitoring station.

(3) The following requirements shall apply to an ESV system that uses variable power-density control of individual simultaneously transmitting co-frequency ESV earth stations in the same satellite receiving beam unless that ESV system operates pursuant to paragraph (a)(2) of this section. An ESV system operating under this paragraph (a)(3) shall provide a detailed demonstration as described in paragraph (b)(3) of this section.

(i) The effective aggregate EIRP-density from all terminals shall be at least 1 dB below the off-axis EIRP-density limits defined in paragraph (a)(1)(i) of this section, with the value of N = 1. In this context the term ''effective'' means that the resultant co-polarized and cross-polarized EIRP-density experienced by any GSO or non-GSO satellite shall not exceed that produced by a single transmitter operating 1 dB below the limits defined in paragraph (a)(1)(i) of this section. An ESV system operating under this paragraph (a)(3) shall provide a detailed demonstration as described in paragraph (b)(3)(i) of this section.

(ii) The individual ESV transmitter shall automatically cease or reduce emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP-density limits specified in paragraph (a)(3)(i) of this section. The individual transmitter must be self-monitoring and capable of shutting itself off. If one or more ESV transmitters causes the aggregate off-axis EIRP-densities to exceed the off-axis EIRP-density limits specified in paragraph (a)(3)(i) of this section, then the transmitter or transmitters shall cease or reduce emissions within 100 milliseconds of receiving a command from the system's central control and monitoring station.

(4) There shall be a point of contact in the United States, with phone number and address, available 24 hours a day, seven days a week, with authority and ability to cease all emissions from the ESVs, either directly or through the facilities of a U.S. Hub or a Hub located in another country with which the United States has a bilateral agreement that enables such cessation of emissions.

(5) For each ESV transmitter, a record of the ship location (*i.e.*, latitude/longitude), transmit frequency, channel bandwidth and satellite used shall be time annotated and maintained for a period of not less than 1 year. Records will be recorded at time intervals no greater than every 20 minutes while the ESV is transmitting. The ESV operator will make this data available upon request to a coordinator, fixed system operator, Fixed-Satellite system operator, NTIA, or the Commission within 24 hours of the request.

(6) ESV operators communicating with vessels of foreign registry must maintain detailed information on each vessel's country of registry and a point of contact for the relevant administration responsible for licensing ESVs.

(7) ESV operators shall control all ESVs by a Hub earth station located in the United States, except that an ESV on U.S.-registered vessels may operate under control of a Hub earth station location outside the United States provided the ESV operator maintains a point of contact within the United States that will have the capability and authority to cause an ESV on a U.S.-registered vessel to cease transmitting if necessary.

(8) In the 10.95–11.2 GHz (space-to-Earth) and 11.45–11.7 GHz (space-to-Earth) frequency bands ESVs shall not claim protection from interference from any authorized terrestrial stations to which frequencies are either already assigned, or may be assigned in the future.

(b) Applications for ESV operation in the 14.0–14.5 GHz (Earth-to-space) band to GSO satellites in the Fixed-Satellite Service must include, in addition to the particulars of operation identified on Form 312, and associated Schedule B, the applicable technical demonstrations in paragraphs (b)(1) or (2) of this section and the documentation identified in paragraphs (b)(3) through (5) of this section.

(1) An ESV applicant proposing to implement a transmitter under paragraph (a)(1) of this section must demonstrate that the transmitter meets the off-axis EIRP spectral-density limits contained in paragraph (a)(1)(i) of this section. To provide this demonstration, the application shall include the tables described in paragraph (b)(1)(i) of this section or the certification described in paragraph (b)(1)(ii) of this section. The ESV applicant also must provide the value N described in paragraph (a)(1)(i)(A) of this section. An ESV applicant proposing to implement a transmitter under paragraph (a)(1)(ii)(A) of this section must provide the certifications identified in paragraph (b)(1)(iii) of this section. An ESV applicant proposing to implement a transmitter under paragraph (a)(1)(ii)(B) of this section must provide the demonstrations identified in paragraph (b)(1)(iv) of this section.

(i) Any ESV applicant filing an application pursuant to paragraph (a)(1) of this section must file three tables showing the off-axis EIRP density level of the proposed earth station antenna in the direction of the plane of the GSO; the co-polarized EIRP density in the elevation plane, that is, the plane perpendicular to the plane of the GSO; and cross polarized EIRP density. In each table, the EIRP density level must be provided at increments of 0.1° for angles between 0° and 10° off-axis, and at increments of 5° for angles between 10° and 180° off-axis.

(A) For purposes of the off-axis EIRP density table in the plane of the GSO, the off-axis angle is the angle in degrees from the line connecting the focal point of the antenna to the orbital location of the target satellite, and the plane of the GSO is determined by the focal point of the antenna and the line tangent to the arc of the GSO at the orbital position of the target satellite.

(B) For purposes of the off-axis co-polarized EIRP density table in the elevation plane, the off-axis angle is the angle in degrees from the line connecting the focal point of the antenna to the orbital location of the target satellite, and the elevation plane is defined as the plane perpendicular to the plane of the GSO defined in paragraph (b)(1)(i)(A) of this section.

(C) For purposes of the cross-polarized EIRP density table, the off-axis angle is the angle in degrees from the line connecting the focal point of the antenna to the orbital location of the target satellite and the plane of the GSO as defined in paragraph (b)(1)(i)(A) of this section will be used.

(ii) A certification, in Schedule B, that the ESV antenna conforms to the gain pattern criteria of §25.209(a) and (b), that, combined with the maximum input power density calculated from the EIRP density less the antenna gain, which is entered in Schedule B, demonstrates that the off-axis EIRP spectral density envelope set forth in paragraphs (a)(1)(i)(A) through (C) of this section will be met under the assumption that the antenna is pointed at the target satellite. If an antenna proposed for use by the applicant does not comply with the antenna performance standards contained in §25.209(a) and (b), the applicant must provide, as an exhibit to its application, antenna gain test plots pursuant to §25.132(b)(3).

(iii) An ESV applicant proposing to implement a transmitter under paragraph (a)(1)(ii)(A) of this section, must provide a certification from the equipment manufacturer stating that the antenna tracking system will maintain a pointing error of less than or equal to 0.2 between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna and that the antenna tracking system is capable of ceasing emissions within 100 milliseconds if the angle between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna exceeds 0.5°.

(iv) An ESV applicant proposing to implement a transmitter under paragraph (a)(1)(ii)(B) of this section must:

(A) Declare, in their application, a maximum antenna pointing error and demonstrate that the maximum antenna pointing error can be achieved without exceeding the off-axis EIRP spectral-density limits in paragraph (a)(1)(A) of this section; and

(B) Demonstrate that the ESV transmitter can detect if the transmitter exceeds the declared maximum antenna pointing error and can cease transmission within 100 milliseconds if the angle between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna exceeds the declared maximum antenna pointing error, and will not resume transmissions until the angle between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna is less than or equal to the declared maximum antenna pointing error.

(2) An ESV applicant proposing to implement a transmitter under paragraph (a)(2) of this section and using off-axis EIRP spectral-densities in excess of the levels in paragraph (a)(1)(i) or (a)(3)(i) of this section shall provide the following certifications and demonstration(s) as exhibits to its earth station application:

(i) A statement from the target satellite operator certifying that the proposed operation of the ESV has the potential to create harmful interference to satellite networks adjacent to the target satellite(s) that may be unacceptable.

(ii) A statement from the target satellite operator certifying that the power-density levels that the ESV applicant provided to the target satellite operator are consistent with the existing coordination agreements between its satellite(s) and the adjacent satellite systems within 6° of orbital separation from its satellite(s).

(iii) A statement from the target satellite operator certifying that it will include the power-density levels of the ESV applicant in all future coordination agreements.

(iv) Except for variable power ESV applicants, a demonstration from the ESV operator that the ESV system is capable of detecting and automatically ceasing emissions within 100 milliseconds when the transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator. Variable power ESV applicants shall provide a detailed showing that an individual ESV terminal is capable of automatically ceasing or reducing emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator; that the individual transmitter is self-monitoring and capable of shutting itself off; and that one or more transmitters are capable of automatically ceasing or reducing emissions within 100 milliseconds of receiving the appropriate command from the system's central control and monitoring station if the aggregate off-axis EIRP spectral-densities of the transmitter or transmitters exceed the off-axis EIRP spectral-densities supplied to the target satellite operator.

(3) An ESV applicant proposing to implement an ESV system under paragraph (a)(3) of this section and using variable power-density control of individual simultaneously transmitting co-frequency ESV earth stations in the same satellite receiving beam shall provide the information in paragraphs (b)(3)(i) and (b)(3)(ii) of this section as exhibits to its ESV application. The International Bureau will place these showings on Public Notice along with the application.

(i) The ESV applicant shall provide a detailed showing of the measures it intends to employ to maintain the effective aggregate EIRP-density from all simultaneously transmitting co-frequency terminals operating with the same satellite transponder at least 1 dB below the EIRP-density limits defined in paragraph (a)(1)(i) of this section. In this context the term ''effective'' means that the resultant co-polarized and cross-polarized EIRP-density experienced by any GSO or non-GSO satellite shall not exceed that produced by a single ESV transmitter operating at 1 dB below the limits defined in paragraph (a)(1)(i) of this section.

(ii) The ESV applicant shall provide a detailed showing that an individual ESV terminal is capable of automatically ceasing emissions within 100 milliseconds if the ESV transmitter exceeds the off-axis EIRP-density limit specified in paragraph (a)(3)(i) of this section and that the individual transmitter is self-monitoring and capable of shutting itself off. The ESV applicant shall also provide a detailed showing that one or more transmitters are capable of automatically ceasing or reducing emissions within 100 milliseconds of receiving the appropriate command from the system's central control and monitoring station if the aggregate off-axis EIRP spectral-densities of the transmitter or transmitters exceed the off-axis EIRP-density limits specified in paragraph (a)(3)(i) of this section.

(4) There shall be an exhibit included with the application describing the geographic area(s) in which the ESVs will operate.

(5) The point of contact referred to in paragraph (a)(3) of this section and, if applicable paragraph (a)(6) of this section, must be included in the application.

(6) ESVs that exceed the radiation guidelines of §1.1310 of this chapter, Radiofrequency radiation exposure limits, must provide, with their environmental assessment, a plan for mitigation of radiation exposure to the extent required to meet those guidelines.

(7) Except for ESV systems operating pursuant to paragraph (a)(2) of this section, ESV systems authorized pursuant to this section shall be eligible for a license that lists Permitted List as an authorized point of communication.

(c) Operations of ESVs in the 14.0–14.2 GHz (Earth-to-space) frequency band within 125 km of the NASA TDRSS facilities on Guam (located at latitude: 13°36′55″ N, longitude 144°51′22″ E) or White Sands, New Mexico (latitude: 32°20′59″ N, longitude 106°36′31″ W and latitude: 32°32′40″ N, longitude 106°36′48″ W) are subject to coordination through the National Telecommunications and Information Administration (NTIA) Interdepartment Radio Advisory Committee (IRAC). When NTIA seeks to provide similar protection to future TDRSS sites that have been coordinated through the IRAC Frequency Assignment Subcommittee process, NTIA will notify the Commission that the site is nearing operational status. Upon public notice from the Commission, all Ku-band ESV operators must cease operations in the 14.0–14.2 GHz band within 125 km of the new TDRSS site until after NTIA/IRAC coordination for the new TDRSS facility is complete. ESV operations will then again be permitted to operate in the 14.0–14.2 GHz band within 125 km of the new TDRSS site, subject to any operational constraints developed in the coordination process.

(d) Operations of ESVs in the 14.47–14.5 GHz (Earth-to-space) frequency band within (a) 45 km of the radio observatory on St. Croix, Virgin Islands (latitude 17°46′ N, longitude 64°35′ W); (b) 125 km of the radio observatory on Mauna Kea, Hawaii (at latitude 19°48′ N, longitude 155°28′ W); and (c) 90 km of the Arecibo Observatory on Puerto Rico (latitude 18°20′46″ W, longitude 66°45′11″ N) are subject to coordination through the National Telecommunications and Information Administration (NTIA) Interdepartment Radio Advisory Committee (IRAC).

[74 FR 47105, Sept. 15, 2009, as amended at 77 FR 50051, Aug. 20, 2012; 78 FR 8429, Feb. 6, 2013; 79 FR 8324, Feb. 12, 2014]

§ 25.223 Alternative licensing rules for feeder-link earth stations in the 17/24 GHz BSS.

(a) This section applies to license applications for earth stations that transmit to 17/24 GHz Broadcasting-Satellite Service space stations that

are not eligible for routine processing under § 25.212(f).

(b) All applications for earth station licenses in the 24.75–25.25 GHz portion of 17/24 GHz BSS shall be routinely processed if they meet the following requirements:

(1) 17/24 GHz BSS earth station antenna off-axis EIRP spectral density for co-polarized signals shall not exceed the following values, within ±3° of the GSO arc, under clear sky conditions:

32.5–25log(θ)	dBW/MHz	for 2° ≤θ ≤7°
11.4	dBW/MHz	for 7° ≤θ ≤9.2°
35.5–25log(θ)	dBW/MHz	for 9.2° ≤θ ≤48°
3.5	dBW/MHz	for 48° ≤θ ≤180°

Where θ is the angle in degrees from the axis of the main lobe.

(2) 17/24 GHz BSS earth station antenna off-axis EIRP spectral density for co-polarized signals shall not exceed the following values, for all directions other than within ±3° of the GSO arc, under clear sky conditions:

35.5–25log(θ)	dBW/MHz	for 2° ≤θ ≤7°
14.4	dBW/MHz	for 7° ≤θ ≤9.2°
38.5–25log(θ)	dBW/MHz	for 9.2° ≤θ ≤48°
6.5	dBW/MHz	for 48° ≤θ ≤180°

Where θ is the angle in degrees from the axis of the main lobe.

(3) The values given in paragraphs (b)(1) and (2) of this section may be exceeded by 3 dB, for values of θ >10°, provided that the total angular range over which this occurs does not exceed 20° when measured along both sides of the GSO arc.

(4) 17/24 GHz BSS earth station antenna off-axis EIRP spectral density for cross-polarized signals shall not exceed the following values, in all directions greater than + 3 relative to the GSO arc, under clear sky conditions:

22.5–25log(θ)	dBW/MHz	for 2° ≤θ ≤7°
1.4	dBW/MHz	for 7° ≤θ ≤9.2°

Where is the angle in degrees from the axis of the main lobe.

(c) Each earth station license applicant that proposes levels in excess of those defined in paragraph (b) of this section must certify that all potentially affected parties acknowledge and do not object to the use of the applicant's higher power densities. For proposed power density levels less than or equal to 3 dB in excess of the limits defined in paragraph (b) of this section, the potentially affected parties are operators of co-frequency U.S.-authorized 17/24 GHz BSS satellites at angular separations of up to ±6° from the proposed satellite points of communication; for power density levels greater than 3 dB and less than or equal to 6 dB in excess of the limits defined in paragraph (b) of this section, potentially affected parties are operators of co-frequency U.S.-authorized satellites up to ±10° from the proposed satellite points of communication. Power density levels greater than 6 dB in excess of the limits defined in paragraph (b) of this section will not be permitted.

(d) Licensees authorized pursuant to paragraph (c) of this section shall bear the burden of coordinating with any future applicants or licensees whose proposed compliant operations at 10 degrees or smaller orbital spacing, as defined by paragraph (b) of this section, is potentially or actually adversely affected by the operation of the non-compliant licensee. If no good faith agreement can be reached, however, the non-compliant licensee shall reduce its

earth station EIRP spectral density levels to be compliant with those specified in paragraph (b) of this section.

[72 FR 50030, Aug. 29, 2007, as amended at 79 FR 8324, Feb. 12, 2014]

§ 25.224 Protection of receive-only earth stations in the 17/24 GHz BSS.

(a) Notwithstanding § 25.209(c) of this part, receive-only earth stations operating in the 17/24 GHz broadcasting-satellite service can claim no greater protection from interference than they would receive if the equivalent antenna diameter were equal to or greater than 45 cm and the antenna meets the co-polar and cross-polar performance patterns represented by the following set of formulas (adopted in Recommendation ITU–R BO.1213–1, dated November 2005) that are valid for $D/\lambda \geq 11$:

(1) Co-polar pattern:

$$G_{co}(\varphi) = G_{max} - 2.5 \times 10^{-3}\left(\frac{D}{\lambda}\varphi\right)^2 \text{ for } \quad 0 \le \varphi < \varphi_m$$

where:

$$\varphi_m = \frac{\lambda}{D}\sqrt{\frac{G_{max} - G_1}{0.0025}}$$

$$G_{max} = 10\log\left(\eta\left(\frac{\pi D}{\lambda}\right)^2\right)$$

$G_1 = 29 - 25 \log \varphi_r$, and $\varphi_r = 95\frac{\lambda}{D}$

$G_{CO}(\varphi) = G_1$ for $\varphi_m \le \varphi < \varphi_r$

$G_{CO}(\varphi) = 29 - 25 \log \varphi$ for $\varphi_r \le \varphi < \varphi_b$ where $\varphi_b = 10^{(34/25)}$

$G_{CO}(\varphi) = -5$ dBi for $\varphi_b \le \varphi < 70°$

$G_{CO}(\varphi) = 0$ dBi for $70° \le \varphi < 180°$

(2) Cross-polar pattern:

$G_{cross}(\varphi) = G_{max} - 25$ for $0 \le \varphi < 0.25\ \varphi_0$

where:

$$\varphi_0 = 2\frac{\lambda}{D}\sqrt{\frac{3}{0.0025}} = 3 \text{ dB beamwidth}$$

$$G_{cross}(\varphi) = G_{max} - 25 + 8\left(\frac{\varphi - 0.25\ \varphi_0}{0.19\ \varphi_0}\right) \text{ for } 0.25\ \varphi_0 \le \varphi < 0.44\ \varphi_0$$

$G_{cross}(\varphi) = G_{max} - 17$ for $0.44\ \varphi_0 \le \varphi < \varphi_0$

$$G_{cross}(\varphi) = G_{max} - 17 + C\left|\frac{\varphi - \varphi_0}{\varphi_1 - \varphi_0}\right| \text{ for } \varphi_0 \le \varphi < \varphi_1 \text{ where } \varphi_1 = \frac{\varphi_0}{2}\sqrt{10.1875}$$

and $C = 21 - 25 \log(\varphi_1) - (G_{max} - 17)$

$G_{cross}(\varphi) = 21 - 25 \log \varphi$ for $\varphi_1 \le \varphi < \varphi_2$ where $\varphi_2 = 10^{(26/25)}$

$G_{cross}(\varphi) = -5$ dBi for $\varphi_2 \le \varphi < 70°$

$G_{cross}(\varphi) = 0$ dBi for $70° \le \varphi < 180°$

where:

D: equivalent antenna diameter

λ: wavelength expressed in the same unit as the diameter

φ: off-axis angle of the antenna relative to boresight (degrees)

η: antenna efficiency = 0.65

(b) Paragraph (a) of this section does not apply to 17/24 GHz BSS telemetry earth stations. Those earth stations are subject to the antenna performance standards of §25.209(a) and (b) of this part.

[72 FR 50031, Aug. 29, 2007]

§ 25.225 Geographic Service Requirements for 17/24 GHz Broadcasting Satellite Service.

(a) Each operator of a 17/24 GHz BSS space station that is used to provide video programming directly to consumers in the 48 contiguous United States (CONUS) must provide comparable service to Alaska and Hawaii, unless such service is not technically feasible or not economically reasonable from the authorized orbital location.

(b) Each operator of a 17/24 GHz BSS space station subject to paragraph (a) of this section must design and configure its space station to be capable of providing service to Alaska and Hawaii, that is comparable to the service that such satellites will provide to CONUS subscribers, from any orbital location capable of providing service to either Alaska or Hawaii to which it may be located or relocated in the future.

(c) If an operator of a 17/24 GHz BSS space station that is used to provide video programming directly to consumers in the United States relocates or replaces a 17/24 GHz BSS space station at a location from which service to Alaska and Hawaii had been provided by another 17/24 GHz BSS space station, the operator must use a space station capable of providing at least the same level of service to Alaska and Hawaii as previously provided from that location.

[72 FR 50033, Aug. 29, 2007]

§ 25.226 Blanket Licensing provisions for domestic, U.S. Vehicle-Mounted Earth Stations (VMESs) receiving in the 10.95–11.2 GHz (space-to-Earth), 11.45–11.7 GHz (space-to-Earth), and 11.7–12.2 GHz (space-to-Earth) bands and transmitting in the 14.0–14.5 GHz (Earth-to-space) band, operating with Geostationary Satellites in the Fixed-Satellite Service.

(a) The following ongoing requirements govern all VMES licensees and operations in the 10.95–11.2 GHz (space-to-Earth), 11.45–11.7 GHz (space-to-Earth), 11.7–12.2 GHz (space-to-Earth) and 14.0–14.5 GHz (Earth-to-space) bands receiving from and transmitting to geostationary orbit satellites in the Fixed-Satellite Service. VMES licensees shall comply with the requirements in either paragraph (a)(1), (a)(2) or (a)(3) of this section and all of the requirements set forth in paragraphs (a)(4) through (a)(9) and paragraphs (c), (d), and (e) of this section. Paragraph (b) of this section identifies items that shall be included in the application for VMES operations to demonstrate that these ongoing requirements will be met.

(1) The following requirements shall apply to a VMES that uses transmitters with off-axis EIRP spectral-densities lower than or equal to the levels in paragraph (a)(1)(i) of this section. A VMES, or VMES system, operating under this section shall provide a detailed demonstration as described in paragraph (b)(1) of this section. The VMES transmitter also shall comply with the antenna pointing and cessation of emission requirements in paragraphs (a)(1)(ii) and (a)(1)(iii) of this section.

(i) A VMES system shall not exceed the off-axis EIRP spectral-density limits and conditions defined in paragraphs (a)(1)(i)(A) through (D) of this section.

(A) The off-axis EIRP spectral-density emitted from the VMES, in the plane of the geostationary satellite orbit (GSO) as it appears at the particular earth station location, shall not exceed the following values:

$15 - 10\log(N) - 25\log\theta$ dBW/4kHz for $1.5° \leq \theta \leq 7°$

$-6 - 10\log(N)$ dBW/4kHz for $7° < \theta \leq 9.2°$

$18 - 10\log(N) - 25\log\theta$ dBW/4kHz for $9.2° < \theta \leq 48°$

$-24 - 10\log(N)$ dBW/4kHz for $48° < \theta \leq 85°$

$-14 - 10\log(N)$ dBW/4kHz for $85° < \theta \leq 180°$

where theta (θ) is the angle in degrees from the line connecting the focal point of the antenna to the orbital location of the target satellite, the plane of the GSO is determined by the focal point of the antenna and the line tangent to the arc of the GSO at the orbital location of the target satellite. For VMES networks using frequency division multiple access (FDMA) or time division multiple access (TDMA) techniques, N is equal to one. For VMES networks using multiple co-frequency transmitters that have the same EIRP, N is the maximum expected number of co-frequency simultaneously transmitting VMES earth stations in the

same satellite receiving beam. For the purpose of this section, the peak EIRP of an individual sidelobe shall not exceed the envelope defined above for θ between 1.5° and 7.0°. For θ greater than 7.0°, the envelope shall be exceeded by no more than 10% of the sidelobes, provided no individual sidelobe exceeds the envelope given above by more than 3 dB.

(B) In all directions other than along the GSO, the off-axis EIRP spectral-density for co-polarized signals emitted from the VMES shall not exceed the following values:

$18 - 10\log(N) - 25\log\theta$ dBW/4kHz for $3.0° \leq \theta \leq 48°$

$-24 - 10\log(N)$ dBW/4kHz for $48° < \theta \leq 85°$

$-14 - 10\log(N)$ dBW/4kHz for $85° < \theta \leq 180°$

where θ and N are defined in paragraph (a)(1)(i)(A) of this section. This off-axis EIRP spectral-density applies in any plane that includes the line connecting the focal point of the antenna to the orbital location of the target satellite with the exception of the plane of the GSO as defined in paragraph (a)(1)(i)(A) of this section. For the purpose of this subsection, the envelope shall be exceeded by no more than 10% of the sidelobes provided no individual sidelobe exceeds the gain envelope given above by more than 6 dB. The region of the main reflector spillover energy is to be interpreted as a single lobe and shall not exceed the envelope by more than 6 dB.

(C) In all directions, the off-axis EIRP spectral-density for cross-polarized signals emitted from the VMES shall not exceed the following values:

$5 - 10\log(N) - 25\log\theta$ dBW/4kHz for $1.8° \leq \theta \leq 7.0°$

$-16 - 10\log(N)$ dBW/4kHz for $7.0° < \theta \leq 9.2°$

where θ and N are defined as set forth in paragraph (a)(1)(i)(A) of this section. This EIRP spectral-density applies in any plane that includes the line connecting the focal point of the antenna to the target satellite.

(D) For non-circular VMES antennas, the major axis of the antenna shall be aligned with the tangent to the arc of the GSO at the orbital location of the target satellite, to the extent required to meet the specified off-axis EIRP spectral-density criteria.

(ii) Except for VMES systems operating under paragraph (a)(3), each VMES transmitter must meet one of the following antenna pointing error requirements:

(A) Each VMES transmitter shall maintain a pointing error of less than or equal to 0.2° between the orbital location of the target satellite and the axis of the main lobe of the VMES antenna, or

(B) Each VMES transmitter shall declare a maximum antenna pointing error that may be greater than 0.2° provided that the VMES does not exceed the off-axis EIRP spectral-density limits in paragraph (a)(1)(i) of this section, taking into account the antenna pointing error.

(iii) Except for VMES systems operating under paragraph (a)(3), each VMES transmitter must meet of one the following cessation of emission requirements:

(A) For VMESs operating under paragraph (a)(1)(ii)(A) of this section, all emissions from the VMES shall automatically cease within 100 milliseconds if the angle between the orbital location of the target satellite and the axis of the main lobe of the VMES antenna exceeds 0.5°, and transmission shall not resume until such angle is less than or equal to 0.2°, or

(B) For VMES transmitters operating under paragraph (a)(1)(ii)(B) of this section, all emissions from the VMES shall automatically cease within 100 milliseconds if the angle between the orbital location of the target satellite and the axis of the main lobe of the VMES antenna exceeds the declared maximum antenna pointing error and shall not resume transmissions until such angle is less than or equal to the declared maximum antenna pointing error.

(2) The following requirements shall apply to a VMES that uses off-axis EIRP spectral-densities in excess of the levels in paragraph (a)(1)(i) of this section. A VMES, or VMES system, operating under this subsection shall file certifications and provide a detailed demonstration as described in paragraph (b)(2) of this section.

(i) The VMES shall transmit only to the target satellite system(s) referred to in the certifications required by paragraph (b)(2) of this section.

(ii) If a good faith agreement cannot be reached between the target satellite operator and the operator of a future satellite that is located within 6 degrees longitude of the target satellite, the VMES operator shall accept the

power-density levels that would accommodate that adjacent satellite.

(iii) The VMES shall operate in accordance with the off-axis EIRP spectral-densities that the VMES supplied to the target satellite operator in order to obtain the certifications listed in paragraph (b)(2) of this section. The VMES shall automatically cease emissions within 100 milliseconds if the VMES transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator.

(3) The following requirements shall apply to a VMES system that uses variable power-density control of individual simultaneously transmitting co-frequency VMES earth stations in the same satellite receiving beam. A VMES system operating under this subsection shall file certifications and provide a detailed demonstration as described in paragraph (b)(3) of this section.

(i) The effective aggregate EIRP-density from all terminals shall be at least 1 dB below the off-axis EIRP-density limits defined in paragraph (a)(1)(i) of this section, with the value of N = 1. In this context the term ''effective'' means that the resultant co-polarized and cross-polarized EIRP-density experienced by any GSO or non-GSO satellite shall not exceed that produced by a single transmitter operating 1 dB below the limits defined in paragraph (a)(1)(i) of this section. The individual VMES transmitter shall automatically cease emissions within 100 milliseconds if the VMES transmitter exceeds the off-axis EIRP-density limits minus 1 dB specified above. If one or more VMES transmitters causes the aggregate off-axis EIRP-densities to exceed the off-axis EIRP-density limits minus 1 dB specified above, then the transmitter or transmitters shall cease or reduce emissions within 100 milliseconds of receiving a command from the system's network control and monitoring center. A VMES system operating under this subsection shall provide a detailed demonstration as described in paragraph (b)(3)(i) of this section.

(ii) The following requirements shall apply to a VMES that uses off-axis EIRP spectral-densities in excess of the levels in paragraph (a)(3)(i) of this section. A VMES system operating under this section shall file certifications and provide a detailed demonstration as described in paragraphs (b)(3)(ii) and (b)(3)(iii) of this section.

(A) If a good faith agreement cannot be reached between the target satellite operator and the operator of a future satellite that is located within 6 degrees longitude of the target satellite, the VMES shall operate at an EIRP-density defined in paragraph (a)(3)(i) of this section.

(B) The VMES shall operate in accordance with the off-axis EIRP spectral-densities that the VMES supplied to the target satellite operator in order to obtain the certifications listed in paragraph (b)(3)(ii) of this section. The individual VMES terminals shall automatically cease emissions within 100 milliseconds if the VMES transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator. The overall system shall be capable of shutting off an individual transmitter or the entire system if the aggregate off-axis EIRP spectral-densities exceed those supplied to the target satellite operator.

(C) The VMES shall transmit only to the target satellite system(s) referred to in the certifications required by paragraph (b)(3) of this section.

(4) An applicant filing to operate a VMES terminal or system and planning to use a contention protocol shall certify that its contention protocol use will be reasonable.

(5) There shall be a point of contact in the United States, with phone number and address, available 24 hours a day, seven days a week, with authority and ability to cease all emissions from the VMESs.

(6) For each VMES transmitter, a record of the vehicle location (i.e., latitude/longitude), transmit frequency, channel bandwidth and satellite used shall be time annotated and maintained for a period of not less than one (1) year. Records shall be recorded at time intervals no greater than every five (5) minutes while the VMES is transmitting. The VMES operator shall make this data available upon request to a coordinator, fixed system operator, Fixed-Satellite Service system operator, NTIA, or the Commission within 24 hours of the request.

(7) In the 10.95–11.2 GHz (space-to-Earth) and 11.45–11.7 GHz (space-to-Earth) frequency bands VMESs shall not claim protection from interference from any authorized terrestrial stations to which frequencies are either already assigned, or may be assigned in the future.

(8) A VMES terminal receiving in the 10.95–11.2 GHz (space-to-Earth), 11.45–11.7 GHz (space-to-Earth) and 11.7–12.2 GHz (space-to-Earth) bands shall receive protection from interference caused by space stations other than the target space station only to the degree to which harmful interference would not be expected to be caused to an earth station employing an antenna conforming to the referenced patterns defined in §25.209(a) and (b) and stationary at the location at which any interference occurred.

(9) Each VMES terminal shall automatically cease transmitting upon the loss of synchronization or within 5 seconds upon loss of reception of the satellite downlink signal, whichever is the shorter timeframe.

(b) Applications for VMES operation in the 14.0–14.5 GHz (Earth-to-space) band to GSO satellites in the Fixed-Satellite Service shall include, in addition to the particulars of operation identified on Form 312, and associated Schedule B, the applicable technical demonstrations in paragraphs (b)(1), (2) or (3) of this section and the documentation identified in paragraphs (b)(4) through (8) of this section.

(1) A VMES applicant proposing to implement a transmitter under paragraph (a)(1) of this section shall demonstrate that the transmitter meets the off-axis EIRP spectral-density limits contained in paragraph (a)(1)(i) of this section. To provide this demonstration, the application shall include the tables described in paragraph (b)(1)(i) of this section or the certification described in paragraph (b)(1)(ii) of this section. The VMES applicant also shall provide the value N described in paragraph (a)(1)(i)(A) of this section. A VMES applicant proposing to implement a transmitter under paragraph (a)(1)(ii)(A) of this section shall provide the certifications identified in paragraph (b)(1)(iii) of this section. A VMES applicant proposing to implement a transmitter under paragraph (a)(1)(ii)(B) of this section shall provide the demonstrations identified in paragraph (b)(1)(iv) of this section.

(i) Any VMES applicant filing an application pursuant to paragraph (a)(1) of this section shall file three tables showing the off-axis EIRP density level of the proposed earth station antenna in the direction of the plane of the GSO; the co-polarized EIRP density in the elevation plane, that is, the plane perpendicular to the plane of the GSO; and cross polarized EIRP density. Each table shall provide the EIRP density level at increments of 0.1° for angles between 0° and 10° off-axis, and at increments of 5° for angles between 10° and 180° off-axis.

(A) For purposes of the off-axis EIRP density table in the plane of the GSO, the off-axis angle is the angle in degrees from the line connecting the focal point of the antenna to the orbital location of the target satellite, and the plane of the GSO is determined by the focal point of the antenna and the line tangent to the arc of the GSO at the orbital position of the target satellite.

(B) For purposes of the off-axis co-polarized EIRP density table in the elevation plane, the off-axis angle is the angle in degrees from the line connecting the focal point of the antenna to the orbital location of the target satellite, and the elevation plane is defined as the plane perpendicular to the plane of the GSO defined in paragraph (b)(1)(i)(A) of this section.

(C) For purposes of the cross-polarized EIRP density table, the off-axis angle is the angle in degrees from the line connecting the focal point of the antenna to the orbital location of the target satellite and the plane of the GSO as defined in paragraph (b)(1)(i)(A) of this section will be used.

(ii) A VMES applicant shall include a certification, in Schedule B, that the VMES antenna conforms to the gain pattern criteria of §25.209(a) and (b), that, combined with the maximum input power density calculated from the EIRP density less the antenna gain, which is entered in Schedule B, demonstrates that the off-axis EIRP spectral density envelope set forth in paragraphs (a)(1)(i)(A) through (C) of

this section will be met under the assumption that the antenna is pointed at the target satellite. If an antenna proposed for use by the applicant does not comply with the antenna performance standards contained in §25.209(a) and (b), the applicant must provide, as an exhibit to its application, antenna gain test plots pursuant to §25.132(b)(3).

(iii) A VMES applicant proposing to implement a transmitter under paragraph (a)(1)(ii)(A) of this section shall provide a certification from the equipment manufacturer stating that the antenna tracking system will maintain a pointing error of less than or equal to 0.2° between the orbital location of the target satellite and the axis of the main lobe of the VMES antenna and that the antenna tracking system is capable of ceasing emissions within 100 milliseconds if the angle between the orbital location of the target satellite and the axis of the main lobe of the VMES antenna exceeds 0.5°.

(iv) A VMES applicant proposing to implement a transmitter under paragraph (a)(1)(ii)(B) of this section shall:

(A) Declare, in its application, a maximum antenna pointing error and demonstrate that the maximum antenna pointing error can be achieved without exceeding the off-axis EIRP spectral-density limits in paragraph (a)(1)(i) of this section; and

(B) Demonstrate that the VMES transmitter can detect if the transmitter exceeds the declared maximum antenna pointing error and can cease transmission within 100 milliseconds if the angle between the orbital location of the target satellite and the axis of the main lobe of the VMES antenna exceeds the declared maximum antenna pointing error, and will not resume transmissions until the angle between the orbital location of the target satellite and the axis of the main lobe of the VMES antenna is less than or equal to the declared maximum antenna pointing error.

(2) A VMES applicant proposing to implement a transmitter under paragraph (a)(2) of this section and using off-axis EIRP spectral-densities in excess of the levels in paragraph (a)(1)(i) of this section shall provide the following certifications and demonstration as exhibits to its earth station application:

(i) A statement from the target satellite operator certifying that the proposed operation of the VMES has the potential to create harmful interference to satellite networks adjacent to the target satellite(s) that may be unacceptable.

(ii) A statement from the target satellite operator certifying that the power density levels that the VMES applicant provided to the target satellite operator are consistent with the existing coordination agreements between its satellite(s) and the adjacent satellite systems within 6° of orbital separation from its satellite(s).

(iii) A statement from the target satellite operator certifying that it will include the power-density levels of the VMES applicant in all future coordination agreements.

(iv) A demonstration from the VMES operator that the VMES system is capable of detecting and automatically ceasing emissions within 100 milliseconds when the transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator.

(3) A VMES applicant proposing to implement VMES system under paragraph (a)(3) of this section and using variable power-density control of individual simultaneously transmitting co-frequency VMES earth stations in the same satellite receiving beam shall provide the following certifications and demonstration as exhibits to its earth station application:

(i) The applicant shall make a detailed showing of the measures it intends to employ to maintain the effective aggregate EIRP-density from all simultaneously transmitting co-frequency terminals operating with the same satellite transponder at least 1 dB below the off-axis EIRP-density limits defined in paragraphs (a)(1)(i)(A) through (C) of this section. In this context the term ''effective'' means that the resultant co-polarized and cross-polarized EIRP-density experienced by any GSO or non-GSO satellite shall not exceed that produced by a single VMES transmitter operating at 1 dB below the limits defined in paragraphs (a)(1)(i)(A) through (C) of this section.

The applicant also must demonstrate that an individual transmitter and the entire VMES system is capable of automatically ceasing emissions within 100 milliseconds if the aggregate off-axis EIRP-densities exceed the off-axis EIRP-density limits minus 1 dB, as set forth in paragraph (a)(3)(i) of this section. The International Bureau will place this showing on public notice along with the application.

(ii) An applicant proposing to implement a VMES under paragraph (a)(3)(ii) of this section that uses off-axis EIRP spectral-densities in excess of the levels in paragraph (a)(3)(i) of this section shall provide the following certifications, demonstration and list of satellites as exhibits to its earth station application:

(A) A detailed showing of the measures the applicant intends to employ to maintain the effective aggregate EIRP-density from all simultaneously transmitting co-frequency terminals operating with the same satellite transponder at the EIRP-density limits supplied to the target satellite operator. The International Bureau will place this showing on public notice along with the application.

(B) A statement from the target satellite operator certifying that the proposed operation of the VMES has the potential to create harmful interference to satellite networks adjacent to the target satellite(s) that may be unacceptable.

(C) A statement from the target satellite operator certifying that the aggregate power density levels that the VMES applicant provided to the target satellite operator are consistent with the existing coordination agreements between its satellite(s) and the adjacent satellite systems within 6° of orbital separation from its satellite(s).

(D) A statement from the target satellite operator certifying that it will include the aggregate power-density levels of the VMES applicant in all future coordination agreements.

(E) A demonstration from the VMES operator that the VMES system is capable of detecting and automatically ceasing emissions within 100 milliseconds when an individual transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator and that the overall system is capable of shutting off an individual transmitter or the entire system if the aggregate off-axis EIRP spectral-densities exceed those supplied to the target satellite operator.

(F) An identification of the specific satellite or satellites with which the VMES system will operate.

(iii) The applicant shall acknowledge that it will maintain sufficient statistical and technical information on the individual terminals and overall system operation to file a detailed report, one year after license issuance, describing the effective aggregate EIRP-density levels resulting from the operation of the VMES system.

(4) There shall be an exhibit included with the application describing the geographic area(s) in which the VMESs will operate.

(5) Any VMES applicant filing for a VMES terminal or system and planning to use a contention protocol shall include in its application a certification that will comply with the requirements of paragraph (a)(4) of this section.

(6) The point of contact referred to in paragraph (a)(5) of this section shall be included in the application.

(7) Any VMES applicant filing for a VMES terminal or system shall include in its application a certification that will comply with the requirements of paragraph (a)(6) of this section.

(8) All VMES applicants shall submit a radio frequency hazard analysis determining via calculation, simulation, or field measurement whether VMES terminals, or classes of terminals, will produce power densities that will exceed the Commission's radio frequency exposure criteria. VMES applicants with VMES terminals that will exceed the guidelines in §1.1310 of this chapter for radio frequency radiation exposure shall provide, with their environmental assessment, a plan for mitigation of radiation exposure to the extent required to meet those guidelines. All VMES licensees shall ensure installation of VMES terminals on vehicles by qualified installers who have an understanding of the antenna's radiation environment and the measures best suited to maximize protection of the general public and persons operating the

vehicle and equipment. A VMES terminal exhibiting radiation exposure levels exceeding 1.0 mW/cm^2 in accessible areas, such as at the exterior surface of the radome, shall have a label attached to the surface of the terminal warning about the radiation hazard and shall include thereon a diagram showing the regions around the terminal where the radiation levels could exceed 1.0 mW/cm^2. All VMES applicants shall demonstrate that their VMES terminals are capable of automatically ceasing transmissions upon the loss of synchronization or within 5 seconds upon loss of reception of the satellite downlink signal, whichever is the shorter timeframe.

(9) Except for VMES systems operating pursuant to paragraphs (a)(2) and (a)(3)(ii) of this section, VMES systems authorized pursuant to this section shall be eligible for a license that lists Permitted List as an authorized point of communication.

(c)(1) Operations of VMESs in the 14.0–14.2 GHz (Earth-to-space) frequency band within 125 km of the NASA TDRSS facilities on Guam (latitude 13°36′55″ N, longitude 144°51′22″ E) or White Sands, New Mexico (latitude 32°20′59″ N, longitude 106°36′31″ W and latitude 32°32′40″ N, longitude 106°36′48″ W) are subject to coordination with the National Aeronautics and Space Administration (NASA) through the National Telecommunications and Information Administration (NTIA) Interdepartment Radio Advisory Committee (IRAC). Licensees shall notify the International Bureau once they have completed coordination. Upon receipt of such notification from a licensee, the International Bureau will issue a public notice stating that the licensee may commence operations within the coordination zone in 30 days if no party has opposed the operations.

(2) When NTIA seeks to provide similar protection to future TDRSS sites that have been coordinated through the IRAC Frequency Assignment Subcommittee process, NTIA will notify the Commission's International Bureau that the site is nearing operational status. Upon public notice from the International Bureau, all Ku-band VMES licensees shall cease operations in the 14.0–14.2 GHz band within 125 km of the new TDRSS site until the licensees complete coordination with NTIA/IRAC for the new TDRSS facility. Licensees shall notify the International Bureau once they have completed coordination for the new TDRSS site. Upon receipt of such notification from a licensee, the International Bureau will issue a public notice stating that the licensee may commence operations within the coordination zone in 30 days if no party has opposed the operations. The VMES licensee then will be permitted to commence operations in the 14.0–14.2 GHz band within 125 km of the new TDRSS site, subject to any operational constraints developed in the coordination process.

(d)(1) Operations of VMESs in the 14.47–14.5 GHz (Earth-to-space) frequency band in the vicinity of radio astronomy service (RAS) observatories observing in the 14.47–14.5 GHz band are subject to coordination with the National Science Foundation (NSF). The appropriate NSF contact point to initiate coordination is Electromagnetic Spectrum Manager, NSF, 4201 Wilson Blvd., Suite 1045, Arlington VA 22203, fax 703–292–9034, e-mail *esm@nsf.gov*. Licensees shall notify the International Bureau once they have completed coordination. Upon receipt of the coordination agreement from a licensee, the International Bureau will issue a public notice stating that the licensee may commence operations within the coordination zone in 30 days if no party has opposed the operations.

(2) Table 1 provides a list of each applicable RAS site, its location, and the applicable coordination zone.

TABLE 1—APPLICABLE RADIO ASTRONOMY SERVICE (RAS) FACILITIES AND ASSOCIATED COORDINATION DISTANCES

Observatory	Latitude (north)	Longitude (west)	Radius (km) of coordination zone
Arecibo, Observatory, Arecibo, PR	18°20′37″	66°45′11″	Island of Puerto Rico.
Green Bank, WV	38°25′59″	79°50′23″	160.
Very Large Array, near Socorro, NM	34°04′44″	107°37′06″	160.

TABLE 1—APPLICABLE RADIO ASTRONOMY SERVICE (RAS) FACILITIES AND ASSOCIATED COORDINATION DISTANCES—Continued

Observatory	Latitude (north)	Longitude (west)	Radius (km) of coordination zone
Pisgah Astronomical Research Institute, Rosman, NC	35°11′59″	82°52′19″	160.
U of Michigan Radio Astronomy Observatory, Stinchfield Woods, MI.	42°23′56″	83°56′11″	160.
Very Long Baseline Array (VLBA) stations:			
Owens Valley, CA	37°13′54″	118°16′37″	160*.
Mauna Kea, HI	19°48′05″	155°27′20″	50.
Brewster, WA	48°07′52″	119°41′00″	
Kitt Peak, AZ	31°57′23″	111°36′45″	
Pie Town, NM	34°18′04″	108°07′09″	
Los Alamos, NM	35°46′30″	106°14′44″	
Fort Davis, TX	30°38′06″	103°56′41″	
North Liberty, IA	41°46′17″	91°34′27″	
Hancock, NH	42°56′01″	71°59′12″	
St. Croix, VI	17°45′24″	64°35′01″	

*Owens Valley, CA operates both a VLBA station and single-dish telescopes.

(3) When NTIA seeks to provide similar protection to future RAS sites that have been coordinated through the IRAC Frequency Assignment Subcommittee process, NTIA will notify the Commission's International Bureau that the site is nearing operational status. Upon public notice from the International Bureau, all Ku-band VMES licensees shall cease operations in the 14.47–14.5 GHz band within the relevant geographic zone (160 kms for single-dish radio observatories and Very Large Array antenna systems and 50 kms for Very Long Baseline Array antenna systems) of the new RAS site until the licensees complete coordination for the new RAS facility. Licensees shall notify the International Bureau once they have completed coordination for the new RAS site and shall submit the coordination agreement to the Commission. Upon receipt of such notification from a licensee, the International Bureau will issue a public notice stating that the licensee may commence operations within the coordination zone in 30 days if no party opposed the operations. The VMES licensee then will be permitted to commence operations in the 14.47–14.5 GHz band within the relevant coordination distance around the new RAS site, subject to any operational constraints developed in the coordination process.

(e) VMES licensees shall use Global Positioning Satellite-related or other similar position location technology to ensure compliance with paragraphs (c) and (d) of this section.

[74 FR 57099, Nov. 4, 2009, as amended at 78 FR 8429, Feb. 6, 2013; 78 FR 9604, Feb. 11, 2013; 79 FR 8324, Feb. 12, 2014]

§ 25.227 Blanket licensing provisions for Earth Stations Aboard Aircraft (ESAAs) receiving in the 10.95–11.2 GHz (space-to-Earth), 11.45–11.7 GHz (space-to-Earth), and 11.7–12.2 GHz (space-to-Earth) frequency bands and transmitting in the 14.0–14.5 GHz (Earth-to-space) frequency band, operating with Geostationary Satellites in the Fixed-Satellite Service.

(a) The following ongoing requirements govern all ESAA licensees and operations in the 10.95–11.2 GHz (space-to-Earth), 11.45–11.7 GHz (space-to-Earth), 11.7–12.2 GHz (space-to-Earth) and 14.0–14.5 GHz (Earth-to-space) frequency bands receiving from and transmitting to geostationary orbit satellites in the Fixed-Satellite Service. ESAA licensees shall comply with the requirements in either paragraph (a)(1), (a)(2) or (a)(3) of this section and all of the requirements set forth in paragraphs (a)(4) through (a)(16) and paragraphs (c), (d), and (e) of this section. Paragraph (b) of this section identifies items that shall be included in the application for ESAA operations to demonstrate that these ongoing requirements will be met.

(1) The following requirements shall apply to an ESAA that uses transmitters with off-axis EIRP spectral-densities lower than or equal to the levels

in paragraph (a)(1)(i) of this section. ESAA licensees operating under this section shall provide a detailed demonstration as described in paragraph (b)(1) of this section. The ESAA transmitter also shall comply with the antenna pointing and cessation of emission requirements in paragraphs (a)(1)(ii) and (iii) of this section.

(i) An ESAA licensee shall not exceed the off-axis EIRP spectral-density limits and conditions defined in paragraphs (a)(1)(i)(A) through (D) of this subsection.

(A) The off-axis EIRP spectral-density for co-polarized signals emitted from the ESAA, in the plane of the geostationary satellite orbit (GSO) as it appears at the particular earth station location, shall not exceed the following values:

15 - 10 $\log_{10}$ (N) - 25 $\log_{10}\theta$	dBW/4 kHz	For	1.5° ≤θ ≤7°
-6 - 10 $\log_{10}$ (N)	dBW/4 kHz	For	7° <θ ≤9.2°
18 - 10 $\log_{10}$ (N) - 25 $\log_{10}\theta$	dBW/4 kHz	For	9.2° <θ ≤48°
-24 - 10 $\log_{10}$ (N)	dBW/4 kHz	For	48° <θ ≤85°
-14 - 10 $\log_{10}$ (N)	dBW/4 kHz	For	85° <θ ≤180°

where theta (θ) is the angle in degrees from the line connecting the focal point of the antenna to the orbital location of the target satellite in the plane of the GSO. The plane of the GSO is determined by the focal point of the antenna and the line tangent to the arc of the GSO at the orbital location of the target satellite. For ESAA networks using frequency division multiple access (FDMA) or time division multiple access (TDMA) techniques, N is equal to one. For ESAA networks using multiple co-frequency transmitters that have the same EIRP density, N is the maximum expected number of co-frequency simultaneously transmitting ESAA earth stations in the same satellite receiving beam. For the purpose of this subsection, the peak EIRP density of an individual sidelobe shall not exceed the envelope defined above for θ between 1.5° and 7.0°. For θ greater than 7.0°, the envelope shall be exceeded by no more than 10% of the sidelobes, provided no individual sidelobe exceeds the envelope given above by more than 3 dB.

(B) In all directions other than along the GSO, the off-axis EIRP spectral-density for co-polarized signals emitted from the ESAA shall not exceed the following values:

18 - 10 $\log_{10}$ (N) - 25log $\log_{10}\theta$	dBW/4 kHz	For	3.0° ≤θ ≤48°
-24 - 10 $\log_{10}$ (N)	dBW/4 kHz	For	48° <θ ≤85°
-14 - 10 $\log_{10}$ (N)	dBW/4kHz	For	85° <θ ≤180°

where θ and N are defined in paragraph (a)(1)(i)(A). This off-axis EIRP spectral-density applies in any plane that includes the line connecting the focal point of the antenna to the orbital location of the target satellite with the exception of the plane of the GSO as defined in paragraph (a)(1)(i)(A) of this section. For the purpose of this subsection, the envelope shall be exceeded by no more than 10% of the sidelobes provided no individual sidelobe exceeds the EIRP density envelope given above by more than 6 dB. The region of the main reflector spillover energy is to be interpreted as a single lobe and shall not exceed the envelope by more than 6 dB.

(C) The off-axis EIRP spectral-density for cross-polarized signals emitted from the ESAA shall not exceed the following values:

5 - 10 $\log_{10}$ (N) - 25$\log_{10}\theta$	dBW/4kHz	For	1.8° <θ ≤7°
-16 - 10 $\log_{10}$ (N)	dBW/4kHz	For	7° <θ ≤9.2°

where θ and N are defined in paragraph (a)(1)(i)(A). This off-axis EIRP spectral-density applies in the plane of the geostationary satellite orbit as it appears at the particular earth station location.

(ii) Each ESAA transmitter shall meet one of the following antenna pointing requirements:

(A) Each ESAA transmitter shall maintain a pointing error of less than or equal to 0.2° between the orbital location of the target satellite and the axis of the main lobe of the ESAA antenna; or

(B) Each ESAA transmitter shall declare a maximum antenna pointing error that may be greater than 0.2° provided that the ESAA does not exceed the off-axis EIRP spectral-density limits in paragraph (a)(1)(i) of this section, taking into account the antenna pointing error.

(iii) Each ESAA transmitter shall meet one of the following cessation of emission requirements:

(A) For ESAAs operating under paragraph (a)(1)(ii)(A) of this section, all emissions from the ESAA shall automatically cease within 100 milliseconds if the angle between the orbital location of the target satellite and the axis of the main lobe of the ESAA antenna exceeds 0.5°, and transmission shall not resume until such angle is less than or equal to 0.2°, or

(B) For ESAA transmitters operating under paragraph (a)(1)(ii)(B) of this section, all emissions from the ESAA shall automatically cease within 100 milliseconds if the angle between the orbital location of the target satellite and the axis of the main lobe of the ESAA antenna exceeds the declared maximum antenna pointing error and shall not resume transmissions until such angle is less than or equal to the declared maximum antenna pointing error.

(2) The following requirements shall apply to an ESAA, or ESAA system, that uses off-axis EIRP spectral-densities in excess of the levels in paragraph (a)(1)(i) of this section. An ESAA, or ESAA network, operating under this subsection shall file certifications and provide a detailed demonstration as described in paragraph (b)(2) of this section.

(i) The ESAA shall transmit only to the target satellite system(s) referred to in the certifications required by paragraph (b)(2) of this section.

(ii) If a good faith agreement cannot be reached between the target satellite operator and the operator of a future satellite that is located within 6 degrees longitude of the target satellite, the ESAA operator shall accept the power-density levels that would accommodate that adjacent satellite.

(iii) The ESAA shall operate in accordance with the off-axis EIRP spectral-densities that the ESAA supplied to the target satellite operator in order to obtain the certifications listed in paragraph (b)(2) of this section. The ESAA shall automatically cease emissions within 100 milliseconds if the ESAA transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator and transmission shall not resume until ESAA conforms to the off-axis EIRP spectral densities supplied to the target satellite operator.

(iv) In the event that a coordination agreement discussed in paragraph (b)(2)(ii) of this section is reached, but that coordination agreement does not address protection from interference for the earth station, that earth station will be protected from interference to the same extent that an earth station that meets the requirements of §25.209 of this title would be protected from interference.

(3) The following requirements shall apply to an ESAA system that uses variable power-density control of individual simultaneously transmitting co-frequency ESAA earth stations in the same satellite receiving beam. An ESAA system operating under this subsection shall provide a detailed demonstration as described in paragraph (b)(3) of this section.

(i) The effective aggregate EIRP density from all terminals shall be at least 1 dB below the off-axis EIRP density limits defined in paragraph (a)(1)(i)(A) through (C), with the value of N = 1. In this context the term ''effective'' means that the resultant co-polarized and cross-polarized EIRP density experienced by any GSO or non-GSO satellite shall not exceed that produced by a single transmitter operating 1 dB

below the limits defined in paragraph (a)(1)(i)(A) through (C). The individual ESAA transmitter shall automatically cease emissions within 100 milliseconds if the ESAA transmitter exceeds the off-axis EIRP density limits minus 1 dB specified above. If one or more ESAA transmitters causes the aggregate off-axis EIRP-densities to exceed the off-axis EIRP density limits minus 1dB specified above, then the transmitter or transmitters shall cease or reduce emissions within 100 milliseconds of receiving a command from the system's network control and monitoring center. An ESAA system operating under this subsection shall provide a detailed demonstration as described in paragraph (b)(3)(i) of this section.

(ii) The following requirements shall apply to an ESAA that uses off-axis EIRP spectral-densities in excess of the levels in paragraph (a)(3)(i) of this section. An ESAA system operating under this subsection shall file certifications and provide a detailed demonstration as described in paragraphs (b)(3)(ii) and (b)(3)(iii) of this section.

(A) If a good faith agreement cannot be reached between the target satellite operator and the operator of a future satellite that is located within 6 degrees longitude of the target satellite, the ESAA shall operate at an EIRP density defined in (a)(3)(i) of this section.

(B) The ESAA shall operate in accordance with the off-axis EIRP spectral-densities that the ESAA supplied to the target satellite operator in order to obtain the certifications listed in paragraph (b)(3)(ii) of this section. The individual ESAA terminals shall automatically cease emissions within 100 milliseconds if the ESAA transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator. The overall system shall be capable of shutting off an individual transmitter or the entire system if the aggregate off-axis EIRP spectral-densities exceed those supplied to the target satellite operator.

(C) The ESAA shall transmit only to the target satellite system(s) referred to in the certifications required by paragraph (b)(3) of this section.

(4) An applicant filing to operate an ESAA terminal or system and planning to use a contention protocol shall certify that its contention protocol use will be reasonable.

(5) There shall be a point of contact in the United States, with phone number and address, available 24 hours a day, seven days a week, with authority and ability to cease all emissions from the ESAA.

(6) For each ESAA transmitter, a record of the vehicle location (*i.e.*, latitude/longitude/altitude), transmit frequency, channel bandwidth and satellite used shall be time annotated and maintained for a period of not less than one year. Records shall be recorded at time intervals no greater than one (1) minute while the ESAA is transmitting. The ESAA operator shall make this data available, in the form of a comma delimited electronic spreadsheet, within 24 hours of a request from the Commission, NTIA, or a frequency coordinator for purposes of resolving harmful interference events. A description of the units (*i.e.*, degrees, minutes, MHz * * *.) in which the records values are recorded will be supplied along with the records.

(7) In the 10.95–11.2 GHz (space-to-Earth) and 11.45–11.7 GHz (space-to-Earth) frequency bands ESAAs shall not claim protection from interference from any authorized terrestrial stations to which frequencies are either already assigned, or may be assigned in the future.

(8) An ESAA terminal receiving in the 11.7–12.2 GHz (space-to-Earth) bands shall receive protection from interference caused by space stations other than the target space station only to the degree to which harmful interference would not be expected to be caused to an earth station employing an antenna conforming to the referenced patterns defined in paragraphs (a) and (b) of section 25.209 and stationary at the location at which any interference occurred.

(9) Each ESAA terminal shall automatically cease transmitting within 100 milliseconds upon loss of reception of the satellite downlink signal or when it detects that unintended satellite tracking has happened or is about to happen.

(10) Each ESAA terminal should be subject to the monitoring and control

by an NCMC or equivalent facility. Each terminal must be able to receive at least ''enable transmission'' and ''disable transmission'' commands from the NCMC and must automatically cease transmissions immediately on receiving any ''parameter change command,'' which may cause harmful interference during the change, until it receives an ''enable transmission'' command from its NCMC. In addition, the NCMC must be able to monitor the operation of an ESAA terminal to determine if it is malfunctioning.

(11) Each ESAA terminal shall be self-monitoring and, should a fault which can cause harmful interference to FSS networks be detected, the terminal must automatically cease transmissions.

(12) Unless otherwise stated all ESAA system that comply with the off-axis EIRP spectral-density limits in paragraph (a)(1)(i) of this section may request Permitted List authority.

(13) ESAA providers operating in the international airspace within line-of-sight of the territory of a foreign administration where fixed service networks have primary allocation in this band, the maximum power flux density (pfd) produced at the surface of the Earth by emissions from a single aircraft carrying an ESAA terminal should not exceed the following values unless the foreign Administration has imposed other conditions for protecting its fixed service stations:

$-132 + 0.5 \cdot \theta$	dB(W/(m^2 · MHz))	For	$\theta \leq 40°$
-112	dB(W/(m^2 · MHz))	For	$40° < \theta \leq 90°$

Where: θ is the angle of arrival of the radio-frequency wave (degrees above the horizontal) and the aforementioned limits relate to the pfd and angles of arrival would be obtained under free-space propagation conditions.

(14) All ESAA terminals operated in U.S. airspace, whether on U.S.-registered civil aircraft or non-U.S.-registered civil aircraft, must be licensed by the Commission. All ESAA terminals on U.S.-registered civil aircraft operating outside of U.S. airspace must be licensed by the Commission, except as provided by section 303(t) of the Communications Act.

(15) For ESAA systems operating over international waters, ESAA operators will certify that their target space station operators have confirmed that proposed ESAA operations are within coordinated parameters for adjacent satellites up to 6 degrees away on the geostationary arc.

(16) Prior to operations within the foreign nation's airspace, the ESAA operator will ascertain whether the relevant administration has operations that could be affected by ESAA terminals, and will determine whether that administration has adopted specific requirements concerning ESAA operations. When the aircraft enters foreign airspace, the ESAA terminal would be required to operate under the Commission's rules, or those of the foreign administration, whichever is more constraining. To the extent that all relevant administrations have identified geographic areas from which ESAA operations would not affect their radio operations, ESAA operators would be free to operate within those identified areas without further action. To the extent that the foreign administration has not adopted requirements regarding ESAA operations, ESAA operators would be required to coordinate their operations with any potentially affected operations.

(b) Applications for ESAA operation in the 14.0–14.5 GHz (Earth-to-space) band to GSO satellites in the Fixed-Satellite Service shall include, in addition to the particulars of operation identified on Form 312, and associated Schedule B, the applicable technical demonstrations in paragraphs (b)(1), (b)(2) or (b)(3) and the documentation identified in paragraphs (b)(4) through (b)(8) of this section.

(1) An ESAA applicant proposing to implement a transmitter under paragraph (a)(1) of this section shall demonstrate that the transmitter meets

the off-axis EIRP spectral-density limits contained in paragraph (a)(1)(i) of this section. To provide this demonstration, the application shall include the tables described in paragraph (b)(1)(i) of this section or the certification described in paragraph (b)(1)(ii) of this section. The ESAA applicant also shall provide the value N described in paragraph (a)(1)(i)(A) of this section. An ESAA applicant proposing to implement a transmitter under paragraph (a)(1)(ii)(A) of this section shall provide the certifications identified in paragraph (b)(1)(iii) of this section. An ESAA applicant proposing to implement a transmitter under paragraph (a)(1)(ii)(B) of this section shall provide the demonstrations identified in paragraph (b)(1)(iv) of this section.

(i) Any ESAA applicant filing an application pursuant to paragraph (a)(1) of this section shall file three tables and/or graphs depicting off-axis EIRP density masks defined by §25.227(a) and measured off-axis EIRP density levels of the proposed earth station antenna in the direction of the plane of the GSO; the co-polarized EIRP density in the elevation plane, that is, the plane perpendicular to the plane of the GSO; and cross-polarized EIRP density. Each table shall provide the EIRP density level at increments of 0.1° for angles between 0° and 10° off-axis, and at increments of 5° for angles between 10° and 180° off-axis.

(A) For purposes of the off-axis EIRP density table in the plane of the GSO, the off-axis angle is the angle in degrees from the line connecting the focal point of the antenna to the orbital location of the target satellite, and the plane of the GSO is determined by the focal point of the antenna and the line tangent to the arc of the GSO at the orbital position of the target satellite.

(B) For purposes of the off-axis co-polarized EIRP density table in the elevation plane, the off-axis angle is the angle in degrees from the line connecting the focal point of the antenna to the orbital location of the target satellite, and the elevation plane is defined as the plane perpendicular to the plane of the GSO defined in paragraph (b)(1)(i)(A) of this section.

(C) For purposes of the cross-polarized EIRP density table, the off-axis angle is the angle in degrees from the line connecting the focal point of the antenna to the orbital location of the target satellite and the plane of the GSO as defined in paragraph (b)(1)(i)(A) of this section will be used.

(ii) An ESAA applicant shall include a certification, in Schedule B, that the ESAA antenna conforms to the gain pattern criteria of §25.209(a) and (b), that, combined with the maximum input power density calculated from the EIRP density less the antenna gain, which is entered in Schedule B, demonstrates that the off-axis EIRP spectral density envelope set forth in paragraphs (a)(1)(i)(A) through (a)(1)(i)(C) of this section will be met under the assumption that the antenna is pointed at the target satellite.

(iii) An ESAA applicant proposing to implement a transmitter under paragraph (a)(1)(ii)(A) of this section shall:

(A) Demonstrate that the total tracking error budget of their antenna is within 0.2° or less between the orbital location of the target satellite and the axis of the main lobe of the ESAA antenna. As part of the engineering analysis, the ESAA applicant must show that the antenna pointing error is within three sigma (б) from the mean value, *i.e.*, that there is a 0.997 probability the antenna maintains a pointing error within 0.2°; and

(B) Demonstrate that the antenna tracking system is capable of ceasing emissions within 100 milliseconds if the angle between the orbital location of the target satellite and the axis of the main lobe of the ESAA antenna exceeds 0.5°.

(iv) An ESAA applicant proposing to implement a transmitter under paragraph (a)(1)(ii)(B) of this section shall:

(A) Declare, in its application, a maximum antenna pointing error and demonstrate that the maximum antenna pointing error can be achieved without exceeding the off-axis EIRP spectral-density limits in paragraph (a)(1)(i) of this section; and

(B) Demonstrate that the ESAA transmitter can detect if the transmitter exceeds the declared maximum antenna pointing error and can cease transmission within 100 milliseconds if

the angle between the orbital location of the target satellite and the axis of the main lobe of the ESAA antenna exceeds the declared maximum antenna pointing error, and will not resume transmissions until the angle between the orbital location of the target satellite and the axis of the main lobe of the ESAA antenna is less than or equal to the declared maximum antenna pointing error.

(2) An ESAA applicant proposing to implement a transmitter under paragraph (a)(2) of this section and using off-axis EIRP spectral-densities in excess of the levels in paragraph (a)(1)(i) of this section shall provide the following certifications and demonstration as exhibits to its earth station application:

(i) A statement from the target satellite operator certifying that the proposed operation of the ESAA has the potential to create harmful interference to satellite networks adjacent to the target satellite(s) that may be unacceptable.

(ii) A statement from the target satellite operator certifying that the power density levels that the ESAA applicant provided to the target satellite operator are consistent with the existing coordination agreements between its satellite(s) and the adjacent satellite systems within 6° of orbital separation from its satellite(s).

(iii) A statement from the target satellite operator certifying that it will include the power-density levels of the ESAA applicant in all future coordination agreements.

(iv) A demonstration from the ESAA operator that the ESAA system will comply with all coordination agreements reached by the satellite operator and is capable of detecting and automatically ceasing emissions within 100 milliseconds when the transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator.

(3) An ESAA applicant proposing to implement an ESAA system under paragraph (a)(3) of this section and using variable power-density control of individual simultaneously transmitting co-frequency ESAA earth stations in the same satellite receiving beam shall provide the following certifications and demonstration as exhibits to its earth station application:

(i) The applicant shall make a detailed showing of the measures it intends to employ to maintain the effective aggregate EIRP density from all simultaneously transmitting co-frequency terminals operating with the same satellite transponder at least 1 dB below the off-axis EIRP density limits defined in paragraphs (a)(1)(i)(A) through (C) of this section. In this context the term ''effective'' means that the resultant co-polarized and cross-polarized EIRP density experienced by any GSO or non-GSO satellite shall not exceed that produced by a single ESAA transmitter operating at 1 dB below the limits defined in paragraphs (a)(1)(i)(A) through (C) of this section. The ESAA applicant also shall provide a detailed showing that one or more transmitters are capable of automatically ceasing or reducing emissions within 100 milliseconds of receiving a command from the system's network control and monitoring center that the aggregate off-axis EIRP spectral-densities of the transmitter or transmitters exceed the off-axis EIRP-density limits specified in paragraph (a)(3)(i) of this section. The International Bureau will place this showing on public notice along with the application.

(ii) An applicant proposing to implement an ESAA system under paragraph (a)(3)(ii) of this section that uses off-axis EIRP spectral-densities in excess of the levels in paragraph (a)(3)(i) of this section shall provide the following certifications, demonstration and list of satellites as exhibits to its earth station application:

(A) A detailed showing of the measures the applicant intends to employ to maintain the effective aggregate EIRP density from all simultaneously transmitting co-frequency terminals operating with the same satellite transponder at the EIRP density limits supplied to the target satellite operator. The International Bureau will place this showing on Public Notice along with the application.

(B) A statement from the target satellite operator certifying that the proposed operation of the ESAA has the potential to create harmful interference to satellite networks adjacent

to the target satellite(s) that may be unacceptable.

(C) A statement from the target satellite operator certifying that the aggregate power-density levels that the ESAA applicant provided to the target satellite operator are consistent with the existing coordination agreements between its satellite(s) and the adjacent satellite systems within 6° of orbital separation from its satellite(s).

(D) A statement from the target satellite operator certifying that it will include the aggregate power-density levels of the ESAA applicant in all future coordination agreements.

(E) A demonstration from the ESAA operator that the ESAA system is capable of detecting and automatically ceasing emissions within 100 milliseconds when an individual transmitter exceeds the off-axis EIRP spectral-densities supplied to the target satellite operator and that the overall system is capable of shutting off an individual transmitter or the entire system if the aggregate off-axis EIRP spectral-densities exceed those supplied to the target satellite operator.

(F) An identification of the specific satellite or satellites with which the ESAA system will operate.

(4) There shall be an exhibit included with the application describing the geographic area(s) in which the ESAA will operate.

(5) Any ESAA applicant filing for an ESAA terminal or system and planning to use a contention protocol shall include in its application a certification that will comply with the requirements of paragraph (a)(4) of this section.

(6) The point of contact referred to in paragraph (a)(5) of this section shall be included in the application.

(7) Any ESAA applicant filing for an ESAA terminal or system shall include in its application a certification that will comply with the requirements of paragraphs (a)(6), (a)(9), (a)(10), and (a)(11) of this section.

(8) All ESAA applicants shall submit a radio frequency hazard analysis determining via calculation, simulation, or field measurement whether ESAA terminals, or classes of terminals, will produce power densities that will exceed the Commission's radio frequency exposure criteria. ESAA applicants with ESAA terminals that will exceed the guidelines in §1.1310 of this chapter for radio frequency radiation exposure shall provide, with their environmental assessment, a plan for mitigation of radiation exposure to the extent required to meet those guidelines. All ESAA licensees shall ensure installation of ESAA terminals on aircraft by qualified installers who have an understanding of the antenna's radiation environment and the measures best suited to maximize protection of the general public and persons operating the vehicle and equipment. An ESAA terminal exhibiting radiation exposure levels exceeding 1.0 mW/cm^2 in accessible areas, such as at the exterior surface of the radome, shall have a label attached to the surface of the terminal warning about the radiation hazard and shall include thereon a diagram showing the regions around the terminal where the radiation levels could exceed 1.0 mW/cm^2.

(c)(1) Operations of ESAAs in the 14.0–14.2 GHz (Earth-to-space) frequency band in the radio line-of-sight of the NASA TDRSS facilities on Guam (latitude 13°36′55″ N, longitude 144°51′22″ E) or White Sands, New Mexico (latitude 32°20′59″ N, longitude 106°36′31″ W and latitude 32°32′40″ N, longitude 106°36′48″ W) are subject to coordination with the National Aeronautics and Space Administration (NASA) through the National Telecommunications and Information Administration (NTIA) Interdepartment Radio Advisory Committee (IRAC). Licensees shall notify the International Bureau once they have completed coordination. Upon receipt of such notification from a licensee, the International Bureau will issue a public notice stating that the licensee may commence operations within the coordination zone in 30 days if no party has opposed the operations.

(2) When NTIA seeks to provide similar protection to future TDRSS sites that have been coordinated through the IRAC Frequency Assignment Subcommittee process, NTIA will notify the Commission's International Bureau that the site is nearing operational status. Upon public notice from the International Bureau, all Ku-band ESAA licensees shall cease operations in the 14.0–14.2 GHz band within radio line-of-

sight of the new TDRSS site until the licensees complete coordination with NTIA/IRAC for the new TDRSS facility. Licensees shall notify the International Bureau once they have completed coordination for the new TDRSS site. Upon receipt of such notification from a licensee, the International Bureau will issue a public notice stating that the licensee may commence operations within the coordination zone in 30 days if no party has opposed the operations. The ESAA licensee then will be permitted to commence operations in the 14.0–14.2 GHz band within radio line-of-sight of the new TDRSS site, subject to any operational constraints developed in the coordination process.

(d)(1) Operations of ESAA in the 14.47–14.5 GHz (Earth-to-space) frequency band in the radio line-of-sight of radio astronomy service (RAS) observatories observing in the 14.47–14.5 GHz band are subject to coordination with the National Science Foundation (NSF). The appropriate NSF contact point to initiate coordination is Electromagnetic Spectrum Manager, NSF, 4201 Wilson Blvd., Suite 1045, Arlington VA 22203, fax 703–292–9034, email *esm@nsf.gov*. Licensees shall notify the International Bureau once they have completed coordination. Upon receipt of the coordination agreement from a licensee, the International Bureau will issue a public notice stating that the licensee may commence operations within the coordination zone in 30 days if no party has opposed the operations.

(2) A list of applicable RAS sites and their locations can be found in §25.226(d)(2) Table 1.

(3) When NTIA seeks to provide similar protection to future RAS sites that have been coordinated through the IRAC Frequency Assignment Subcommittee process, NTIA will notify the Commission's International Bureau that the site is nearing operational status. Upon public notice from the International Bureau, all Ku-band ESAA licensees shall cease operations in the 14.47–14.5 GHz band within the relevant geographic zone of the new RAS site until the licensees complete coordination for the new RAS facility. Licensees shall notify the International Bureau once they have completed coordination for the new RAS site and shall submit the coordination agreement to the Commission. Upon receipt of such notification from a licensee, the International Bureau will issue a public notice stating that the licensee may commence operations within the coordination zone in 30 days if no party has opposed the operations. The ESAA licensee then will be permitted to commence operations in the 14.47–14.5 GHz band within the relevant coordination distance around the new RAS site, subject to any operational constraints developed in the coordination process.

[78 FR 14927, Mar. 8, 2013, as amended at 79 FR 8324, Feb. 12, 2014; 79 FR 26868, May 12, 2014]

§§ 25.228–25.249 [Reserved]

§ 25.250 Sharing between NGSO MSS Feeder links Earth Stations in the 19.3–19.7 GHz and 29.1–29.5 GHz Bands.

(a) NGSO MSS applicants shall be licensed to operate in the 29.1–29.5 GHz band for Earth-to-space transmissions and 19.3–19.7 GHz for space-to-Earth transmissions from feeder link earth station complexes. A ''feeder link earth station complex'' may include up to three (3) earth station groups, with each earth station group having up to four (4) antennas, located within a radius of 75 km of a given set of geographic coordinates provided by NGSO-MSS licensees or applicants.

(b) Licensees of NGSO MSS feeder link earth stations separated by 800 km or less are required to coordinate their operations, see §25.203. The results of the coordination shall be reported to the Commission.

[61 FR 44181, Aug. 28, 1996]

§ 25.251 Special requirements for coordination.

(a) The administrative aspects of the coordination process are set forth in §101.103 of this chapter in the case of coordination of terrestrial stations with earth stations, and in §25.203 in the case of coordination of earth stations with terrestrial stations.

(b) The technical aspects of coordination are based on Appendix 7 of the International Telecommunication Union Radio Regulations and certain recommendations of the ITU

Radiocommunication Sector (available at the address in § 0.445 of this chapter).

[66 FR 10630, Feb. 16, 2001, as amended at 78 FR 8430, Feb. 6, 2013]

§ 25.252 [Reserved]

§ 25.253 Special requirements for ancillary terrestrial components operating in the 1626.5–1660.5 MHz/1525–1559 MHz bands.

(a) An ancillary terrestrial component in these bands shall:

(1) In any band segment coordinated for the exclusive use of an MSS applicant within the land area of the U.S., where there is no other L-Band MSS satellite making use of that band segment within the visible portion of the geostationary arc as seen from the ATC coverage area, the ATC system will be limited by the in-band and out-of-band emission limitations contained in this section and the requirement to maintain a substantial MSS service.

(2) In any band segment that is coordinated for the shared use of the applicant's MSS system and another MSS operator, where the coordination agreement existed prior to February 10, 2005 and permits a level of interference to the other MSS system of less than 6% ΔT/T, the applicant's combined ATC and MSS operations shall increase the system noise level of the other MSS to no more then 6% ΔT/T. Any future coordination agreement between the parties governing ATC operation will supersede this paragraph.

(3) In any band segment that is coordinated for the shared use of the applicant's MSS system and another MSS operator, where a coordination agreement existed prior to February 10, 2005 and permits a level of interference to the other MSS system of 6% ΔT/T or greater, the applicant's ATC operations may increase the system noise level of the other MSS system by no more than an additional 1% ΔT/T. Any future coordination agreement between the parties governing ATC operations will supersede this paragraph.

(4) In a band segment in which the applicant has no rights under a coordination agreement, the applicant may not implement ATC in that band.

(b) ATC base stations shall not exceed an out-of-channel emissions measurement of -57.9 dBW/MHz at the edge of a MSS licensee's authorized and internationally coordinated MSS frequency assignment.

(c) An applicant for an ancillary terrestrial component in these bands shall:

(1) Demonstrate, at the time of application, how its ATC network will comply with the requirements of footnotes US308 and US315 to the table of frequency allocations contained in § 2.106 of this chapter regarding priority and preemptive access to the L-band MSS spectrum by the aeronautical mobile-satellite en-route service (AMS(R)S) and the global maritime distress and safety system (GMDSS).

(2) Coordinate with the terrestrial CMRS operators prior to initiating ATC transmissions when co-locating ATC base stations with terrestrial commercial mobile radio service (CMRS) base stations that make use of Global Positioning System (GPS) time-based receivers.

(3) Provide, at the time of application, calculations that demonstrate the ATC system conforms to the ΔT/T requirements in paragraphs (a)(2) and (a)(3) of this section, if a coordination agreement that incorporates the ATC operations does not exist with other MSS operators.

(d) Applicants for an ancillary terrestrial component in these bands must demonstrate that ATC base stations shall not:

(1) Exceed a peak EIRP of 31.9–10*log (number of carriers) dBW/200kHz, per sector, for each carrier in the 1525–1541.5 MHz and 1547.5–1559 MHz frequency bands;

(2) Exceed an EIRP in any direction toward the physical horizon (not to include man-made structures) of 26.9–10*log (number of carriers) dBW/200 kHz, per sector, for each carrier in the 1525–1541.5 MHz and 1547.5–1559 MHz frequency bands;

(3) Exceed a peak EIRP of 23.9 −10*log(number of carriers) dBW/200 kHz, per sector, for each carrier in the 1541.5–1547.5 MHz frequency band;

(4) Exceed an EIRP toward the physical horizon (not to include man-made structures) of 18.9–10*log(number of carriers) dBW/200 kHz, per sector, for

each carrier in the 1541.5–1547.5 MHz frequency band;

(5) Exceed a total power flux density level of −56.8 dBW/m²/200 kHz at the edge of all airport runways and aircraft stand areas, including takeoff and landing paths from all carriers operating in the 1525–1559 MHz frequency bands. The total power flux density here is the sum of all power flux density values associated with all carriers in a sector in the 1525–1559 MHz frequency band, expressed in dB(Watts/m²/200 kHz). Free-space loss must be assumed if this requirement is demonstrated via calculation;

(6) Exceed a total power flux density level of −56.6 dBW/ m²/200 kHz at the water's edge of any navigable waterway from all carriers operating in the 1525–1541.5 MHz and 1547.5–1559 MHz frequency bands. The total power flux density here is the sum of all power flux density values associated with all carriers in a sector in the 1525–1541.5 MHz and 1547.5–1559 MHz frequency bands, expressed in dB(Watts/m²/200 kHz). Free-space loss must be assumed if this requirement is demonstrated via calculation;

(7) Exceed a total power flux density level of −64.6 dBW/ m²/200 kHz at the water's edge of any navigable waterway from all carriers operating in the 1541.5–1547.5 MHz frequency band. The total power flux density here is the sum of all power flux density values associated with all carriers in a sector in the 1541.5–1547.5 MHz frequency band, expressed in dB(Watts/m²/200 kHz). Free-space loss must be assumed if this requirement is demonstrated via calculation;

(8) Exceed a peak antenna gain of 16 dBi;

(9) Generate EIRP density, averaged over any two-millisecond active transmission interval, greater than −70 dBW/MHz in the 1559–1605 MHz band or greater than a level determined by linear interpolation in the 1605–1610 MHz band, from −70 dBW/MHz at 1605 MHz to −46 dBW/MHz at 1610 MHz. The EIRP, averaged over any two-millisecond active transmission interval, of discrete out-of-band emissions of less than 700 Hz bandwidth from such base stations shall not exceed −80 dBW in the 1559–1605 MHz band or exceed a level determined by linear interpolation in the 1605–1610 MHz band, from −80 dBW at 1605 MHz to −56 dBW at 1610 MHz. A root-mean-square detector function with a resolution bandwidth of one megahertz or equivalent and no less video bandwidth shall be used to measure wideband EIRP density for purposes of this rule, and narrowband EIRP shall be measured with a root-mean-square detector function with a resolution bandwidth of one kilohertz or equivalent.

(e) Applicants for an ancillary terrestrial component in these bands must demonstrate, at the time of the application, that ATC base stations shall use left-hand-circular polarization antennas with a maximum gain of 16 dBi and overhead gain suppression according to the following:

Angle from direction of maximum gain, in vertical plane, above antenna (degrees)	Antenna discrimination pattern (dB)
0	Gmax
5	Not to Exceed Gmax −5
10	Not to Exceed Gmax −19
15 to 55	Not to Exceed Gmax −27
55 to 145	Not to Exceed Gmax −30
145 to 180	Not to Exceed Gmax −26

Where: Gmax is the maximum gain of the base station antenna in dBi.

(f) Prior to operation, ancillary terrestrial component licensees shall:

(1) Provide the Commission with sufficient information to complete coordination of ATC base stations with Search-and-Rescue Satellite-Aided Tracking (SARSAT) earth stations operating in the 1544–1545 MHz band for any ATC base station located either within 27 km of a SARSAT station, or within radio horizon of the SARSAT station, whichever is less.

(2) Take all practicable steps to avoid locating ATC base stations within radio line of sight of Mobile Aeronautical Telemetry (MAT) receive sites

in order to protect U.S. MAT systems consistent with ITU–R Recommendation ITU–R M.1459. MSS ATC base stations located within radio line of sight of a MAT receiver must be coordinated with the Aerospace and Flight Test Radio Coordinating Council (AFTRCC) for non-Government MAT receivers on a case-by-case basis prior to operation. For government MAT receivers, the MSS licensee shall supply sufficient information to the Commission to allow coordination to take place. A listing of current and planned MAT receiver sites can be obtained from AFTRCC for non-Government sites and through the FCC's IRAC Liaison for Government MAT receiver sites.

(g) ATC mobile terminals shall:

(1) Be limited to a peak EIRP level of 0 dBW and an out-of-channel emissions of −67 dBW/4 kHz at the edge of an MSS licensee's authorized and internationally coordinated MSS frequency assignment.

(2) Be operated in a fashion that takes all practicable steps to avoid causing interference to U.S. radio astronomy service (RAS) observations in the 1660–1660.5 MHz band.

(3) Not generate EIRP density, averaged over any two-millisecond active transmission interval, greater than −70 dBW/MHz in the 1559–1605 MHz band or greater than a level determined by linear interpolation in the 1605–1610 MHz band, from −70 dBW/MHz at 1605 MHz to −46 dBW/MHz at 1610 MHz. The EIRP, averaged over any two-millisecond active transmission interval, of discrete out-of-band emissions of less than 700 Hz bandwidth from such mobile terminals shall not exceed −80 dBW in the 1559–1605 MHz band or exceed a level determined by linear interpolation in the 1605–1610 MHz band, from −80 dBW at 1605 MHz to −56 dBW at 1610 MHz. The EIRP density of carrier-off-state emissions from such mobile terminals shall not exceed −80 dBW/MHz in the 1559–1610 MHz band, averaged over a two-millisecond interval. A root-mean-square detector function with a resolution bandwidth of one megahertz or equivalent and no less video bandwidth shall be used to measure wideband EIRP density for purposes of this rule, and narrowband EIRP shall be measured with a root-mean-square detector function with a resolution bandwidth of one kilohertz or equivalent.

(h) When implementing multiple base stations and/or base stations using multiple carriers, where any third-order intermodulation product of these base stations falls on an L-band MSS band coordinated for use by another MSS operator with rights to the coordinated band, the MSS ATC licensee must notify the MSS operator. The MSS operator may request coordination to modify the base station carrier frequencies, or to reduce the maximum base station EIRP on the frequencies contributing to the third-order intermodulation products. The threshold for this notification and coordination is when the sum of the calculated signal levels received by an MSS receiver exceeds −70 dBm. The MSS receiver used in these calculations can be assumed to have an antenna with 0 dBi gain. Free-space propagation between the base station antennas and the MSS terminals can be assumed and actual signal polarizations for the ATC signals and the MSS system may be used.

[70 FR 19319, Apr. 13, 2005]

§ 25.254 Special requirements for ancillary terrestrial components operating in the 1610–1626.5 MHz/2483.5–2500 MHz bands.

(a) An applicant for an ancillary terrestrial component in these bands must demonstrate that ATC base stations shall:

(1) Not exceed a peak EIRP of 32 dBW in 1.25 MHz;

(2) Not cause unacceptable interference to systems identified in paragraph (c) of this section and, in any case, shall not exceed out-of-channel emissions of −44.1 dBW/30 kHz at the edge of the MSS licensee's authorized frequency assignment;

(3) At the time of application, that it has taken, or will take steps necessary to avoid causing interference to other services sharing the use of the 2450–2500 MHz band through frequency coordination; and

(4) Base stations operating in frequencies above 2483.5 MHz shall not generate EIRP density, averaged over any two-millisecond active transmission interval, greater than −70

dBW/MHz in the 1559–1610 MHz band. The EIRP, averaged over any two-millisecond active transmission interval, of discrete out-of-band emissions of less than 700 Hz bandwidth from such base stations shall not exceed −80 dBW in the 1559–1610 MHz band. A root-mean-square detector function with a resolution bandwidth of one megahertz or equivalent and no less video bandwidth shall be used to measure wideband EIRP density for purposes of this rule, and narrowband EIRP shall be measured with a root-mean-square detector function with a resolution bandwidth of one kilohertz or equivalent.

(b) An applicant for an ancillary terrestrial component in these bands must demonstrate that mobile terminals shall:

(1) Meet the requirements contained in §25.213 to protect radio astronomy service (RAS) observations in the 1610.6–1613.8 MHz band from unacceptable interference;

(2) Observe a peak EIRP limit of 1.0 dBW in 1.25 MHz;

(3) Observe an out-of-channel EIRP limit of −57.1 dBW/30 kHz at the edge of the licensed MSS frequency assignment.

(4) ATC mobile terminals operating in assigned frequencies in the 1610–1626.5 MHz band shall not generate EIRP density, averaged over any two-millisecond active transmission interval, greater than -70 dBW/MHz in the 1559–1605 MHz band or greater than a level determined by linear interpolation in the 1605–1610 MHz band, from −70 dBW/MHz at 1605 MHz to −10 dBW/MHz at 1610 MHz. The EIRP, averaged over any two-millisecond active transmission interval, of discrete out-of-band emissions of less than 700 Hz bandwidth from such mobile terminals shall not exceed −80 dBW in the 1559–1605 MHz band or exceed a level determined by linear interpolation in the 1605–1610 MHz band, from −80 dBW at 1605 MHz to −20 dBW at 1610 MHz. The EIRP density of carrier-off-state emissions from such mobile terminals shall not exceed −80 dBW/MHz in the 1559–1610 MHz band, averaged over a two-millisecond interval. A root-mean-square detector function with a resolution bandwidth of one megahertz or equivalent and no less video bandwidth shall be used to measure wideband EIRP density for purposes of this rule, and narrowband EIRP shall be measured with a root-mean-square detector function with a resolution bandwidth of one kilohertz or equivalent.

(c) Applicants for an ancillary terrestrial component to be used in conjunction with a Mobile-Satellite Service system using CDMA technology shall coordinate the use of the 1.6/2.4 GHz Mobile-Satellite Service spectrum designated for CDMA systems using the framework established by the ITU in Recommendation ITU–R M.1186 ''Technical Considerations for the Coordination Between Mobile Satellite Service (MSS) Networks Utilizing Code Division Multiple Access (CDMA) and Other Spread Spectrum Techniques in the 1–3 GHz Band'' (1995). Recommendation ITU-R M.1186 is incorporated by reference. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of this standard can be inspected at the Federal Communications Commission, 445 12th Street, SW., Washington, DC (Reference Information Center) or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.* The ITU-R Recommendations can also be purchased from the International Telecommunication Union (ITU), Place des Nations, CH–1211 Geneva 20, Switzerland.

(d) To avoid interference to an adjacent channel licensee in the Broadband Radio Service (BRS), the power of any ATC base station emission above 2495 MHz shall be attenuated below the transmitter power (P) measured in watts in accordance with the standards below. If these measures do not resolve a documented interference complaint received from the adjacent channel BRS licensee, the provisions of §25.255 shall apply.

(1) For base stations, the attenuation shall be not less than 43 + 10 log (P) dB at the upper edge of the authorized ATC band, unless a documented interference complaint is received from an adjacent channel licensee in the BRS.

Provided that a documented interference complaint cannot be mutually resolved between the parties, the following additional attenuation requirements set forth in subsections (2)–(5) shall apply:

(2) If a pre-existing BRS base station suffers harmful interference from emissions caused by a new or modified ATC base station located 1.5 km or more away, within 24 hours of the receipt of a documented interference complaint the ATC licensee must attenuate its emissions by at least 67 + 10 log (P) dB measured at 3 megahertz above the edge of the authorized ATC band, and shall immediately notify the complaining licensee upon implementation of the additional attenuation.

(3) If a pre-existing BRS base station suffers harmful interference from emissions caused by a new or modified ATC base station located less than 1.5 km away, within 24 hours of the receipt of a documented interference complaint the ATC licensee must attenuate its emissions by at least 67 + 10 log (P) − 20 log(D_{km}/1.5) dB measured at 3 megahertz above the edge of the authorized ATC band, or if both base stations are co-located, limit its undesired signal level at the pre-existing BRS base station receiver(s) to no more than −107 dBm measured in a 5.5 megahertz bandwidth and shall immediately notify the complaining licensee upon such reduction in the undesired signal level.

(4) If a new or modified BRS base station suffers harmful interference from emissions caused by a pre-existing ATC base station located 1.5 km or more away, within 60 days of receipt of a documented interference complaint the licensee of the ATC base station must attenuate its base station emissions by at least 67 + 10 log (P) dB measured at 3 megahertz above the edge of the authorized ATC band.

(5) If a new or modified BRS base station suffers harmful interference from emissions caused by a pre-existing ATC base station located less than 1.5 km away, within 60 days of receipt of a documented interference complaint:

(i) the ATC licensee must attenuate its base station emissions by at least 67 + 10 log (P) − 20 log(D_{km}/1.5) dB measured 3 megahertz above the edge of the authorized ATC band, or

(ii) if both base stations are co-located, the ATC licensee must limit its undesired signal level at the new or modified BRS base station receiver(s) to no more than −107 dBm measured in a 5.5 megahertz bandwidth.

(6) Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately above and adjacent to the 2495 MHz a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy, provided the measured power is integrated over the full required measurement bandwidth (i.e., 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

NOTE TO § 25.254: The preceding rules of § 25.254 are based on cdma2000 and IS–95 system architecture. To the extent that a 1.6/2.4 GHz Mobile-Satellite Service licensee is able to demonstrate that the use of different system architectures would produce no greater potential interference than would be produced as a result of implementing the rules of this section, the licensee may apply for ATC authorization based on another system architecture.

[68 FR 33653, June 5, 2003, as amended at 69 FR 18803, Apr. 9, 2004; 70 FR 19320, Apr. 13, 2005; 73 FR 25592, May 5, 2008; 78 FR 8430, Feb. 6, 2013]

§ 25.255 Procedures for resolving harmful interference related to operation of ancillary terrestrial components operating in the 1.5/1.6 GHz and 1.6/2.4 GHz bands.

If harmful interference is caused to other services by ancillary MSS ATC operations, either from ATC base stations or mobile terminals, the MSS ATC operator must resolve any such

interference. If the MSS ATC operator claims to have resolved the interference and other operators claim that interference has not been resolved, then the parties to the dispute may petition the Commission for a resolution of their claims.

[68 FR 33653, June 5, 2003, as amended at 78 FR 8267, Feb. 5, 2013]

§ 25.256 Special Requirements for operations in the 3.65–3.7 GHz band.

Upon request from a terrestrial licensee authorized under subpart Z, part 90 that seeks to place base and fixed stations in operation within 150 km of a primary earth station, licensees of earth stations operating on a primary basis in the Fixed-Satellite Service in the 3.65–3.7 GHz band must negotiate in good faith with that terrestrial licensee to arrive at mutually agreeable operating parameters to prevent unacceptable interference.

[70 FR 24725, May 11, 2005, as amended at 78 FR 8430, Feb. 6, 2013]

§ 25.257 Special requirements for operations in the band 29.1–29.25 GHz between NGSO MSS and LMDS.

(a) Non-geostationary Mobile-Satellite Service (NGSO MSS) operators shall be licensed to use the 29.1–29.25 GHz band for Earth-to-space transmissions from feeder link earth station complexes. A ''feeder link earth station complex'' may include up to three (3) earth station groups, with each earth station group having up to four (4) antennas, located within a radius of 75 km of a given set of geographic coordinates provided by a NGSO MSS licensees or applicants pursuant to § 101.147.

(b) A maximum of seven (7) feeder link earth station complexes in the contiguous United States, Alaska and Hawaii may be placed into operation, in the largest 100 MSAs, in the band 29.1–29.25 GHz in accordance with § 25.203 and § 101.147 of this chapter.

(c) One of the NGSO MSS operators licensed to use the 29.1–29.25 GHz band may specify geographic coordinates for a maximum of eight feeder link earth station complexes that transmit in the 29.1–29.25 GHz band. The other NGSO MSS operator licensed to use the 29.1–29.25 GHz band may specify geographic coordinates for a maximum of two feeder link earth station complexes that transmit in the 29.1–29.25 GHz band.

(d) Additional NGSO MSS operators may be licensed in this band if the additional NGSO MSS operator shows that its system can share with the existing NGSO MSS systems.

(e) All NGSO MSS operators shall cooperate fully and make reasonable efforts to identify mutually acceptable locations for feeder link earth station complexes. In this connection, any single NGSO MSS operator shall only identify one feeder link earth station complex protection zone in each category identified in § 101.147(c)(2) of this chapter until the other NGSO MSS operator has been given an opportunity to select a location from the same category.

[61 FR 44181, Aug. 28, 1996, as amended at 78 FR 8430, Feb. 6, 2013]

§ 25.258 Sharing between NGSO MSS Feeder links Stations and GSO FSS services in the 29.25–29.5 GHz Bands.

(a) Operators of NGSO MSS feeder link earth stations and GSO FSS earth stations in the band 29.25 to 29.5 GHz where both services have a co-primary allocation shall cooperate fully in order to coordinate their systems. During the coordination process both service operators shall exchange the necessary technical parameters required for coordination.

(b) Licensed GSO FSS systems shall, to the maximum extent possible, operate with frequency/polarization selections, in the vicinity of operational or planned NGSO MSS feeder link earth station complexes, that will minimize instances of unacceptable interference to the GSO FSS space stations. Earth station licensees operating with GSO FSS systems shall be capable of providing earth station locations to support coordination of NGSO MSS feeder link stations under paragraphs (a) and (c) of this section. Operation of ubiquitously deployed GSO FSS earth stations in the 29.25–29.5 GHz frequency band shall conform to the rules contained in § 25.138.

(c) Applicants for authority to use the 29.25–29.5 GHz band for NGSO MSS

feeder uplinks will have to demonstrate that their systems can share with GSO FSS and NGSO MSS systems that have been authorized for operation in that band.

[67 FR 37336, May 29, 2002, as amended at 68 FR 16967, Apr. 8, 2003]

§ 25.259 Time sharing between NOAA meteorological satellite systems and non-voice, non-geostationary satellite systems in the 137–138 MHz band.

(a) The space stations of a non-voice, non-geostationary Mobile-Satellite Service (NVNG MSS) system time-sharing downlink spectrum in the 137–138 MHz band with National Oceanic and Atmospheric Administration (NOAA) satellites shall not transmit signals into the ''protection areas'' of the NOAA satellites.

(1) With respect to transmission in the 137.333–137.367 MHz, 137.485–137.515 MHz, 137.605–137.635 MHz, and 137.753–137.787 MHz bands, the protection area for a NOAA satellite is the area on the Earth's surface in which the NOAA satellite is in line of sight from the ground at an elevation angle of five degrees or more above the horizon. No NVNG MSS satellite shall transmit in these bands when it is in line of sight at an elevation angle of zero degrees or more from any point on the ground within a NOAA satellite's protected area for that band.

(2) With respect to transmission in the 137.025–137.175 MHz and 137.825–138 MHz bands, the protection area for a NOAA satellite is the area on the Earth's surface in which the NOAA satellite is in line of sight from the ground at any elevation angle above zero degrees. No NVNG MSS satellite shall transmit in these bands when at a line-of-sight elevation angle of zero degrees or more from any point on the ground within a NOAA satellite's protected area for that band. In addition, such an NVNG MSS satellite shall cease transmitting when it is at an elevation angle of less than zero degrees from any such point, if reasonably necessary to protect reception of the NOAA satellite's signal.

(3) An NVNG MSS licensee is responsible for obtaining the ephemeris data necessary for compliance with these restrictions. The ephemeris information must be updated system-wide on at least a weekly basis. For calculation required for compliance with these restrictions an NVNG MSS licensee shall use an orbital propagator algorithm with an accuracy equal to or greater than the NORAD propagator used by NOAA.

(b) An NVNG licensee time sharing spectrum in the 137–138 MHz band must establish a 24-hour per day contact person and telephone number so that claims of harmful interference into NOAA earth stations and other operational issues can be reported and resolved expeditiously. This contact information must be made available to NOAA or its designee. If the NTIA notifies the Commission that NOAA is receiving unacceptable interference from a NVNG licensee, the Commission will require such NVNG licensee to terminate its interfering operations immediately unless it demonstrates to the Commission's reasonable satisfaction, and that of NTIA, that it is not responsible for causing harmful interference into the worldwide NOAA system. An NVNG licensee assumes the risk of any liability or damage that it and its directors, officers, employees, affiliates, agents and subcontractors may incur or suffer in connection with an interruption of its Mobile-Satellite Service, in whole or in part, arising from or relating to its compliance or noncompliance with the requirements of this paragraph.

(c) Each satellite in a NVNG licensee's system time-sharing spectrum with NOAA in the 137–138 MHz band shall automatically turn off and cease satellite transmissions if, after 72 consecutive hours, no reset signal is received from the NVNG licensee's gateway earth station and verified by the satellite. All satellites in such NVNG licensee's system shall be capable of instantaneous shutdown on any sub-band upon command from such NVNG licensee's gateway earth station.

[62 FR 59296, Nov. 3, 1997, as amended at 78 FR 8430, Feb. 6, 2013; 79 FR 8324, Feb. 12, 2014]

§ 25.260 Time sharing between DoD meteorological satellite systems and non-voice, non-geostationary satellite systems in the 400.15–401 MHz band.

(a) The space stations of a non-voice, non-geostationary Mobile-Satellite Service (NVNG MSS) system time-sharing downlink spectrum in the 400.15–401.0 MHz band with Department of Defense (DoD) satellites shall not transmit signals into the ''protection areas'' of the DoD satellites.

(1) The protection area for such a DoD satellite is the area on the Earth's surface in which the DoD satellite is in line of sight from the ground at an elevation angle of five degrees or more above the horizon.

(2) An NVNG MSS space station shall not transmit in the 400.15–401 MHz band when at a line-of-sight elevation angle of zero degrees or more from any point on the ground within the protected area of a DoD satellite operating in that band.

(3) An NVNG MSS licensee is responsible for obtaining the ephemeris data necessary for compliance with this restriction. The ephemeris information must be updated system-wide at least once per week. For calculation required for compliance with this restriction an NVNG MSS licensee shall use an orbital propagator algorithm with an accuracy equal to or greater than the NORAD propagator used by DoD.

(b) An NVNG licensee time sharing spectrum in the 400.15–401 MHz band must establish a 24-hour per day contact person and telephone number so that claims of harmful interference into DoD earth stations and other operational issues can be reported and resolved expeditiously. This contact information must be made available to DoD or its designee. If the NTIA notifies the Commission that DoD is receiving unacceptable interference from a NVNG licensee, the Commission will require such NVNG licensee to terminate its interfering operations immediately unless it demonstrates to the Commission's reasonable satisfaction, and that of NTIA, that it is not responsible for causing harmful interference into the worldwide DoD system. A NVNG licensee assumes the risk of any liability or damage that it and its directors, officers, employees, affiliates, agents and subcontractors may incur or suffer in connection with an interruption of its Mobile-Satellite Service, in whole or in part, arising from or relating to its compliance or noncompliance with the requirements of this paragraph.

(c) Each satellite in a NVNG licensee's system time-sharing spectrum with DoD in the 400.15–401 MHz band shall automatically turn off and cease satellite transmissions if, after 72 consecutive hours, no reset signal is received from the NVNG licensee's gateway earth station and verified by the satellite. All satellites in such NVNG licensee's system shall be capable of instantaneous shutdown on any sub-band upon command from such NVNG licensee's gateway earth station.

(d) Initially, a NVNG licensee time-sharing spectrum with DoD in the 400.15–401 MHz band shall be able to change the frequency on which its system satellites are operating within 125 minutes of receiving notification from a DoD required frequency change in the 400.15–401 MHz band. Thereafter, when a NVNG licensee constructs additional gateway earth stations located outside of North and South America, it shall use its best efforts to decrease to 90 minutes the time required to implement a DoD required frequency change. A NVNG licensee promptly shall notify the Commission and NTIA of any decrease in the time it requires to implement a DoD required frequency change.

(e) Once a NVNG licensee time-sharing spectrum with DoD in the 400.15–401 MHz band demonstrates to DoD that it is capable of implementing a DoD required frequency change within the time required under paragraph (d) of this section, thereafter, such NVNG licensee shall demonstrate its capability to implement a DoD required frequency change only once per year at the instruction of DoD. Such demonstrations shall occur during off-peak hours, as determined by the NVNG licensee, unless otherwise agreed by the NVNG licensee and DoD. Such NVNG licensee will coordinate with DoD in establishing a plan for such a demonstration. In the event that a NVNG licensee fails to demonstrate to DoD that it is capable of implementing a

DoD required frequency change in accordance with a demonstration plan established by DoD and the NVNG licensee, upon the Commission's receipt of a written notification from NTIA describing such failure, the Commission shall impose additional conditions or requirements on the NVNG licensee's authorization as may be necessary to protect DoD operations in the 400.15–401 MHz downlink band until the Commission is notified by NTIA that the NVNG licensee has successfully demonstrated its ability to implement a DoD required frequency change. Such additional conditions or requirements may include, but are not limited to, requiring such NVNG licensee immediately to terminate its operations interfering with the DoD system.

[62 FR 59296, Nov. 3, 1997, as amended at 78 FR 8430, Feb. 6, 2013; 79 FR 8325, Feb. 12, 2014]

§ 25.261 Procedures for avoidance of in-line interference events for Non Geostationary Satellite Orbit (NGSO) Satellite Network Operations in the Fixed-Satellite Service (FSS) Bands.

(a) *Applicable NGSO FSS Bands.* The coordination procedures in this section apply to non-Federal-Government NGSO FSS satellite networks operating in the following assigned frequency bands: The 28.6–29.1 GHz or 18.8–19.3 GHz frequency bands.

(b) *Definition of ''In-line interference events.''* For purposes of this section, an ''in-line interference event'' is defined as the interference associated with an occurrence of any physical alignment of space stations of two or more satellite networks with an operating Earth station of one of these networks in such a way that the angular separation between operational links of the two networks is less than 10° as measured at the Earth station.

(c) *Default procedure.* If no agreed coordination exists between two or more satellite networks, then the bands will be divided among the affected satellite networks involved in an in-line interference event in accordance with the following procedure:

(1) Each of n (number of) satellite networks involved in a particular in-line interference event shall select 1/n of the assigned spectrum available in each frequency band for its home base spectrum. The selection order for each satellite network shall be determined by and be in accordance with the date that the first space station in each satellite network is launched and operating;

(2) The affected space station(s) of the respective satellite networks shall only operate in the selected (1/n) spectrum associated with its satellite network, its home base spectrum, for the duration of the in-line interference event;

(3) All affected space station(s) may resume operations throughout the assigned frequency bands once the angular separation between the affected space stations in the in-line interference event is again greater than 10°.

(d) *Coordination procedure.* Any coordination procedure agreed among the affected operating satellite networks, which allows operations of the satellite networks when each network's respective space stations are within the 10 degree avoidance angle associated with an in-line interference event, shall supersede the default procedure of paragraph (c) of this section. Coordination may be effected using information relating to the space stations and the parameters of one or more typical earth stations. All parties are required to coordinate in good faith.

[68 FR 59129, Oct. 14, 2003, as amended at 78 FR 8430, Feb. 6, 2013]

§ 25.262 Licensing and domestic coordination requirements for 17/24 GHz BSS space stations.

(a) Except as described in paragraphs (b), (c) or (e) of this section, applicants seeking to operate a space station in the 17/24 GHz BSS must locate that space station at one of the orbital positions described in Appendix F of the Report and Order adopted May 2, 2007, IB Docket No. 06–123, FCC 07–76.

(b) An applicant may be authorized to operate a 17/24 GHz BSS space station at an orbital location described in Appendix F as set forth in paragraph (a) of this section, or at a location with a geocentric angular separation of one degree or less from an Appendix F location, and may operate at the maximum power flux density limits defined in §25.208(c) and (w) of this part, without

coordinating its power flux density levels with adjacent licensed or permitted operators, only if there is no licensed 17/24 GHz BSS space station or prior-filed application at a location less than four degrees from the offset orbital location at which the applicant proposes to operate.

(c)(1) Notwithstanding the provisions of this section, licensees and permittees will be allowed to apply for a license or authorization for a replacement satellite that will be operated at the same power level and interference protection as the satellite to be replaced.

(2) In addition, applicants for licenses or authority for a satellite to be operated at an orbit location that was made available after a previous 17/24 GHz BSS license was cancelled or surrendered will be permitted to apply for authority to operate a satellite at the same power level and interference protection as the previous licensee at that orbit location, to the extent that their proposed operations are consistent with the provisions of this part. Such applications will be considered pursuant to the first-come, first-served procedures set forth in §25.158 of this part.

(d) Any U.S. licensee or permittee using a 17/24 GHz BSS space station that is located less than four degrees away from a prior-authorized 17/24 GHz BSS space station that is authorized to operate in accordance with paragraph (b) of this section:

(1) may not cause any more interference to the adjacent satellite network than would be caused if the adjacent 17/24 GHz BSS space station were located four degrees away from the proposed space station; and

(2) must accept any increased interference that results from the adjacent space station network operating at the offset orbital location less than four degrees away.

(e) Any 17/24 GHz BSS U.S. licensee or permittee that is required to provide information in its application pursuant to §25.140(b)(4)(ii) or (b)(4)(iii) of this part must accept any increased interference that may result from adjacent 17/24 GHz BSS space stations that are operating in compliance with the rules for this service.

(f) Any 17/24 GHz BSS U.S. licensee or permittee that does not comply with the power flux-density limits set forth in §25.208(w) of this part shall bear the burden of coordinating with any future co-frequency licensees and permittees of a 17/24 GHz BSS network under the following circumstances:

(1) If the operator's space-to-Earth power flux-density levels exceed the power flux-density limits set forth in §25.208(w) of this part by 3 dB or less, the operator shall bear the burden of coordinating with any future operators proposing a 17/24 GHz BSS space station in compliance with power flux-density limits set forth in §25.208(w) of this part and located within ±6 degrees of the operator's 17/24 GHz BSS space station.

(2) If the operator's space-to-Earth power flux-density levels exceed the power flux-density limits set forth in §25.208(w) of this part by more than 3 dB, the operator shall bear the burden of coordinating with any future operators proposing a 17/24 GHz BSS space station in compliance with power flux-density limits set forth in §25.208(w) of this part and located within ±10 degrees of the operator's 17/24 GHz BSS space station.

(3) If no good faith agreement can be reached, the operator of the 17/24 GHz BSS satellite network that does not comply with §25.208(w) of this part shall reduce its space-to-Earth power flux-density levels to be compliant with those specified in §25.208(w) of this part.

[72 FR 60280, Oct. 24, 2007]

§25.263 Information sharing requirements for SDARS terrestrial repeater operators.

This section requires SDARS licensees in the 2320–2345 MHz band to share information regarding the location and operation of terrestrial repeaters with WCS licensees in the 2305–2320 MHz and 2345–2360 MHz bands. Section 27.72 of this chapter requires WCS licensees to share information regarding the location and operation of base stations in the 2305–2320 MHz and 2345–2360 MHz bands with SDARS licensees in the 2320–2345 MHz band.

(a) SDARS licensees must select terrestrial repeater sites and frequencies,

to the extent practicable, to minimize the possibility of harmful interference to WCS base station operations in the 2305–2320 MHz and 2345–2360 MHz bands.

(b) *Notice requirements.* SDARS licensees that intend to operate a new terrestrial repeater must, before commencing such operation, provide 10 business days prior notice to all potentially affected Wireless Communications Service (WCS) licensees. SDARS licensees that intend to modify an existing repeater must, before commencing such modified operation, provide 5 business days prior notice to all potentially affected WCS licensees.

(1) For purposes of this section, a ''potentially affected WCS licensee'' is a WCS licensee that:

(i) Is authorized to operate a base station in the 2305–2315 MHz or 2350–2360 MHz bands in the same Major Economic Area (MEA) as that in which the terrestrial repeater is to be located;

(ii) Is authorized to operate base station in the 2315–2320 MHz or 2345–2350 MHz bands in the same Regional Economic Area Grouping (REAG) as that in which the terrestrial repeater is to be located;

(iii) In addition to the WCS licensees identified in paragraphs (b)(1)(i) and (ii) of this section, in cases in which the SDARS licensee plans to deploy or modify a terrestrial repeater within 5 kilometers of the boundary of an MEA or REAG in which the terrestrial repeater is to be located, a potentially affected WCS licensee is one that is authorized to operate a WCS base station in that neighboring MEA or REAG within 5 kilometers of the location of the terrestrial repeater.

(2) For the purposes of this section, a business day is defined by §1.4(e)(2) of this chapter.

(3) For modifications other than changes in location, a licensee may provide notice within 24 hours after the modified operation if the modification does not result in a predicted increase of the power flux density (PFD) at ground level by more than 1 dB since the last advance notice was given. If a demonstration is made by the WCS licensee that such modifications may cause harmful interference to WCS receivers, SDARS licensees will be required to provide notice 5 business days in advance of additional repeater modifications.

(4) SDARS repeaters operating below 2 watts equivalent isotropically radiated power (EIRP) are exempt from the notice requirements set forth in this paragraph.

(5) SDARS licensees are encouraged to develop separate coordination agreements with WCS licensees to facilitate efficient deployment of and coexistence between each service. To the extent the provisions of any such coordination agreement conflict with the requirements set forth herein, the procedures established under a coordination agreement will control. SDARS licensees must maintain a copy of any coordination agreement with a WCS license in their station files and disclose it to prospective assignees, transferees, or spectrum lessees and, upon request, to the Commission.

(6) SDARS and WCS licensees may enter into agreements regarding alternative notification procedures.

(c) *Contents of notice.* (1) Notification must be written (*e.g.,* certified letter, fax, or e-mail) and include the licensee's name, and the name, address, and telephone number of its coordination representative, unless the SDARS licensee and all potentially affected WCS licensees reach a mutual agreement to provide notification by some other means. WCS licensees and SDARS licensees may establish such a mutually agreeable alternative notification mechanism without prior Commission approval, provided that they comply with all other requirements of this section.

(2) Regardless of the notification method, notification must specify relevant technical details, including, at a minimum:

(i) The coordinates of the proposed repeater to an accuracy of no less than ±1 second latitude and longitude;

(ii) The proposed operating power(s), frequency band(s), and emission(s);

(iii) The antenna center height above ground and ground elevation above mean sea level, both to an accuracy of no less than ±1 meter;

(iv) The antenna gain pattern(s) in the azimuth and elevation planes that include the peak of the main beam; and

(v) The antenna downtilt angle(s).

(3) An SDARS licensee operating terrestrial repeaters must maintain an accurate and up-to-date inventory of its terrestrial repeaters operating above 2 watts average EIRP, including the information set forth in §25.263(c)(2), which shall be available upon request by the Commission.

(d) *Calculation of Notice Period.* Notice periods are calculated from the date of receipt by the licensee being notified. If notification is by mail, the date of receipt is evidenced by the return receipt on certified mail. If notification is by fax, the date of receipt is evidenced by the notifying party's fax transmission confirmation log. If notification is by e-mail, the date of receipt is evidenced by a return e-mail receipt. If the SDARS licensee and all potentially affected WCS licensees reach a mutual agreement to provide notification by some other means, that agreement must specify the method for determining the beginning of the notice period.

(e) *Duty to cooperate.* SDARS licensees must cooperate in good faith in the selection and use of new repeater sites to reduce interference and make the most effective use of the authorized facilities. SDARS licensees should provide WCS licensees as much lead time as practicable to provide ample time to conduct analyses and opportunity for prudent repeater site selection prior to SDARS licensees entering into real estate and tower leasing or purchasing agreements. Licensees of stations suffering or causing harmful interference must cooperate in good faith and resolve such problems by mutually satisfactory arrangements. If the licensees are unable to do so, the International Bureau, in consultation with the Office of Engineering and Technology and the Wireless Telecommunications Bureau, will consider the actions taken by the parties to mitigate the risk of and remedy any alleged interference. In determining the appropriate action, the Bureau will take into account the nature and extent of the interference and act promptly to remedy the interference. The Bureau may impose restrictions on SDARS licensees, including specifying the transmitter power, antenna height, or other technical or operational measures to remedy the interference, and will take into account previous measures by the licensees to mitigate the risk of interference.

[75 FR 45069, Aug. 2, 2010, as amended at 78 FR 9619, Feb. 11, 2013]

§ 25.264 Requirements to facilitate reverse-band operation in the 17.3–17.8 GHz band of 17/24 GHz Broadcasting-satellite Service and Direct Broadcast Satellite Service space stations.

(a) Each applicant for a space station license in the 17/24 GHz broadcasting-satellite service (BSS) must provide a series of tables or graphs with its application, that contain the predicted transmitting antenna off-axis gain information for each transmitting antenna in the 17.3–17.8 GHz frequency band. Using a Cartesian coordinate system wherein the X axis is tangent to the geostationary orbital arc with the positive direction pointing east, *i.e.*, in the direction of travel of the satellite; the Y axis is parallel to a line passing through the geographic north and south poles of the Earth, with the positive direction pointing south; and the Z axis passes through the satellite and the center of the Earth, with the positive direction pointing toward the Earth, the applicant must provide the predicted transmitting antenna off-axis antenna gain information:

(1) In the X–Z plane, *i.e.*, the plane of the geostationary orbit, over a range of ±30 degrees from the positive and negative X axes in increments of 5 degrees or less.

(2) In planes rotated from the X–Z plane about the Z axis, over a range of ±60 degrees relative to the equatorial plane, in increments of 10 degrees or less.

(3) In both polarizations.

(4) At a minimum of three measurement frequencies determined with respect to the entire portion of the 17.3–17.8 GHz frequency band over which the space station is designed to transmit: 5 MHz above the lower edge of the band; at the band center frequency; and 5 MHz below the upper edge of the band.

(5) Over a greater angular measurement range, if necessary, to account for any planned spacecraft orientation bias or change in operating orientation relative to the reference coordinate

system. The applicant must also explain its reasons for doing so.

(b) Each applicant for a space station license in the 17/24 GHz BSS must provide power flux density (pfd) calculations with its application that are based upon the predicted off-axis transmitting antenna gain information submitted in accordance with paragraph (a) of this section, as follows:

(1) The pfd calculations must be provided at the location of all prior-filed U.S. DBS space stations where the applicant's pfd level exceeds the coordination trigger of −117 dBW/m²/100 kHz in the 17.3–17.8 GHz band. In this rule, the term prior-filed U.S. DBS space station refers to any Direct Broadcast Satellite service space station application that was filed with the Commission (or authorization granted by the Commission) prior to the filing of the 17/24 GHz BSS application containing the predicted off-axis transmitting antenna gain information. The term prior-filed U.S. DBS space station does not include any applications (or authorizations) that have been denied, dismissed, or are otherwise no longer valid. Prior-filed U.S. DBS space stations may include foreign-licensed DBS space stations seeking authority to serve the United States market, but do not include foreign-licensed DBS space stations that have not filed applications with the Commission for market access in the United States.

(2) The pfd calculations must take into account the maximum permitted longitudinal station-keeping tolerance, orbital inclination and orbital eccentricity of both the 17/24 GHz BSS and DBS space stations, and must:

(i) Identify each prior-filed U.S. DBS space station at whose location the coordination threshold pfd level of −117 dBW/m²/100 kHz is exceeded; and

(ii) Demonstrate the extent to which the applicant's transmissions in the 17.3–17.8 GHz band exceed the threshold pfd level of −117 dBW/m²/100 kHz at those prior-filed U.S. DBS space station locations.

(3) If the calculated pfd level is in excess of the threshold level of −117 dBW/m²/100 kHz at the location of any prior-filed U.S. DBS space station, the applicant must also provide with its application certification that all affected DBS operators acknowledge and do not object to the applicants higher off-axis pfd levels. No such certification is required in cases where the DBS and 17/24 GHz BSS assigned operating frequencies do not overlap.

(c) No later than 9 months prior to launch, each 17/24 GHz BSS space station applicant or authorization holder must confirm the predicted transmitting antenna off-axis gain information provided in accordance with §25.114(d)(15)(iv) by submitting measured transmitting antenna off-axis gain information over the angular ranges, measurement frequencies and polarizations described in paragraphs (a)(1) through (5) of this section. The transmitting antenna off-axis gain information should be measured under conditions as close to flight configuration as possible.

(d) No later than 9 months prior to launch, each 17/24 GHz BSS space station applicant or authorization holder must provide pfd calculations based upon the measured transmitting antenna off-axis gain information that is submitted in accordance with paragraph (c) of this section as follows:

(1) The pfd calculations must be provided:

(i) At the location of all prior-filed U.S. DBS space stations as defined in paragraph (b)(1) of this section, where the applicant's pfd level in the 17.3–17.8 GHz band exceeds the coordination trigger of −117 dBW/m²/100 kHz; and

(ii) At the location of any subsequently-filed U.S. DBS space station where the applicant's pfd level in the 17.3–17.8 GHz band exceeds the coordination trigger of −117 dBW/m²/100 kHz. In this rule, the term subsequently-filed U.S. DBS space station refers to any Direct Broadcast Satellite service space station application that was filed with the Commission (or authorization granted by the Commission) after the 17/24 GHz BSS operator submitted the predicted data required by paragraphs (a) through (b) of this section, but prior to the time the 17/24 GHz BSS operator submitted the measured data required in this paragraph. Subsequently-filed U.S. DBS space stations may include foreign-licensed DBS space stations seeking authority to serve the United

States market. The term does not include any applications (or authorizations) that have been denied, dismissed, or are otherwise no longer valid, nor does it include foreign-licensed DBS space stations that have not filed applications with the Commission for market access in the United States.

(2) The pfd calculations must take into account the maximum permitted longitudinal station-keeping tolerance, orbital inclination and orbital eccentricity of both the 17/24 GHz BSS and DBS space stations, and must:

(i) Identify each prior-filed U.S. DBS space station at whose location the coordination threshold pfd level of −117 dBW/m^2/100 kHz is exceeded; and

(ii) Demonstrate the extent to which the applicant's or licensee's transmissions in the 17.3–17.8 GHz band exceed the threshold pfd level of −117 dBW/m^2/100 kHz at those prior-filed U.S. DBS space station locations.

(e) If the pfd level calculated from the measured data submitted in accordance with paragraph (d) of this section is in excess of the threshold pfd level of −117 dBW/m^2/100 kHz:

(1) At the location of any prior-filed U.S. DBS space station as defined in paragraph (b)(1) of this section, then the 17/24 GHz broadcasting-satellite operator must either:

(i) Coordinate its operations that are in excess of the threshold pfd level of −117 dBW/m^2/100 kHz with the affected prior-filed U.S. DBS space station operator, or

(ii) Adjust its operating parameters so that at the location of the prior-filed U.S. DBS space station, the pfd level of −117 dBW/m^2/100 kHz is not exceeded.

(2) At the location of any subsequently-filed U.S. DBS space station as defined in paragraph (d)(1) of this section, where the pfd level submitted in accordance with paragraph (d) of this section, is also in excess of the pfd level calculated on the basis of the predicted data submitted in accordance with paragraph (a) of this section that were on file with the Commission at the time the DBS space station application was filed, then the 17/24 GHz broadcasting-satellite operator must either:

(i) Coordinate with the affected subsequently-filed U.S. DBS space station operator all of its operations that are either in excess of the pfd level calculated on the basis of the predicted antenna off-axis gain data, or are in excess of the threshold pfd level of −117 dBW/m^2/100 kHz, whichever is greater, or

(ii) Adjust its operating parameters so that at the location of the subsequently-filed U.S. DBS space station, either the pfd level calculated on the basis of the predicted off-axis transmitting antenna gain data, or the threshold pfd level of −117 dBW/m^2/100 kHz, whichever is greater, is not exceeded.

(3) No coordination or adjustment of operating parameters is required in cases where the DBS and 17/24 GHz BSS operating frequencies do not overlap.

(f) The 17/24 GHz BSS applicant or licensee must modify its license, or amend its application, as appropriate, based upon new information:

(1) If the pfd levels submitted in accordance with paragraph (d) of this section, are in excess of those submitted in accordance with paragraph (b) of this section at the location of any prior-filed or subsequently-filed U.S. DBS space station as defined in paragraphs (b)(1) and (d)(1)of this section, or

(2) If the 17/24 GHz BSS operator adjusts its operating parameters in accordance with paragraphs (e)(1)(ii) or (e)(2)(ii) or this section.

(g) Absent an explicit agreement between operators to permit more closely spaced operations, U.S. authorized 17/24 GHz BSS space stations and U.S. authorized DBS space stations with co-frequency assignments may not be licensed to operate at locations separated by less than 0.2 degrees in orbital longitude.

(h) All operational 17/24 GHz BSS space stations must be maintained in geostationary orbits that:

(1) Do not exceed 0.075° of inclination.

(2) Operate with an apogee less than or equal to 35,806 km above the surface of the Earth, and with a perigee greater than or equal to 35,766 km above the surface of the Earth (*i.e.*, an eccentricity of less than 4.7×10^{-4}).

(i) U.S. authorized DBS networks may claim protection from space path

interference arising from the reverse-band operations of U.S. authorized 17/24 GHz BSS networks to the extent that the DBS space station operates within the bounds of inclination and eccentricity listed below. When the geostationary orbit of the DBS space station exceeds these bounds on inclination and eccentricity, it may not claim protection from any additional space path interference arising as a result of its inclined or eccentric operations and may only claim protection as if it were operating within the bounds listed below:

(1) The DBS space station's orbit does not exceed 0.075° of inclination, and

(2) The DBS space station's orbit maintains an apogee less than or equal to 35,806 km above the surface of the Earth, and a perigee greater than or equal to 35,766 km above the surface of the Earth (*i.e.*, an eccentricity of less than 4.7×10^{-4}).

[76 FR 50431, Aug. 15, 2011]

§ 25.265 Acceptance of interference in 2000–2020 MHz.

(a) MSS receivers operating in the 2000–2020 MHz band must accept interference from lawful operations in the 1995–2000 MHz band, where such interference is due to:

(1) The in-band power of any operations in 1995–2000 MHz (*i.e.*, the portion of transmit power contained in the 1995–2000 MHz band); or

(2) The portion of out-of-band emissions contained in 2000–2005 MHz.

(b) [Reserved]

[78 FR 8267, Feb. 5, 2013]

Subpart D—Technical Operations

SOURCE: 58 FR 13421, Mar. 11, 1993, unless otherwise noted.

§ 25.271 Control of transmitting stations.

(a) The licensee of a facility licensed under this part is responsible for the proper operation and maintenance of the station.

(b) The licensee of a transmitting earth station licensed under this part shall ensure that a trained operator is present on the earth station site, or at a designated remote control point for the earth station, at all times that transmissions are being conducted. No operator's license is required for a person to operate or perform maintenance on facilities authorized under this part.

(c) Authority will be granted to operate a transmitting earth station by remote control only on the conditions that:

(1) The parameters of the transmissions of the remote station monitored at the control point, and the operational functions of the remote earth stations that can be controlled by the operator at the control point, are sufficient to ensure that the operations of the remote station(s) are at all times in full compliance with the remote station authorization(s);

(2) The earth station facilities are protected by appropriate security measures to prevent unauthorized entry or operations;

(3) Upon detection by the licensee, or upon notification from the Commission of a deviation or upon notification by another licensee of harmful interference, the operation of the remote station shall be immediately suspended by the operator at the control point until the deviation or interference is corrected, except that transmissions concerning the immediate safety of life or property may be conducted for the duration of the emergency; and

(4) The licensee shall have available at all times the technical personnel necessary to perform expeditiously the technical servicing and maintenance of the remote stations.

(5) International VSAT system operators are required to maintain a control point within the United States, or to maintain a point of contact within the United States available 24 hours a day, 7 days a week, with the ability to shut off any earth station within the VSAT network immediately upon notification of harmful interference.

(d) The licensee shall insure that the licensed facilities are properly secured against unauthorized access or use whenever an operator is not present at the transmitter.

(e) The licensee of an NGSO FSS system operating in the 10.7–14.5 GHz bands shall maintain an electronic web site bulletin board to list the satellite

ephemeris data, for each satellite in the constellation, using the North American Aerospace Defense Command (NORAD) two-line orbital element format. The orbital elements shall be updated at least once every three days.

(f) The licensee of any transmitting earth station licensed under this part must update the contact information provided in the most recent license application for the station within 10 days of any change therein. The updated information must be filed electronically in the ''Other Filings'' tab of the station's current authorization file in the International Bureau Filing System.

[58 FR 13421, Mar. 11, 1993, as amended at 66 FR 10631, Feb. 16, 2001; 70 FR 4787, Jan. 31, 2005; 70 FR 32257, June 2, 2005; 74 FR 47107, Sept. 15, 2009; 78 FR 8430, Feb. 6, 2013; 79 FR 8325, Feb. 12, 2014]

§ 25.272 General inter-system coordination procedures.

(a) Each space station licensee in the Fixed-Satellite Service shall establish a satellite network control center which will have the responsibility to do the following:

(1) Monitor space-to-Earth transmissions in its system (thus indirectly monitoring uplink earth station transmissions in its system) and

(2) Coordinate transmissions in its satellite system with those of other systems to prevent harmful interference incidents or, in the event of a harmful interference incident, to identify the source of the interference and correct the problem promptly.

(b) [Reserved]

(c) The transmitting earth station licensee shall provide the operator(s) of the satellites, on which the licensee is authorized to transmit, contact telephone numbers for the control center of the earth station and emergency telephone numbers for key personnel; a current file of these contacts shall be maintained at each satellite system control center.

(d) An earth station licensee shall ensure that each of its authorized earth stations complies with the following:

(1) The earth station licensee shall ensure that there is continuously available means of communications between the satellite network control center and the earth station operator or its remote control point as designated by the licensee.

(2) The earth station operator shall notify the satellite network control center and receive permission from the control center before transmitting to the satellite or changing the basic characteristics of a transmission.

(3) The earth station operator shall keep the space station licensee informed of all actual and planned usage.

(4) Upon approval of the satellite network control center, the earth station operator may radiate an RF carrier into the designated transponder. Should improper illumination of the transponder or undue adjacent transponder interference be observed by the satellite network control center, the earth station operator shall immediately take whatever measures are needed to eliminate the problem.

(5) The space station licensee may delegate the responsibility and duties of the satellite network control center to a technically qualified user or group of users, but the space station licensee shall remain ultimately responsible for the performance of those duties.

[58 FR 13421, Mar. 11, 1993, as amended at 62 FR 5931, Feb. 10, 1997; 78 FR 8431, Feb. 6, 2013; 79 FR 8325, Feb. 12, 2014]

§ 25.273 Duties regarding space communications transmissions.

(a) No person shall:

(1) Transmit to a satellite unless the specific transmission is first authorized by the satellite network control center;

(2) Conduct transmissions over a transponder unless the operator is authorized to transmit at that time by the satellite licensee or the satellite licensee's successor in interest; or

(3) Transmit in any manner that causes unacceptable interference to the authorized transmission of another licensee.

(b) Satellite operators shall provide upon request by the Commission and by earth station licensees authorized to transmit on their satellites relevant information needed to avoid unacceptable interference to other users, including the polarization angles for proper illumination of a given transponder.

(c) Space station licensees are responsible for maintaining complete and

accurate technical details of current and planned transmissions over their satellites, and shall require that authorized users of transponders on their satellites, whether by tariff or contract, provide any necessary technical information in this regard including that required by § 25.272. Based on this information, space station licensees shall exchange among themselves general technical information concerning current and planned transmission parameters as needed to identify and promptly resolve any potential cases of unacceptable interference between their satellite systems.

(d) Space stations authorized after May 10, 1993 which do not satisfy the requirements of § 25.210 may be required to accept greater constraints in resolving interference problems than complying ones. The extent of these constraints shall be determined on a case-by-case basis.

[58 FR 13421, Mar. 11, 1993, as amended at 78 FR 8431, Feb. 6, 2013]

§ 25.274 Procedures to be followed in the event of harmful interference.

(a) The earth station operator whose transmission is suffering harmful interference shall first check the earth station equipment to ensure that the equipment is functioning properly.

(b) The earth station operator shall then check all other earth stations in the licensee's network that could be causing the harmful interference to ensure that none of them is the source of the interference and to verify that the interference is not from a local terrestrial source.

(c) After the earth station operator has determined that the source of the interference is not another earth station operating in the same network or from a terrestrial source, the earth station operator shall contact the satellite system control center and advise the satellite operator of the problem. The control center operator shall observe the interference incident and make reasonable efforts to determine the source of the problem. A record shall be maintained by the control center operator and the earth station operator of all harmful interference incidents and their resolution. These records shall be made available to an FCC representative on request.

(d) Where the suspected source of the interference incident is the operation of an earth station licensed to operate on one or more of the satellites in the satellite operator's system, the control center operator shall advise the offending earth station of the harmful interference incident and assist in the resolution of the problem where reasonably possible.

(e) The earth station licensee whose operations are suspected of causing harmful interference to the operations of another earth station shall take reasonable measures to determine whether its operations are the source of the harmful interference problem. Where the operations of the suspect earth station are the source of the interference, the licensee of that earth station shall take all measures necessary to resolve the interference.

(f) Where the earth station suspected of causing harmful interference to the operations of another earth station cannot be identified or is identified as an earth station operating on a satellite system other than the one on which the earth station suffering harmful interference is operating, it is the responsibility of a representative of the earth station suffering harmful interference to contact the control center of other satellite systems. The operator of the earth station suffering harmful interference is free to choose any representative to make this contact, including but not limited to the operator of the satellite system on which the earth station is operating. The operator of the earth station suffering harmful interference is also free to contact the control center of the other satellite systems directly.

(g) At any point, the system control center operator may contact the Commission's Columbia Operations Center in Columbia, Maryland, to assist in resolving the matter. This office specializes in the resolution of satellite interference problems. All licensees are required to cooperate fully with the Commission in any investigation of interference problems.

[58 FR 13421, Mar. 11, 1993, as amended at 62 FR 5931, Feb. 10, 1997; 70 FR 32257, June 2, 2005; 78 FR 8431, Feb. 6, 2013]

§ 25.275 Particulars of operation.

(a) Radio station authorizations issued under this part will normally specify only the frequency bands authorized for transmission and/or reception of the station.

(b) When authorized frequency bands are specified in the station authorization, the licensee is authorized to transmit any number of r.f. carriers on any discrete frequencies within an authorized frequency band in accordance with the other terms and conditions of the authorization and the requirements of this part. Specific r.f. carrier frequencies within the authorized frequency band shall be selected by the licensee to avoid unacceptable levels of interference being caused to other earth, space or terrestrial stations. Any coordination agreements, both domestic and international, concerning specific frequency usage constraints, including non-use of any particular frequencies within the frequency bands listed in the station authorization, are considered to be conditions of the station authorization.

(c) A license for a transmitting earth station will normally specify only the r.f. carriers having the highest e.i.r.p. density, the narrowest bandwidth, and the largest bandwidth authorized for transmission from that station. Unless otherwise specified in the station authorization, the licensee is authorized to transmit any other type of carrier not specifically listed which does not exceed the highest e.i.r.p., e.i.r.p. density and bandwidth prescribed for any listed emission.

(d) Only the most sensitive emission(s) for which protection is being afforded from interference in the authorized receive frequency band(s) will be specified in the station authorization.

§ 25.276 Points of communication.

Unless otherwise specified in the station authorization, an earth station may transmit to any space station in the same radio service that is listed as a point of communication in the earth station license, provided that permission has been received from the space station operator to access that space station.

[79 FR 8325, Feb. 12, 2014]

§ 25.277 Temporary fixed earth station operations.

(a) When an earth station in the Fixed-Satellite Service is to remain at a single location for fewer than 6 months, the location may be considered to be temporary fixed. Services provided at a single location which are initially known to be of longer than six months' duration shall not be provided under a temporary fixed authorization.

(b) When a station, other than an ESV, authorized as a temporary fixed earth station, is to remain at a single location for more than six months, application for a regular station authorization at that location shall be filed at least 30 days prior to the expiration of the six-month period.

(c) The licensee of an earth station, other than an ESV, which is authorized to conduct temporary fixed operations in bands shared co-equally with terrestrial fixed stations shall provide the following information to the Director of the Columbia Operations Center at 9200 Farmhouse Lane, Columbia, Maryland 21046, and to the licensees of all terrestrial facilities lying within the coordination contour of the proposed temporary fixed earth station site before beginning transmissions:

(1) The name of the person operating the station and the telephone number at which the operator can be reached directly;

(2) The exact frequency or frequencies used and the type of emissions and power levels to be transmitted; and

(3) The commencement and anticipated termination dates of operation from each location.

(d) Except as set forth in §25.151(e), transmissions may not be commenced until all affected terrestrial licensees have been notified and the earth station operator has confirmed that unacceptable interference will not be caused to such terrestrial stations.

(e) Operations of temporary fixed earth stations shall cease immediately upon notice of harmful interference from the Commission or the affected licensee.

(f) Filing requirements concerning applications for new temporary fixed earth station facilities operating in frequency bands shared co-equally with terrestrial fixed stations.

(1) When the initial location of the temporary fixed earth station's operation is known, the applicant shall provide, as part of the Form 312 application, a frequency coordination report in accordance with § 25.203 for the initial station location.

(2) When the initial location of the temporary fixed earth station's operation is not known at the time the application is filed, the applicant shall provide, as part of the Form 312 application, a statement by the applicant acknowledging its coordination responsibilities under § 25.277.

[58 FR 13421, Mar. 11, 1993, as amended at 62 FR 5931, Feb. 10, 1997; 70 FR 4787, Jan. 31, 2005; 70 FR 32257, June 2, 2005]

§ 25.278 Additional coordination obligation for non-geostationary and geostationary satellite systems in frequencies allocated to the fixed-satellite service.

Licensees of non-geostationary satellite systems that use frequency bands allocated to the Fixed-Satellite Service for their feeder link operations shall coordinate their operations with licensees of geostationary Fixed-Satellite Service systems licensed by the Commission for operation in the same frequency bands. Licensees of geostationary Fixed-Satellite Service systems in the frequency bands that are licensed to non-geostationary satellite systems for feeder link operations shall coordinate their operations with the licensees of such non-geostationary satellite systems.

[59 FR 53330, Oct. 21, 1994, as amended at 78 FR 8431, Feb. 6, 2013]

§ 25.279 Inter-satellite service.

(a) Any satellite communicating with other space stations may use frequencies in the inter-satellite service as indicated in § 2.106 of this chapter. This does not preclude the use of other frequencies for such purposes as provided for in several service definitions, *e.g.*, FSS. The technical details of the proposed inter-satellite link shall be provided in accordance with § 25.114(c).

(b) *Operating conditions.* In order to ensure compatible operations with authorized users in the frequency bands to be utilized for operations in the inter-satellite service, these inter-satellite service systems must operate in accordance with the conditions specified in this section.

(1) *Coordination requirements with federal government users.* (i) In frequency bands allocated for use by the inter-satellite service that are also authorized for use by agencies of the federal government, the federal use of frequencies in the inter-satellite service frequency bands is under the regulatory jurisdiction of the National Telecommunications and Information Administration (NTIA).

(ii) The Commission will use its existing procedures to reach agreement with NTIA to achieve compatible operations between federal government users under the jurisdiction of NTIA and inter-satellite service systems through frequency assignment and coordination practice established by NTIA and the Interdepartment Radio Advisory Committee (IRAC). In order to facilitate such frequency assignment and coordination, applicants shall provide the Commission with sufficient information to evaluate electromagnetic compatibility with the federal government users of the spectrum, and any additional information requested by the Commission. As part of the coordination process, applicants shall show that they will not cause interference to authorized federal government users, based upon existing system information provided by the government. The frequency assignment and coordination of the satellite system shall be completed prior to grant of construction authorization.

(2) *Coordination among inter-satellite service systems.* Applicants for authority to establish inter-satellite service are encouraged to coordinate their proposed frequency usage with existing permittees and licensees in the inter-satellite service whose facilities could be affected by the new proposal in terms of frequency interference or restricted system capacity. All affected applicants, permittees, and licensees, shall at the direction of the Commission, cooperate fully and make every reasonable effort to resolve technical problems and conflicts that may inhibit effective and efficient use of the radio spectrum; however, the permittee or licensee being coordinated with is

not obligated to suggest changes or re-engineer an applicant's proposal in cases involving conflicts.

[59 FR 53331, Oct. 21, 1994, as amended at 65 FR 59144, Oct. 4, 2000]

§ 25.280 Inclined orbit operations.

(a) Satellite operators may commence operation in inclined orbit mode without obtaining prior Commission authorization provided that the Commission is notified by letter within 30 days after the last north-south station keeping maneuver. The notification shall include:

(1) The operator's name;

(2) The date of commencement of inclined orbit operation;

(3) The initial inclination;

(4) The rate of change in inclination per year; and

(5) The expected end-of-life of the satellite accounting for inclined orbit operation, and the maneuvers specified under §25.283 of the Commission's rules.

(b) Licensees operating in inclined-orbit are required to:

(1) Periodically correct the satellite attitude to achieve a stationary spacecraft antenna pattern on the surface of the Earth and centered on the satellite's designated service area;

(2) Control all electrical interference to adjacent satellites, as a result of operating in an inclined orbit, to levels not to exceed that which would be caused by the satellite operating without an inclined orbit;

(3) Not claim protection in excess of the protection that would be received by the satellite network operating without an inclined orbit; and

(4) Continue to maintain the space station at the authorized longitude orbital location in the geostationary satellite arc with the appropriate east-west station-keeping tolerance.

[69 FR 54587, Sept. 9, 2004]

§ 25.281 Transmitter identification requirements for video uplink transmissions.

(a) Earth-to-space transmissions carrying video information with analog modulation must be identified through use of an Automatic Transmitter Identification System (ATIS) with an analog identifier or a direct sequence spread spectrum signal.

(1) Use of an analog identifier must be in accordance with the following requirements:

(i) The ATIS signal must be a separate subcarrier that is automatically activated whenever any radio frequency signal is transmitted.

(ii) The ATIS message must continuously repeat.

(iii) The ATIS subcarrier signal must be generated at a frequency of 7.1 MHz ±25 kHz and modulate the uplink radio frequency carrier at a level no less than −26 dB (referenced to the unmodulated carrier).

(iv) ATIS subcarrier deviation must not exceed 25 kHz.

(v) The ATIS message protocol must be International Morse Code keyed by a 1200 Hz ±800 Hz tone representing a mark and a message rate of 15 to 25 words per minute. The tone must frequency-modulate the subcarrier signal with the ATIS message.

(vi) The ATIS message must include the FCC-assigned call sign of the transmitting earth station, a telephone number providing immediate access to personnel capable of resolving interference or coordination problems, and a unique serial number of ten or more digits programmed into the ATIS message in a permanent manner so that it cannot be readily changed by the operator on duty. Additional information may be included in the ATIS data stream provided the total ATIS message length does not exceed 30 seconds.

(2) Use of a direct sequence spread spectrum ATIS signal must be in accordance with the requirements in paragraphs (b)(1) and (2) of this section.

(b) As of June 1, 2016, transmissions of fixed-frequency, digitally modulated video signals with a symbol rate of 128,000/s or more from Satellite News Gathering vehicles or other temporary-fixed earth stations must be identified through use of an ATIS in accordance with the following requirements:

(1) The ATIS message must be modulated onto a direct sequence spread spectrum signal in accordance with the DVB–CID standard, ETSI TS 103 129 (2013–05), ''Technical Specification, Digital Video Broadcasting (DVB); Framing structure, channel coding and

modulation of a carrier identification system (DVB–CID) for satellite transmission.'' This document is incorporated by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51 and approved by the Director of the Federal Register. The ETSI document may be obtained from ETSI, 650 Route des Lucioles, 06921 Sophia Antipolis Cedex, France and by email to *webstore@etsi.org* and a copy can be downloaded from *http://www.etsi.org*. You may inspect a copy at the Federal Communications Commission, 445 12th Street SW., Washington, DC 20554, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030 or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*.

(2) The ATIS message must continuously repeat.

(c) ATIS equipment must be integrated into the uplink transmitter chain with a method that cannot easily be defeated.

[79 FR 8325, Feb. 12, 2014]

§ 25.282 Orbit raising maneuvers.

A space station authorized to operate in the geostationary satellite orbit under this part is also authorized to transmit in connection with short-term, transitory maneuvers directly related to post-launch, orbit-raising maneuvers, provided that the following conditions are met:

(a) Authority is limited to those tracking, telemetry, and control frequencies in which the space station is authorized to operate once it reaches its assigned geostationary orbital location;

(b) In the event that any unacceptable interference does occur, the space station licensee shall cease operations until the issue is rectified;

(c) The space station licensee is required to accept interference from any lawfully operating satellite network or radio communication system.

[69 FR 54587, Sept. 9, 2004]

§ 25.283 End-of-life disposal.

(a) *Geostationary orbit space stations.* Unless otherwise explicitly specified in an authorization, a space station authorized to operate in the geostationary satellite orbit under this part shall be relocated, at the end of its useful life, barring catastrophic failure of satellite components, to an orbit with a perigee with an altitude of no less than:

$36{,}021 \text{ km} + (1000 \cdot C_R \cdot A/m)$

where C_R is the solar radiation pressure coefficient of the spacecraft, and A/m is the Area to mass ratio, in square meters per kilogram, of the spacecraft.

(b) A space station authorized to operate in the geostationary satellite orbit under this part may operate using its authorized tracking, telemetry and control frequencies, and outside of its assigned orbital location, for the purpose of removing the satellite from the geostationary satellite orbit at the end of its useful life, provided that the conditions of paragraph (a) of this section are met, and on the condition that the space station's tracking, telemetry and control transmissions are planned so as to avoid electrical interference to other space stations, and coordinated with any potentially affected satellite networks.

(c) *All space stations.* Upon completion of any relocation authorized by paragraph (b) of this section, or any relocation at end-of-life specified in an authorization, or upon a spacecraft otherwise completing its authorized mission, a space station licensee shall ensure, unless prevented by technical failures beyond its control, that all stored energy sources on board the satellite are discharged, by venting excess propellant, discharging batteries, relieving pressure vessels, and other appropriate measures.

(d) The minimum perigee requirement of paragraph (a) of this section shall not apply to space stations launched prior to March 18, 2002.

[69 FR 54588, Sept. 9, 2004, as amended at 78 FR 8431, Feb. 6, 2013]

§ 25.284 Emergency Call Center Service.

(a) Providers of Mobile-Satellite Service to end-user customers (part 25, subparts A–D) must provide Emergency Call Center service to the extent that

they offer real-time, two way switched voice service that is interconnected with the public switched network and utilize an in-network switching facility which enables the provider to reuse frequencies and/or accomplish seamless hand-offs of subscriber calls. Emergency Call Center personnel must determine the emergency caller's phone number and location and then transfer or otherwise redirect the call to an appropriate public safety answering point. Providers of Mobile-Satellite Services that utilize earth terminals that are not capable of use while in motion are exempt from providing Emergency Call Center service for such terminals.

(b) Beginning February 11, 2005, each Mobile-Satellite Service carrier that is subject to the provisions of paragraph (a) of this section must maintain records of all 911 calls received at its emergency call center. Beginning October 15, 2005, and on each following October 15, Mobile-Satellite Service carriers providing service in the 1.6/2.4 GHz and 2 GHz bands must submit a report to the Commission regarding their call center data, current as of September 30 of that year. Beginning June 30, 2006, and on each following June 30, Mobile-Satellite Service carriers providing service in bands other than 1.6/2.4 GHz and 2 GHz must submit a report to the Commission regarding their call center data, current as of May 31 of that year. These reports must include, at a minimum, the following:

(1) The name and address of the carrier, the address of the carrier's emergency call center, and emergency call center contact information;

(2) The aggregate number of calls received by the call center each month during the relevant reporting period;

(3) An indication of how many calls received by the call center each month during the relevant reporting period required forwarding to a public safety answering point and how many did not require forwarding to a public safety answering point.

[69 FR 6582, Feb. 11, 2004, as amended at 69 FR 54042, Sept. 7, 2004; 78 FR 8431, Feb. 6, 2013]

§ 25.285 Operation of MSS and ATC transmitters or transceivers on board civil aircraft.

(a) Operation of any of the following devices aboard civil aircraft is prohibited, unless the device is installed in a manner approved by the Federal Aviation Administration or is used by the pilot or with the pilot's consent:

(1) Earth stations capable of transmitting in the 1.5/1.6 GHz, 1.6/2.4 GHz, or 2 GHz Mobile-Satellite Service frequency bands;

(2) ATC terminals capable of transmitting in the 1.5/1.6 GHz or 1.6/2.4 GHz MSS bands;

(3) Earth stations used for non-voice, non-geostationary Mobile-Satellite Service communication that can emit radiation in the 108–137 MHz band.

(b) No portable device of any type identified in paragraph (a) of this section (including transmitter or transceiver units installed in other devices that are themselves portable) may be sold or distributed to users unless it conspicuously bears the following warning: ''This device must be turned off at all times while on board aircraft.'' For purposes of this section, a device is portable if it is a ''portable device'' as defined in § 2.1093(b) of this chapter or is designed to be carried by hand.

[79 FR 8325, Feb. 12, 2014]

EFFECTIVE DATE NOTE: At 79 FR 44140, July 30, 2014, in § 25.285, paragraph (a)(2) was corrected. This text contains information collection and recordkeeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

§ 25.286 Antenna painting and lighting.

The owner of an earth station antenna structure must comply with all applicable painting, marking, and/or lighting requirements in part 17 of this chapter. In the event of default by the owner, the station licensee will be responsible for ensuring that such requirements are met.

[79 FR 8326, Feb. 12, 2014]

§ 25.287 Requirements pertaining to operation of mobile stations in the NVNG, 1.5/1.6 GHz, 1.6/2.4 GHz, and 2 GHz Mobile-Satellite Service bands.

(a) Any mobile earth station (MES) operating in the 1530–1544 MHz and 1626.5–1645.5 MHz bands must have the following minimum set of capabilities to ensure compliance with Footnote 5.353A in 47 CFR 2.106 and the priority and real-time preemption requirements imposed by Footnote US315.

(1) All MES transmissions must have a priority assigned to them that preserves the priority and preemptive access given to maritime distress and safety communications sharing the band.

(2) Each MES with a requirement to handle maritime distress and safety data communications must be capable of either:

(i) Recognizing message and call priority identification when transmitted from its associated Land Earth Station (LES), or

(ii) Accepting message and call priority identification embedded in the message or call when transmitted from its associated LES and passing the identification to shipboard data message processing equipment.

(3) Each MES must be assigned a unique terminal identification number that will be transmitted upon any attempt to gain access to a system.

(4) After an MES has gained access to a system, the mobile terminal must be under control of an LES and must obtain all channel assignments from it.

(5) All MESs that do not continuously monitor a separate signaling channel or signaling within the communications channel must monitor the signaling channel at the end of each transmission.

(6) Each MES must automatically inhibit its transmissions if it is not correctly receiving separate signaling channel or signaling within the communications channel from its associated LES.

(7) Each MES must automatically inhibit its transmissions on any or all channels upon receiving a channel-shut-off command on a signaling or communications channel it is receiving from its associated LES.

(8) Each MES with a requirement to handle maritime distress and safety communications must have the capability within the station to automatically preempt lower precedence traffic.

(b) Any LES for an MSS system operating in the 1530–1544 MHz and 1626.5–1645.5 MHz bands must have the following minimum set of capabilities to ensure compliance with Footnotes 5.353A and the priority and real-time preemption requirements imposed by Footnote US315. An LES fulfilling these requirements must not have any additional priority with respect to FSS stations operating with other systems.

(1) LES transmissions to MESs must have a priority assigned to them that preserves the priority and preemptive access given to maritime distress and safety communications pursuant to paragraph (a) of this section.

(2) The LES must recognize the priority of calls to and from MESs and make channel assignments taking into account the priority access that is given to maritime distress and safety communications.

(3) The LES must be capable of receiving the MES identification number when transmitted and verifying that it is an authorized user of the system to prohibit unauthorized access.

(4) The LES must be capable of transmitting channel assignment commands to the MESs.

(5) The communications channels used between the LES and the MES shall have provision for signaling within the voice/data channel, for an MES that does not continuously monitor the LES signaling channel during a call.

(6) The LES must transmit periodic control signals to MESs that do not continuously monitor the LES signaling channel.

(7) The LES must automatically inhibit transmissions to an MES to which it is not transmitting in a signaling channel or signaling within the communications channel.

(8) The LES must be capable of transmitting channel-shut-off commands to MESs on signaling or communications channels.

(9) Each LES must be capable of interrupting, and if necessary, preempting ongoing routine traffic from

an MES in order to complete a maritime distress, urgency or safety call to that MES.

(10) Each LES must be capable of automatically turning off one or more of its associated channels in order to complete a maritime distress, urgency or safety call.

(c) No person without an FCC license for such operation may transmit to a space station in the NVNG, 1.5/1.6 GHz, 1.6/2.4 GHz, or 2 GHz Mobile-Satellite Service from anywhere in the United States except to receive service from the holder of a pertinent FCC blanket license or from another party with the permission of such a blanket licensee.

(d) The holder of an FCC blanket license for operation of mobile transmitters or transceivers for communication via an NVNG, 1.6/2.4 GHz, 1.5/1.6 GHz, or 2 GHz Mobile Satellite Service system will be responsible for operation of any such device to receive service provided by that licensee or provided by another party with the blanket licensee's consent. Operators of such satellite systems must not transmit communications to or from such devices in the United States unless such communications are authorized under a service contract with the holder of a pertinent FCC blanket earth station license or under a service contract with another party with authority for such operation delegated by such a blanket licensee.

[79 FR 8326, Feb. 12, 2014]

Subpart E [Reserved]

Subpart F—Competitive Bidding Procedures for DARS

SOURCE: 62 FR 11106, Mar. 11, 1997, unless otherwise noted.

§ 25.401 Satellite DARS applications subject to competitive bidding.

Mutually exclusive initial applications for DARS service licenses are subject to competitive bidding. The general competitive bidding procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this part.

[67 FR 45373, July 9, 2002]

§ 25.402 [Reserved]

§ 25.403 Bidding application and certification procedures.

Submission of Supplemental Application Information. In order to be eligible to bid, each pending applicant must timely submit certain supplemental information. All supplemental information shall be filed by the applicant five days after publication of these rules in the FEDERAL REGISTER. The supplemental information must be certified and include the following:

(a) Applicant's name;

(b) Mailing Address (no Post Office boxes);

(c) City;

(d) State;

(e) ZIP Code;

(f) Auction Number 15;

(g) FCC Account Number;

(h) Person(s) authorized to make or withdraw a bid (list up to three individuals);

(i) Certifications and name and title of person certifying the information provided;

(j) Applicant's contact person and such person's telephone number, E-mail address and FAX number; and

(k) Signature and date.

§ 25.404 Submission of down payment and filing of long-form applications.

A high bidder that meets its down payment obligations in a timely manner must, within thirty (30) business days after being notified that it is a high bidder, submit an amendment to its pending application to provide the information required by § 25.144.

[67 FR 45373, July 9, 2002]

§§ 25.405–25.406 [Reserved]

Subparts G–H [Reserved]

Subpart I—Equal Employment Opportunities

§ 25.601 Equal employment opportunities.

Notwithstanding other EEO provisions within these rules, an entity that uses an owned or leased Fixed-Satellite Service or Direct Broadcast Satellite

Service or 17/24 GHz Broadcasting-Satellite Service facility (operating under this part) to provide video programming directly to the public on a subscription basis must comply with the equal employment opportunity requirements set forth in part 76, subpart E, of this chapter, if such entity exercises control (as defined in part 76, subpart E, of this chapter) over the video programming it distributes. Notwithstanding other EEO provisions within these rules, a licensee or permittee of a direct broadcast satellite station operating as a broadcaster must comply with the equal employment opportunity requirements set forth in part 73.

[72 FR 50033, Aug. 29, 2007, as amended at 78 FR 8431, Feb. 6, 2013]

Subpart J—Public Interest Obligations

§ 25.701 Public interest obligations.

(a) DBS providers are subject to the public interest obligations set forth in paragraphs (b), (c), (d), (e) and (f) of this section. As used in this section, DBS providers are any of the following:

(1) Entities licensed to operate satellites in the 12.2 to 12.7 GHz DBS frequency bands; or

(2) Entities licensed to operate satellites in the Ku band Fixed-Satellite Service and that sell or lease capacity to a video programming distributor that offers service directly to consumers providing a sufficient number of channels so that four percent of the total applicable programming channels yields a set aside of at least one channel of non commercial programming pursuant to paragraph (e) of this section, or

(3) Non U.S. licensed satellite operators in the Ku band that offer video programming directly to consumers in the United States pursuant to an earth station license issued under part 25 of this title and that offer a sufficient number of channels to consumers so that four percent of the total applicable programming channels yields a set aside of one channel of noncommercial programming pursuant to paragraph (e) of this section, or

(4) Entities licensed to operate satellites in the 17/24 GHz BSS that offer video programming directly to consumers or that sell or lease capacity to a video programming distributor that offers service directly to consumers providing a sufficient number of channels so that four percent of the total applicable programming channels yields a set aside of at least one channel of noncommercial programming pursuant to paragraph (e) of this section, or

(5) Non U.S. licensed satellite operators in the 17/24 GHz BSS that offer video programming directly to consumers in the United States or that sell or lease capacity to a video programming distributor that offers service directly to consumers in the United States pursuant to an earth station license issued under part 25 of this title and that offer a sufficient number of channels to consumers so that four percent of the total applicable programming channels yields a set aside of one channel of noncommercial programming pursuant to paragraph (e) of this section.

(b) Political broadcasting requirements—

(1) Legally qualified candidates for public office for purposes of this section are as defined in § 73.1940 of this chapter.

(2) DBS origination programming is defined as programming (exclusive of broadcast signals) carried on a DBS facility over one or more channels and subject to the exclusive control of the DBS provider.

(3) *Reasonable access.* (i) DBS providers must comply with section 312(a)(7) of the Communications Act of 1934, as amended, by allowing reasonable access to, or permitting purchase of reasonable amounts of time for, the use of their facilities by a legally qualified candidate for federal elective office on behalf of his or her candidacy.

(ii) *Weekend access.* For purposes of providing reasonable access, DBS providers shall make facilities available for use by federal candidates on the weekend before the election if the DBS provider has provided similar access to commercial advertisers during the year preceding the relevant election period. DBS providers shall not discriminate

between candidates with regard to weekend access.

(4) *Use of facilities; equal opportunities.* DBS providers must comply with section 315 of the Communications Act of 1934, as amended, by providing equal opportunities to legally qualified candidates for DBS origination programming.

(i) *General requirements.* Except as otherwise indicated in §25.701(b)(3), no DBS provider is required to permit the use of its facilities by any legally qualified candidate for public office, but if a DBS provider shall permit any such candidate to use its facilities, it shall afford equal opportunities to all other candidates for that office to use such facilities. Such DBS provider shall have no power of censorship over the material broadcast by any such candidate. Appearance by a legally qualified candidate on any:

(A) Bona fide newscast;

(B) Bona fide news interview;

(C) Bona fide news documentary (if the appearance of the candidate is incidental to the presentation of the subject or subjects covered by the news documentary); or

(D) On the spot coverage of bona fide news events (including, but not limited to political conventions and activities incidental thereto) shall not be deemed to be use of a DBS provider's facility. (Section 315(a) of the Communications Act.)

(ii) *Uses.* As used in this section and §25.701(c), the term ''use'' means a candidate appearance (including by voice or picture) that is not exempt under paragraphs (b)(3)(i)(A) through (b)(3)(i)(D) of this section.

(iii) *Timing of request.* A request for equal opportunities must be submitted to the DBS provider within 1 week of the day on which the first prior use giving rise to the right of equal opportunities occurred: Provided, however, That where the person was not a candidate at the time of such first prior use, he or she shall submit his or her request within 1 week of the first subsequent use after he or she has become a legally qualified candidate for the office in question.

(iv) *Burden of proof.* A candidate requesting equal opportunities of the DBS provider or complaining of noncompliance to the Commission shall have the burden of proving that he or she and his or her opponent are legally qualified candidates for the same public office.

(v) *Discrimination between candidates.* In making time available to candidates for public office, no DBS provider shall make any discrimination between candidates in practices, regulations, facilities, or services for or in connection with the service rendered pursuant to this part, or make or give any preference to any candidate for public office or subject any such candidate to any prejudice or disadvantage; nor shall any DBS provider make any contract or other agreement that shall have the effect of permitting any legally qualified candidate for any public office to use DBS origination programming to the exclusion of other legally qualified candidates for the same public office.

(c) *Candidate rates*—(1) *Charges for use of DBS facilities.* The charges, if any, made for the use of any DBS facility by any person who is a legally qualified candidate for any public office in connection with his or her campaign for nomination for election, or election, to such office shall not exceed:

(i) During the 45 days preceding the date of a primary or primary runoff election and during the 60 days preceding the date of a general or special election in which such person is a candidate, the lowest unit charge of the DBS provider for the same class and amount of time for the same period.

(A) A candidate shall be charged no more per unit than the DBS provider charges its most favored commercial advertisers for the same classes and amounts of time for the same periods. Any facility practices offered to commercial advertisers that enhance the value of advertising spots must be disclosed and made available to candidates upon equal terms. Such practices include but are not limited to any discount privileges that affect the value of advertising, such as bonus spots, time sensitive make goods, preemption priorities, or any other factors that enhance the value of the announcement.

(B) The Commission recognizes non preemptible, preemptible with notice,

immediately preemptible and run of schedule as distinct classes of time.

(C) DBS providers may establish and define their own reasonable classes of immediately preemptible time so long as the differences between such classes are based on one or more demonstrable benefits associated with each class and are not based solely upon price or identity of the advertiser. Such demonstrable benefits include, but are not limited to, varying levels of preemption protection, scheduling flexibility, or associated privileges, such as guaranteed time sensitive make goods. DBS providers may not use class distinctions to defeat the purpose of the lowest unit charge requirement. All classes must be fully disclosed and made available to candidates.

(D) DBS providers may establish reasonable classes of preemptible with notice time so long as they clearly define all such classes, fully disclose them and make them available to candidates.

(E) DBS providers may treat non preemptible and fixed position as distinct classes of time provided that they articulate clearly the differences between such classes, fully disclose them, and make them available to candidates.

(F) DBS providers shall not establish a separate, premium priced class of time sold only to candidates. DBS providers may sell higher priced non preemptible or fixed time to candidates if such a class of time is made available on a bona fide basis to both candidates and commercial advertisers, and provided such class is not functionally equivalent to any lower priced class of time sold to commercial advertisers.

(G) [Reserved]

(H) Lowest unit charge may be calculated on a weekly basis with respect to time that is sold on a weekly basis, such as rotations through particular programs or dayparts. DBS providers electing to calculate the lowest unit charge by such a method must include in that calculation all rates for all announcements scheduled in the rotation, including announcements aired under long term advertising contracts. DBS providers may implement rate increases during election periods only to the extent that such increases constitute ''ordinary business practices,'' such as seasonal program changes or changes in audience ratings.

(I) DBS providers shall review their advertising records periodically throughout the election period to determine whether compliance with this section requires that candidates receive rebates or credits. Where necessary, DBS providers shall issue such rebates or credits promptly.

(J) Unit rates charged as part of any package, whether individually negotiated or generally available to all advertisers, must be included in the lowest unit charge calculation for the same class and length of time in the same time period. A candidate cannot be required to purchase advertising in every program or daypart in a package as a condition for obtaining package unit rates.

(K) DBS providers are not required to include non cash promotional merchandising incentives in lowest unit charge calculations; provided, however, that all such incentives must be offered to candidates as part of any purchases permitted by the system. Bonus spots, however, must be included in the calculation of the lowest unit charge calculation.

(L) Make goods, defined as the rescheduling of preempted advertising, shall be provided to candidates prior to election day if a DBS provider has provided a time sensitive make good during the year preceding the pre election periods, respectively set forth in paragraph (c)(1)(i) of this section, to any commercial advertiser who purchased time in the same class.

(M) DBS providers must disclose and make available to candidates any make good policies provided to commercial advertisers. If a DBS provider places a make good for any commercial advertiser or other candidate in a more valuable program or daypart, the value of such make good must be included in the calculation of the lowest unit charge for that program or daypart.

(ii) At any time other than the respective periods set forth in paragraph (c)(1)(i) of this section, DBS providers may charge legally qualified candidates for public office no more than the charges made for comparable use of

the facility by commercial advertisers. The rates, if any, charged all such candidates for the same office shall be uniform and shall not be rebated by any means, direct or indirect. A candidate shall be charged no more than the rate the DBS provider would charge for comparable commercial advertising. All discount privileges otherwise offered by a DBS provider to commercial advertisers must be disclosed and made available upon equal terms to all candidates for public office.

(2) If a DBS provider permits a candidate to use its facilities, it shall make all discount privileges offered to commercial advertisers, including the lowest unit charges for each class and length of time in the same time period and all corresponding discount privileges, available on equal terms to all candidates. This duty includes an affirmative duty to disclose to candidates information about rates, terms, conditions and all value enhancing discount privileges offered to commercial advertisers, as provided herein. DBS providers may use reasonable discretion in making the disclosure; provided, however, that the disclosure includes, at a minimum, the following information:

(i) A description and definition of each class of time available to commercial advertisers sufficiently complete enough to allow candidates to identify and understand what specific attributes differentiate each class;

(ii) A description of the lowest unit charge and related privileges (such as priorities against preemption and make goods prior to specific deadlines) for each class of time offered to commercial advertisers;

(iii) A description of the DBS provider's method of selling preemptible time based upon advertiser demand, commonly known as the ''current selling level,'' with the stipulation that candidates will be able to purchase at these demand generated rates in the same manner as commercial advertisers;

(iv) An approximation of the likelihood of preemption for each kind of preemptible time; and

(v) An explanation of the DBS provider's sales practices, if any, that are based on audience delivery, with the stipulation that candidates will be able to purchase this kind of time, if available to commercial advertisers.

(3) Once disclosure is made, DBS providers shall negotiate in good faith to actually sell time to candidates in accordance with the disclosure.

(d) Political file. Each DBS provider shall keep and permit public inspection of a complete and orderly political file and shall prominently disclose the physical location of the file, and the telephonic and electronic means to access the file.

(1) The political file shall contain, at a minimum:

(i) A record of all requests for DBS origination time, the disposition of those requests, and the charges made, if any, if the request is granted. The ''disposition'' includes the schedule of time purchased, when spots actually aired, the rates charged, and the classes of time purchased; and

(ii) A record of the free time provided if free time is provided for use by or on behalf of candidates.

(2) DBS providers shall place all records required by this section in a file available to the public as soon as possible and shall be retained for a period of four years until December 31, 2006, and thereafter for a period of two years.

(3) DBS providers shall make available, by fax, e-mail, or by mail upon telephone request, photocopies of documents in their political files and shall assist callers by answering questions about the contents of their political files. Provided, however, that if a requester prefers access by mail, the DBS provider shall pay for postage but may require individuals requesting documents to pay for photocopying. To the extent that a DBS provider places its political file on its Web site, it may refer the public to the Web site in lieu of mailing photocopies. Any material required by this section to be maintained in the political file must be made available to the public by either mailing or Web site access or both.

(e) *Commercial limits in children's programs.* (1) No DBS provider shall air more than 10.5 minutes of commercial matter per hour during children's programming on weekends, or more that

12 minutes of commercial matter per hour on week days.

(2) This rule shall not apply to programs aired on a broadcast television channel which the DBS provider passively carries, or to channels over which the DBS provider may not exercise editorial control, pursuant to 47 U.S.C. 335(b)(3).

(3) DBS providers airing children's programming must maintain records sufficient to verify compliance with this rule and make such records available to the public. Such records must be maintained for a period sufficient to cover the limitations period specified in 47 U.S.C. 503(b)(6)(B).

NOTE 1 TO PARAGRAPH (e): *Commercial matter* means airtime sold for purposes of selling a product or service.

NOTE 2 TO PARAGRAPH (e): For purposes of this section, children's programming refers to programs originally produced and broadcast primarily for an audience of children 12 years old and younger.

(f) Carriage obligation for noncommercial programming—

(1) *Reservation requirement.* DBS providers shall reserve four percent of their channel capacity exclusively for use by qualified programmers for noncommercial programming of an educational or informational nature. Channel capacity shall be determined annually by calculating, based on measurements taken on a quarterly basis, the average number of channels available for video programming on all satellites licensed to the provider during the previous year. DBS providers may use this reserved capacity for any purpose until such time as it is used for noncommercial educational or informational programming.

(2) *Qualified programmer.* For purposes of these rules, a qualified programmer is:

(i) A noncommercial educational broadcast station as defined in section 397(6) of the Communications Act of 1934, as amended,

(ii) A public telecommunications entity as defined in section 397(12) of the Communications Act of 1934, as amended,

(iii) An accredited nonprofit educational institution or a governmental organization engaged in the formal education of enrolled students (A publicly supported educational institution must be accredited by the appropriate state department of education; a privately controlled educational institution must be accredited by the appropriate state department of education or the recognized regional and national accrediting organizations), or

(iv) A nonprofit organization whose purposes are educational and include providing educational and instructional television material to such accredited institutions and governmental organizations.

(v) Other noncommercial entities with an educational mission.

(3) *Editorial control.* (i) A DBS operator will be required to make capacity available only to qualified programmers and may select among such programmers when demand exceeds the capacity of their reserved channels.

(ii) A DBS operator may not require the programmers it selects to include particular programming on its channels.

(iii) A DBS operator may not alter or censor the content of the programming provided by the qualified programmer using the channels reserved pursuant to this section.

(4) Non-commercial channel limitation. A DBS operator cannot initially select a qualified programmer to fill more than one of its reserved channels except that, after all qualified entities that have sought access have been offered access on at least one channel, a provider may allocate additional channels to qualified programmers without having to make additional efforts to secure other qualified programmers.

(5) *Rates, terms and conditions.* (i) In making the required reserved capacity available, DBS providers cannot charge rates that exceed costs that are directly related to making the capacity available to qualified programmers. Direct costs include only the cost of transmitting the signal to the uplink facility and uplinking the signal to the satellite.

(ii) Rates for capacity reserved under paragraph (a) of this section shall not exceed 50 percent of the direct costs as defined in this section.

(iii) Nothing in this section shall be construed to prohibit DBS providers from negotiating rates with qualified

programmers that are less than 50 percent of direct costs or from paying qualified programmers for the use of their programming.

(iv) DBS providers shall reserve discrete channels and offer these to qualifying programmers at consistent times to fulfill the reservation requirement described in these rules.

(6) *Public file.* (i) In addition to the political file requirements in §25.701(d), each DBS provider shall keep and permit public inspection of a complete and orderly record of:

(A) Quarterly measurements of channel capacity and yearly average calculations on which it bases its four percent reservation, as well as its response to any capacity changes;

(B) A record of entities to whom noncommercial capacity is being provided, the amount of capacity being provided to each entity, the conditions under which it is being provided and the rates, if any, being paid by the entity;

(C) A record of entities that have requested capacity, disposition of those requests and reasons for the disposition.

(ii) All records required by this paragraph shall be placed in a file available to the public as soon as possible and shall be retained for a period of two years.

(7) *Effective date.* DBS providers are required to make channel capacity available pursuant to this section upon the effective date. Programming provided pursuant to this rule must be available to the public no later than six months after the effective date.

[69 FR 23157, Apr. 28, 2004, as amended at 72 FR 50033, Aug. 29, 2007; 78 FR 8431, Feb. 6, 2013]

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AUTHORITY: 47 U.S.C. 154, 301, 302a, 303, 307, 309, 332, 336, 337, 1403, 1404, 1451, and 1452, unless otherwise noted.

SOURCE: 62 FR 9658, Mar. 3, 1997, unless otherwise noted.

Subpart A—General Information

§ 27.1 Basis and purpose.

This section contains the statutory basis for this part of the rules and provides the purpose for which this part is issued.

(a) *Basis.* The rules for miscellaneous wireless communications services (WCS) in this part are promulgated under the provisions of the Communications Act of 1934, as amended, that vest authority in the Federal Communications Commission to regulate radio transmission and to issue licenses for radio stations.

(b) *Purpose.* This part states the conditions under which spectrum is made available and licensed for the provision

of wireless communications services in the following bands.

(1) 2305–2320 MHz and 2345–2360 MHz.

(2) 746–758 MHz, 775–788 MHz, and 805–806 MHz.

(3) 698–746 MHz.

(4) 1390–1392 MHz.

(5) 1392–1395 MHz and 1432–1435 MHz.

(6) 1670–1675 MHz.

(7) 1915–1920 MHz and 1995–2000 MHz.

(8) 1710–1755 MHz and 2110–2155 MHz.

(9) 2495–2690 MHz.

(10) 2000–2020 MHz and 2180–2200 MHz.

(11) 1695–1710 MHz.

(12) 1755–1780 MHz.

(13) 2155–2180 MHz.

(14) Spectrum in the 470–698 MHz UHF band that has been reallocated and redesignated for flexible fixed and mobile use pursuant to section 6403 of the Spectrum Act. The specific frequencies and number of channel blocks will be determined in light of further proceedings pursuant to Docket No. 12–268 and the rule will be updated accordingly pursuant to a future public notice.

(c) *Scope.* The rules in this part apply only to stations authorized under this part.

[62 FR 9658, Mar. 3, 1997, as amended at 65 FR 3144, Jan. 20, 2000; 65 FR 17601, Apr. 4, 2000; 67 FR 5510, Feb. 6, 2002; 67 FR 41854, June 20, 2002; 69 FR 5714, Feb. 6, 2004; 69 FR 72031, Dec. 10, 2004; 69 FR 77949, Dec. 29, 2004; 72 FR 48843, Aug. 24, 2007; 77 FR 62462, Oct. 15, 2012; 78 FR 8267, Feb. 5, 2013; 78 FR 50254, Aug. 16, 2013; 79 FR 32410, June 4, 2014; 79 FR 48536, Aug. 15, 2014]

§ 27.2 Permissible communications.

(a) *Miscellaneous wireless communications services.* Except as provided in paragraph (b) or (d) of this section and subject to technical and other rules contained in this part, a licensee in the frequency bands specified in § 27.5 may provide any services for which its frequency bands are allocated, as set forth in the non-Federal Government column of the Table of Allocations in § 2.106 of this chapter (column 5).

(b) *775–776 MHz and 805–806 MHz bands.* Operators in the 775–776 MHz and 805–806 MHz bands may not employ a cellular system architecture. A cellular system architecture is defined, for purposes of this part, as one that consists of many small areas or cells (segmented from a larger geographic service area), each of which uses its own base station, to enable frequencies to be reused at relatively short distances.

(c) *Satellite DARS.* Satellite digital audio radio service (DARS) may be provided using the 2310–2320 and 2345–2360 MHz bands. Satellite DARS service shall be provided in a manner consistent with part 25 of this chapter.

(d) *2000–2020 MHz and 2180–2200 MHz bands.* Operators in the 2000–2020 MHz and 2180–2200 MHz bands may not provide the mobile-satellite service under the provisions of this part; rather, mobile-satellite service shall be provided in a manner consistent with part 25 of this chapter.

(e) *716–722 MHz and 722–728 MHz bands.* The 716–722 and 722–728 MHz frequencies may not be used for uplink transmission and must be used only for downlink transmissions.

[65 FR 3144, Jan. 20, 2000, as amended at 65 FR 17601, Apr. 4, 2000; 72 FR 48843, Aug. 24, 2007; 78 FR 8267, Feb. 5, 2013; 78 FR 66316, Nov. 5, 2013]

§ 27.3 Other applicable rule parts.

Other FCC rule parts applicable to the Wireless Communications Service include the following:

(a) *Part 0.* This part describes the Commission's organization and delegations of authority. Part 0 of this chapter also lists available Commission publications, standards and procedures for access to Commission records, and location of Commission Field Offices.

(b) *Part 1.* This part includes rules of practice and procedure for license applications, adjudicatory proceedings, procedures for reconsideration and review of the Commission's actions; provisions concerning violation notices and forfeiture proceedings; competitive bidding procedures; and the environmental requirements that, together with the procedures specified in § 17.4(c) of this chapter, if applicable, must be complied with prior to the initiation of construction. Subpart F includes the rules for the Wireless Telecommunications Services and the procedures for filing electronically via the ULS.

(c) *Part 2.* This part contains the Table of Frequency Allocations and special requirements in international

regulations, recommendations, agreements, and treaties. This part also contains standards and procedures concerning the marketing and importation of radio frequency devices, and for obtaining equipment authorization.

(d) *Part 5*. This part contains rules prescribing the manner in which parts of the radio frequency spectrum may be made available for experimentation.

(e) *Part 15*. This part sets forth the requirements and conditions applicable to certain radio frequency devices.

(f) *Part 17*. This part contains requirements for the construction, marking and lighting of antenna towers, and the environmental notification process that must be completed before filing certain antenna structure registration applications.

(g) *Part 20*. This part sets forth the requirements and conditions applicable to commercial mobile radio service providers.

(h) *Part 22*. This part sets forth the requirements and conditions applicable to public mobile services.

(i) *Part 24*. This part sets forth the requirements and conditions applicable to personal communications services.

(j) *Part 25*. This part contains the requirements for satellite communications, including satellite DARS.

(k) *Part 51*. This part contains general duties of telecommunications carriers to provide for interconnection with other telecommunications carriers.

(l) *Part 64*. This part sets forth the requirements and conditions applicable to telecommunications carriers under the Communications Assistance for Law Enforcement Act.

(m) *Part 68*. This part contains technical standards for connection of terminal equipment to the telephone network.

(n) *Part 73*. This part sets forth the requirements and conditions applicable to radio broadcast services.

(o) *Part 74*. This part sets forth the requirements and conditions applicable to experimental radio, auxiliary, special broadcast and other program distributional services.

(p) *Part 90*. This part sets forth the requirements and conditions applicable to private land mobile radio services.

(q) *Part 101*. This part sets forth the requirements and conditions applicable to fixed microwave services.

[62 FR 9658, Mar. 3, 1997, as amended at 63 FR 68954, Dec. 14, 1998; 65 FR 3144, Jan. 20, 2000; 67 FR 5510, Feb. 6, 2002; 69 FR 5714, Feb. 6, 2004; 69 FR 72031, Dec. 10, 2004; 70 FR 61059, Oct. 20, 2005; 77 FR 3955, Jan. 26, 2012]

§ 27.4 Terms and definitions.

600 MHz service. A radiocommunication service licensed pursuant to this part for the frequency bands specified in § 27.5(l).

Advanced Wireless Service (AWS). A radiocommunication service licensed pursuant to this part for the frequency bands specified in § 27.5(h), 27.5(j), or 27.5(k).

Affiliate. This term shall have the same meaning as that for ''affiliate'' in part 1, § 1.2110(b)(5) of this chapter.

Assigned frequency. The center of the frequency band assigned to a station.

Attended operation. Operation of a station by a designated person on duty at the place where the transmitting apparatus is located with the transmitter in the person's plain view.

Authorized bandwidth. The maximum width of the band of frequencies permitted to be used by a station. This is normally considered to be the necessary or occupied bandwidth, whichever is greater.

Average terrain. The average elevation of terrain between 3 and 16 kilometers from the antenna site.

Base station. A land station in the land mobile service.

Booster service area. A geographic area to be designated by an applicant for a booster station, within which the booster station shall be entitled to protection against interference as set forth in this part. The booster service area must be specified by the applicant so as not to overlap the booster service area of any other booster authorized to or proposed by the applicant. However, a booster station may provide service to receive sites outside of its booster service area, at the licensee's risk of interference. The booster station must be capable of providing substantial service within the designated booster service area.

Broadband Radio Service (BRS). A radio service using certain frequencies

in the 2150–2162 and 2496–2690 MHz bands which can be used to provide fixed and mobile services, except for aeronautical services.

Broadcast services. This term shall have the same meaning as that for ''broadcasting'' in section 3(6) of the Communications Act of 1934, *i.e.,* ''the dissemination of radio communications intended to be received by the public, directly or by the intermediary of relay stations.'' 47 U.S.C. 153(6).

Commercial EBS licensee. A licensee authorized to operate on EBS channels pursuant to the provisions of § 27.1201(c) contained in the edition of 47 CFR parts 20 to 39, revised as of October 1, 2005, or §§ 74.990 through 74.992 contained in the edition of 47 CFR parts 70 to 79, revised as of October 1, 2004, of this chapter, and that does not meet the eligibility requirements of § 27.1201(a).

Documented complaint. A complaint that a party is suffering from non-consensual interference. A documented complaint must contain a certification that the complainant has contacted the operator of the allegedly offending facility and tried to resolve the situation prior to filing. The complaint must then specify the nature of the interference, whether the interference is constant or intermittent, when the interference began and the site(s) most likely to be causing the interference. The complaint should be accompanied by a videotape or other evidence showing the effects of the interference. The complaint must contain a motion for a temporary order to have the interfering station cease transmitting. The complaint must be filed with the Secretary's office and served on the allegedly offending party.

Educational Broadband Service (EBS). A fixed or mobile service, the licensees of which are educational institutions or non-profit educational organizations, and intended primarily for video, data, or voice transmissions of instructional, cultural, and other types of educational material to one or more receiving locations.

Effective Radiated Power (ERP) (in a given direction). The product of the power supplied to the antenna and its gain relative to a half-wave dipole in a given direction.

Equivalent Isotropically Radiated Power (EIRP). The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.

Fixed service. A radio communication service between specified fixed points.

Fixed station. A station in the fixed service.

Land mobile service. A mobile service between base stations and land mobile stations, or between land mobile stations.

Land mobile station. A mobile station in the land mobile service capable of surface movement within the geographic limits of a country or continent.

Land station. A station in the mobile service not intended to be used while in motion.

Lower Band Segment (LBS). Segment of the BRS/EBS band consisting of channels in the frequencies 2496–2572 MHz.

Middle Band Segment (MBS). Segment of the BRS/EBS band consisting of channels in the frequencies 2572–2614 MHz.

Mobile service. A radio communication service between mobile and land stations, or between mobile stations.

Mobile station. A station in the mobile service intended to be used while in motion or during halts at unspecified points.

National Geodetic Reference System (NGRS). The name given to all geodetic control data contained in the National Geodetic Survey (NGS) data base. (Source: National Geodetic Survey, U.S. Department of Commerce)

Point-to-point Broadband station. A Broadband station that transmits a highly directional signal from a fixed transmitter location to a fixed receive location.

Portable device. Transmitters designed to be used within 20 centimeters of the body of the user.

Post-auction transition period. The 39-month period commencing upon the public release of the Channel Reassignment Public Notice as defined in § 73.3700(a) of this chapter.

Public Safety Broadband Licensee. The licensee of the Public Safety Broadband License in the 763–768 MHz and 793–798 MHz bands.

Radiodetermination. The determination of the position, velocity and/or other characteristics of an object, or the obtaining of information relating to these parameters, by means of the propagation properties of radio waves.

Radiolocation. Radiodetermination used for purposes other than those of radionavigation.

Radiolocation land station. A station in the radiolocation service not intended to be used while in motion.

Radiolocation mobile station. A station intended to be used while in motion or during halts at unspecified points.

Radionavigation. Radiodetermination used for the purpose of navigation, including obstruction warning.

Remote control. Operation of a station by a designated person at a control position from which the transmitter is not visible but where suitable control and telemetering circuits are provided which allow the performance of the essential functions that could be performed at the transmitter.

Satellite Digital Audio Radio Service (satellite DARS). A radiocommunication service in which compact disc quality programming is digitally transmitted by one or more space stations.

Sectorization. The use of an antenna system at any broadband station, booster station and/or response station hub that is capable of simultaneously transmitting multiple signals over the same frequencies to different portions of the service area and/or simultaneously receiving multiple signals over the same frequencies from different portions of the service area.

Spectrum Act. The term *Spectrum Act* means Title VI of the Middle Class Tax Relief and Job Creation Act of 2012 (Pub. L. 112–96).

Studio to transmitter link (STL). A directional path used to transmit a signal from a station's studio to its transmitter.

Temporary fixed broadband station. A broadband station used for the transmission of material from temporary unspecified points to a broadband station.

Time division multiple access (TDMA). A multiple access technique whereby users share a transmission medium by being assigned and using (one-at-a-time) for a limited number of time division mulitplexed channels; implies that several transmitters use one channel for sending several bit streams.

Time division multiplexing (TDM). A multiplexing technique whereby two or more channels are derived from a transmission medium by dividing access to the medium into sequential intervals. Each channel has access to the entire bandwidth of the medium during its interval. This implies that one transmitter uses one channel to send several bit streams of information.

Unattended operation. Operation of a station by automatic means whereby the transmitter is turned on and off and performs its functions without attention by a designated person.

Universal Licensing System. The Universal Licensing System (ULS) is the consolidated database, application filing system, and processing system for all Wireless Radio Services. ULS supports electronic filing of all applications and related documents by applicants and licensees in the Wireless Radio Services, and provides public access to licensing information.

Upper 700 MHz D Block license. The Upper 700 MHz D Block license is the nationwide license associated with the 758–763 MHz and 788–793 MHz bands.

Upper Band Segment (UBS). Segment of the BRS/EBS band consisting of channels in the frequencies 2614–2690 MHz

Wireless communications service. A radiocommunication service licensed pursuant to this part for the frequency bands specified in § 27.5.

[62 FR 9658, Mar. 3, 1997]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 27.4, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.fdsys.gov.

§ 27.5 Frequencies.

(a) *2305–2320 MHz and 2345–2360 MHz bands.* The following frequencies are available for WCS in the 2305–2320 MHz and 2345–2360 MHz bands:

(1) Two paired channel blocks are available for assignment on a Major Economic Area basis as follows:

Block A: 2305–2310 and 2350–2355 MHz; and
Block B: 2310–2315 and 2355–2360 MHz.

(2) Two unpaired channel blocks are available for assignment on a Regional Economic Area Grouping basis as follows:

Block C: 2315–2320 MHz; and
Block D: 2345–2350 MHz.

(b) *746–758 MHz, 775–788 MHz, and 805–806 MHz bands.* The following frequencies are available for licensing pursuant to this part in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands:

(1) Two paired channels of 1 megahertz each are available for assignment in Block A in the 757–758 MHz and 787–788 MHz bands.

(2) Two paired channels of 1 megahertz each are available for assignment in Block B in the 775–776 MHz and 805–806 MHz bands.

(3) Two paired channels of 11 megahertz each are available for assignment in Block C in the 746–757 MHz and 776–787 MHz bands. In the event that no licenses for two channels in this Block C are assigned based on the results of the first auction in which such licenses were offered because the auction results do not satisfy the applicable reserve price, the spectrum in the 746–757 MHz and 776–787 MHz bands will instead be made available for assignment at a subsequent auction as follows:

(i) Two paired channels of 6 megahertz each available for assignment in Block C1 in the 746–752 MHz and 776–782 MHz bands.

(ii) Two paired channels of 5 megahertz each available for assignment in Block C2 in the 752–757 MHz and 782–787 MHz bands.

(c) *698–746 MHz band.* The following frequencies are available for licensing pursuant to this part in the 698–746 MHz band:

(1) Three paired channel blocks of 12 megahertz each are available for assignment as follows:

Block A: 698–704 MHz and 728–734 MHz;
Block B: 704–710 MHz and 734–740 MHz; and
Block C: 710–716 MHz and 740–746 MHz.

(2) Two unpaired channel blocks of 6 megahertz each are available for assignment as follows:

Block D: 716–722 MHz; and
Block E: 722–728 MHz.

(d) *1390–1392 MHz band.* The 1390–1392 MHz band is available for assignment on a Major Economic Area basis.

(e) *The paired 1392–1395 and 1432–1435 MHz bands.* The paired 1392–1395 MHz and 1432–1435 MHz bands are available for assignment on an Economic Area Grouping basis as follows: Block A: 1392–1393.5 MHz and 1432–1433.5 MHz; and Block B: 1393.5–1395 MHz and 1433.5–1435 MHz.

(f) *1670–1675 MHz band.* The 1670–1675 MHz band is available for assignment on a nationwide basis.

(g) [Reserved]

(h) *1710–1755 MHz, 2110–2155 MHz, 1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz bands.* The following frequencies are available for licensing pursuant to this part in the 1710–1755 MHz, 2110–2155 MHz, 1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz bands:

(1) Four paired channel blocks of 10 megahertz each are available for assignment as follows:

Block A: 1710–1720 MHz and 2110–2120 MHz;
Block B: 1720–1730 MHz and 2120–2130 MHz;
Block F: 1745–1755 MHz and 2145–2155 MHz; and
Block J: 1770–1780 MHz and 2170–2180 MHz.

(2) Six paired channel blocks of 5 megahertz each are available for assignment as follows:

Block C: 1730–1735 MHz and 2130–2135 MHz;
Block D: 1735–1740 MHz and 2135–2140 MHz;
Block E: 1740–1745 MHz and 2140–2145 MHz;
Block G: 1755–1760 MHz and 2155–2160 MHz;
Block H: 1760–1765 MHz and 2160–2165 MHz; and
Block I: 1765–1770 MHz and 2165–2170 MHz.

(3) One unpaired block of 5 megahertz and one unpaired block of 10 megahertz each are available for assignment as follows:

Block A1: 1695–1700 MHz
Block B1: 1700–1710 MHz.

NOTE TO PARAGRAPH (h). Licenses to operate in the 1695–1710 MHz and 1755–1780 MHz bands are subject to the condition that the licensee must not cause harmful interference to an incumbent Federal entity relocating from these bands under an approved Transition Plan. This condition remains in effect until NTIA terminates the applicable authorization of the incumbent Federal entity.

(i) *Frequency assignments for the BRS/EBS band.* (1) Pre-transition frequency assignments.

BRS Channel 1: 2150–2156 MHz or 2496–2500 MHz

BRS Channel 2: 2156–2162 MHz or 2686–2690 MHz
BRS Channel 2A: 2156–2160 MHz
EBS Channel A1: 2500–2506 MHz
EBS Channel B1: 2506–2512 MHz
EBS Channel A2: 2512–2518 MHz
EBS Channel B2: 2518–2524 MHz
EBS Channel A3: 2524–2530 MHz
EBS Channel B3: 2530–2536 MHz
EBS Channel A4: 2536–2542 MHz
EBS Channel B4: 2542–2548 MHz
EBS Channel C1: 2548–2554 MHz
EBS Channel D1: 2554–2560 MHz
EBS Channel C2: 2560–2566 MHz
EBS Channel D2: 2566–2572 MHz
EBS Channel C3: 2572–2578 MHz
EBS Channel D3: 2578–2584 MHz
EBS Channel C4: 2584–2590 MHz
EBS Channel D4: 2590–2596 MHz
BRS Channel E1: 2596–2602 MHz
BRS Channel F1: 2602–2608 MHz
BRS Channel E2: 2608–2614 MHz
BRS Channel F2: 2614–2620 MHz
BRS Channel E3: 2620–2626 MHz
BRS Channel F3: 2626–2632 MHz
BRS Channel E4: 2632–2638 MHz
BRS Channel F4: 2638–2644 MHz
EBS Channel G1: 2644–2650 MHz
BRS Channel H1: 2650–2656 MHz
EBS Channel G2: 2656–2662 MHz
BRS Channel H2: 2662–2668 MHz
EBS Channel G3: 2668–2674 MHz
BRS Channel H3: 2674–2680 MHz
EBS Channel G4: 2680–2686 MHz
I Channels: 2686–2690 MHz

(2) *Post transition frequency assignments.* The frequencies available in the Broadband Radio Service (BRS) and Educational Broadband Service (EBS) are listed in this section in accordance with the frequency allocations table of § 2.106 of this chapter.

(i) Lower Band Segment (LBS): The following channels shall constitute the Lower Band Segment:

BRS Channel 1: 2496–2502 MHz or 2150–2156 MHz
EBS Channel A1: 2502–2507.5 MHz
EBS Channel A2: 2507.5–2513 MHz
EBS Channel A3: 2513–2518.5 MHz
EBS Channel B1: 2518.5–2524 MHz
EBS Channel B2: 2524–2529.5 MHz
EBS Channel B3: 2529.5–2535 MHz
EBS Channel C1: 2535–2540.5 MHz
EBS Channel C2: 2540.5–2546 MHz
EBS Channel C3: 2546–2551.5 MHz
EBS Channel D1: 2551.5–2557 MHz
EBS Channel D2: 2557–2562.5 MHz
EBS Channel D3: 2562.5–2568 MHz
EBS Channel JA1: 2568.00000–2568.33333 MHz
EBS Channel JA2: 2568.33333–2568.66666 MHz
EBS Channel JA3: 2568.66666–2569.00000 MHz
EBS Channel JB1: 2569.00000–2569.33333 MHz
EBS Channel JB2: 2569.33333–2569.66666 MHz
EBS Channel JB3: 2569.66666–2570.00000 MHz
EBS Channel JC1: 2570.00000–2570.33333 MHz
EBS Channel JC2: 2570.33333–2570.66666 MHz
EBS Channel JC3: 2570.66666–2571.00000 MHz
EBS Channel JD1: 2571.00000–2571.33333 MHz
EBS Channel JD2: 2571.33333–2571.66666 MHz
EBS Channel JD3: 2571.66666–2572.00000 MHz

(ii) Middle Band Segment (MBS): The following channels shall constitute the Middle Band Segment:

EBS Channel A4: 2572–2578 MHz
EBS Channel B4: 2578–2584 MHz
EBS Channel C4: 2584–2590 MHz
EBS Channel D4: 2590–2596 MHz
EBS Channel G4: 2596–2602 MHz
BRS/EBS Channel F4: 2602–2608 MHz
BRS/EBS Channel E4: 2608–2614 MHz

(iii) Upper Band Segment (UBS): The following channels shall constitute the Upper Band Segment:

BRS Channel KH1: 2614.00000–2614.33333 MHz.
BRS Channel KH2: 2614.33333–2614.66666 MHz.
BRS Channel KH3: 2614.66666–2615.00000 MHz.
EBS Channel KG1: 2615.00000–2615.33333 MHz.
EBS Channel KG2: 2615.33333–2615.66666 MHz.
EBS Channel KG3: 2615.66666–2616.00000 MHz.
BRS Channel KF1: 2616.00000–2616.33333 MHz.
BRS Channel KF2: 2616.33333–2616.66666 MHz.
BRS Channel KF3: 2616.66666–2617.00000 MHz.
BRS Channel KE1: 2617.00000–2617.33333 MHz.
BRS Channel KE2: 2617.33333–2617.66666 MHz.
BRS Channel KE3: 2617.66666–2618.00000 MHz.
BRS Channel 2: 2618–2624 MHz or 2156–2162 MHz.
BRS Channel 2A: 2618–2624 MHz or 2156–2160 MHz.
BRS/EBS Channel E1: 2624–2629.5 MHz.
BRS/EBS Channel E2: 2629.5–2635 MHz.
BRS/EBS Channel E3: 2635–2640.5 MHz.
BRS/EBS Channel F1: 2640.5–2646 MHz.
BRS/EBS Channel F2: 2646–2651.5 MHz.
BRS/EBS Channel F3: 2651.5–2657 MHz.
BRS Channel H1: 2657–2662.5 MHz.
BRS Channel H2: 2662.5–2668 MHz.
BRS Channel H3: 2668–2673.5 MHz.
EBS Channel G1: 2673.5–2679 MHz.
EBS Channel G2: 2679–2684.5 MHz.
EBS Channel G3: 2684.5–2690 MHz.

NOTE TO PARAGRAPH (i)(2): No 125 kHz channels are provided for channels in operation in this service. The 125 kHz channels previously associated with these channels have been reallocated to Channel G3 in the upper band segment.

(3) During the transition (see §§ 27.1230–27.1239) EBS and BRS licensees may exchange channels to effectuate the transition of the 2.5 GHz band in a given BTA.

(4) A temporary fixed broadband station may use any available broadband channel on a secondary basis, except

that operation of temporary fixed broadband stations is not allowed within 56.3 km (35 miles) of Canada.

(5)(i) A point-to-point EBS station on the E and F-channel frequencies, may be involuntarily displaced by a BRS applicant or licensee, provided that suitable alternative spectrum is available and that the BRS entity bears the expenses of the migration. Suitability of spectrum will be determined on a case-by-base basis; at a minimum, the alternative spectrum must be licensable by broadband operators on a primary basis (although it need not be specifically allocated to the broadband service), and must provide a signal that is equivalent to the prior signal in picture quality and reliability, unless the broadband licensee will accept an inferior signal. Potential expansion of the BRS licensee may be considered in determining whether alternative available spectrum is suitable.

(ii) If suitable alternative spectrum is located pursuant to paragraph (h)(6)(i) of this section, the initiating party must prepare and file the appropriate application for the new spectrum, and must simultaneously serve a copy of the application on the EBS licensee to be moved. The initiating party will be responsible for all costs connected with the migration, including purchasing, testing and installing new equipment, labor costs, reconfiguration of existing equipment, administrative costs, legal and engineering expenses necessary to prepare and file the migration application, and other reasonable documented costs. The initiating party must secure a bond or establish an escrow account to cover reasonable incremental increase in ongoing expenses that may fall upon the migrated licensee. The bond or escrow account should also account for the possibility that the initiating party subsequently becomes bankrupt. If it becomes necessary for the Commission to assess the sufficiency of a bond or escrow amount, it will take into account such factors as projected incremental increase in electricity or maintenance expenses, or relocation expenses, as relevant in each case.

(iii) The EBS licensee to be moved will have a 60-day period in which to oppose the involuntary migration. The broadband party should state its opposition to the migration with specificity, including engineering and other challenges, and a comparison of the present site and the proposed new site. If involuntary migration is granted, the new facilities must be operational before the initiating party will be permitted to begin its new or modified operations. The migration must not disrupt the broadband licensee's provision of service, and the broadband licensee has the right to inspect the construction or installation work.

(j) *2000–2020 MHz and 2180–2200 MHz bands.* The following frequencies are available for licensing pursuant to this part in the 2000–2020 MHz and 2180–2200 MHz (AWS–4) bands:

(1) Two paired channel blocks of 10 megahertz each are available for assignment as follows: Block A: 2000–2010 MHz and 2180–2190 MHz; and Block B: 2010–2020 MHz and 2190–2200 MHz.

(2) [Reserved]

(k) *1915–1920 MHz and 1995–2000 MHz bands.* The paired 1915–1920 MHz and 1995–2000 MHz bands are available for assignment on an Economic Area (EA) basis.

(l) *600 MHz band.* In accordance with the terms and conditions established in Docket No. 12–268, pursuant to section 6403 of the Spectrum Act, paired channel blocks of 5 + 5 megahertz are available for assignment on a Partial Economic Area basis. The specific frequencies and number of channel blocks will be determined in light of further proceedings pursuant to Docket No. 12–268 and the rule will be updated accordingly pursuant to a future public notice.

[62 FR 9658, Mar. 3, 1997]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 27.5, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at *www.fdsys.gov.*

§ 27.6 Service areas.

(a) WCS service areas include Economic Areas (EAs), Major Economic Areas (MEAs), Regional Economic Area Groupings (REAGs), cellular markets comprising Metropolitan Statistical Areas (MSAs) and Rural Service Areas (RSAs), and a nationwide area. MEAs and REAGs are defined in the Table

immediately following paragraph (a)(1) of this section. Both MEAs and REAGs are based on the U.S. Department of Commerce's EAs. *See* 60 FR 13114 (March 10, 1995). In addition, the Commission shall separately license Guam and the Northern Mariana Islands, Puerto Rico and the United States Virgin Islands, American Samoa, and the Gulf of Mexico, which have been assigned Commission-created EA numbers 173–176, respectively. The nationwide area is composed of the contiguous 48 states, Alaska, Hawaii, the Gulf of Mexico, and the U.S. territories. Maps of the EAs, MEAs, MSAs, RSAs, and REAGs and the FEDERAL REGISTER Notice that established the 172 EAs are available for public inspection and copying at the Reference Information Center, Consumer and Governmental Affairs Bureau, Federal Communications Commission, 445 12th Street, SW., Washington, DC 20554.

(1) The 52 MEAs are composed of one or more EAs and the 12 REAGs are composed of one or more MEAs, as defined in the table below:

REAGs	MEAs	EAs
1 (Northeast)	1 (Boston)	1–3.
	2 (New York City)	4–7, 10.
	3 (Buffalo)	8.
	4 (Philadelphia)	11–12.
2 (Southeast)	5 (Washington)	13–14.
	6 (Richmond)	15–17, 20.
	7 (Charlotte-Greensboro-Greenville-Raleigh).	18–19, 21–26, 41–42, 46.
	8 (Atlanta)	27–28, 37–40, 43.
	9 (Jacksonville)	29, 35.
	10 (Tampa-St. Petersburg-Orlando)	30, 33–34.
	11 (Miami)	31–32.
3 (Great Lakes)	12 (Pittsburgh)	9, 52–53.
	13 (Cincinnati-Dayton)	48–50.
	14 (Columbus)	51.
	15 (Cleveland)	54–55.
	16 (Detroit)	56–58, 61–62.
	17 (Milwaukee)	59–60, 63, 104–105, 108.
	18 (Chicago)	64–66, 68, 97, 101.
	19 (Indianapolis)	67.
	20 (Minneapolis-St. Paul)	106–107, 109–114, 116.
	21 (Des Moines-Quad Cities)	100, 102–103, 117.
4 (Mississippi Valley)	22 (Knoxville)	44–45.
	23 (Louisville-Lexington-Evansville)	47, 69–70, 72.
	24 (Birmingham)	36, 74, 78–79.
	25 (Nashville)	71.
	26 (Memphis-Jackson)	73, 75–77.
	27 (New Orleans-Baton Rouge)	80–85.
	28 (Little Rock)	90–92, 95.
	29 (Kansas City)	93, 99, 123.
	30 (St. Louis)	94, 96, 98.
5 (Central)	31 (Houston)	86–87, 131.
	32 (Dallas-Fort Worth)	88–89, 127–130, 135, 137–138.
	33 (Denver)	115, 140–143.
	34 (Omaha)	118–121.
	35 (Wichita)	122.
	36 (Tulsa)	124.
	37 (Oklahoma City)	125–126.
	38 (San Antonio)	132–134.
	39 (El Paso-Albuquerque)	136, 139, 155–157.
	40 (Phoenix)	154, 158–159.
6 (West)	41 (Spokane-Billings)	144–147, 168.
	42 (Salt Lake City)	148–150, 152.
	43 (San Francisco-Oakland-San Jose)	151, 162–165.
	44 (Los Angeles-San Diego)	153, 160–161.
	45 (Portland)	166–167.
	46 (Seattle)	169–170.
7 (Alaska)	47 (Alaska)	171.
8 (Hawaii)	48 (Hawaii)	172.
9 (Guam and the Northern Mariana Islands).	49 (Guam and the Northern Mariana Islands).	173.
10 (Puerto Rico and U.S. Virgin Islands)	50 (Puerto Rico and U.S. Virgin Islands)	174.
11 (American Samoa)	51 (American Samoa)	175.
12 (Gulf of Mexico)	52 (Gulf of Mexico)	176.

(2) The Gulf of Mexico EA extends from 12 nautical miles off the U.S. Gulf coast outward into the Gulf.

(b) *746–758 MHz, 775–788 MHz, and 805–806 MHz bands.* WCS service areas for the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands are as follows.

(1) Service areas for Block A in the 757–758 MHz and 787–788 MHz bands and Block B in the 775–776 MHz and 805–806 MHz bands are based on Major Economic Areas (MEAs), as defined in paragraphs (a)(1) and (a)(2) of this section.

(2) Service areas for Block C in the 746–757 MHz and 776–787 MHz bands are based on Regional Economic Area Groupings (REAGs) as defined by paragraph (a) of this section. In the event that no licenses with respect to service areas for Block C in the 746–757 MHz and 776–787 MHz bands are assigned based on the results of the first auction in which such licenses are offered because the auction results do not satisfy the applicable reserve price, then service areas for the spectrum at 746–757 MHz and 776–787 MHz will instead be available for assignment as follows:

(i) Service areas for Block C1 in the 746–752 MHz and 776–782 MHz bands are based on Economic Areas (EAs) as defined in paragraph (a) of this section.

(ii) Service areas for Block C2 in the 752–757 MHz and 782–787 MHz bands are based on Regional Economic Area Groupings (REAGs) as defined by paragraph (a) of this section.

(c) *698–746 MHz band.* WCS service areas for the 698–746 MHz band are as follows:

(1) Service areas for Block A in the 698–704 MHz and 728–734 MHz bands and Block E in the 722–728 MHz band are based on Economic Areas (EAs) as defined in paragraph (a) of this section.

(2) Service areas for Block B in the 704–710 MHz and 734–740 MHz bands and Block C in the 710–716 MHz and 740–746 MHz bands are based on cellular markets comprising Metropolitan Statistical Areas (MSAs) and Rural Service Areas (RSAs) as defined by Public Notice Report No. CL–92–40 ''Common Carrier Public Mobile Services Information, Cellular MSA/RSA Markets and Counties,'' dated January 24, 1992, DA 92–109, 7 FCC Rcd 742 (1992), with the following modifications:

(i) The service areas of cellular markets that border the U.S. coastline of the Gulf of Mexico extend 12 nautical miles from the U.S. Gulf coastline.

(ii) The service area of cellular market 306 that comprises the water area of the Gulf of Mexico extends from 12 nautical miles off the U.S. Gulf coast outward into the Gulf.

(3) Service areas for Block D in the 716–722 MHz band are based on Economic Area Groupings (EAGs) as defined by the Federal Communications Commission. *See* 62 FR 15978 (April 3, 1997) extended with the Gulf of Mexico. *See also* paragraphs (a)(1) and (a)(2) of this section and 62 FR 9636 (March 3, 1997), in which the Commission created an additional four economic area-like areas for a total of 176. Maps of the EAGs and the FEDERAL REGISTER notice that established the 172 Economic Areas (EAs) are available for public inspection and copying at the Reference Center, Room CY A–257, 445 12th St., SW., Washington, DC 20554. These maps and data are also available on the FCC Web site at *http://www.fcc.gov/oet/info/maps/areas/*.

(i) There are 6 EAGs, which are composed of multiple EAs as defined in the table below:

Economic area groupings	Name	Economic areas
EAG001	Northeast	1–11, 54.
EAG002	Mid-Atlantic	12–26, 41, 42, 44–53, 70.
EAG003	Southeast	27–40, 43, 69, 71–86, 88–90, 95, 96, 174, 176 (part).
EAG004	Great Lakes	55–68, 97, 100–109.
EAG005	Central/Mountain	87, 91–94, 98, 99, 110–146, 148, 149, 152, 154–159, 176 (part).
EAG006	Pacific	147, 150, 151, 153, 160–173, 175.

NOTE 1 TO PARAGRAPH (c)(3)(i): Economic Area Groupings are defined by the Federal Communications Commission; *see* 62 FR 15978 (April 3, 1997) extended with the Gulf of Mexico.

NOTE 2 TO PARAGRAPH (c)(3)(i): Economic Areas are defined by the Regional Economic Analysis Division, Bureau of Economic Analysis, U.S. Department of Commerce February 1995 and extended by the Federal Communications Commission, *see* 62 FR 9636 (March 3, 1997).

(ii) For purposes of paragraph (c)(3)(i) of this section, EA 176 (the Gulf of Mexico) will be divided between EAG003 (the Southeast EAG) and EAG005 (the Central/Mountain EAG) in accordance with the configuration of the Eastern/Central and Western Planning Area established by the Mineral Management Services Bureau of the Department of the Interior (MMS). That portion of EA 176 contained in the Eastern and Central Planning Areas as defined by MMS will be included in EAG003; that portion of EA 176 contained in the Western Planning Area as defined by MMS will be included in EAG005. Maps of these areas may be found on the MMS Web site: *http://www.gomr.mms.gov/homepg/offshore/offshore.html*.

(d) *1390–1392 MHz band.* Service areas for the 1390–1392 MHz band is based on Major Economic Areas (MEAs), as defined in paragraphs (a)(1) and (a)(2) of this section.

(e) *The paired 1392–1395 and 1432–1435 MHz bands.* Service areas for the paired 1392–1395 and 1432–1435 MHz bands are as follows. Service areas for Block A in the 1392–1393.5 MHz and 1432–1433.5 MHz bands and Block B in the 1393.5–1395 MHz and 1433.5–1435 MHz bands are based on Economic Area Groupings (EAGs) as defined in paragraph (c)(3) of this section.

(f) *1670–1675 MHz band.* Service areas for the 1670–1675 MHz band are available on a nationwide basis.

(g) [Reserved]

(h) 1710–1755 and 2110–2155 MHz bands. AWS service areas for the 1710–1755 MHz and 2110–2155 MHz bands are as follows:

(1) Service areas for Block A (1710–1720 MHz and 2110–2120 MHz) are based on cellular markets comprising Metropolitan Statistical Areas (MSAs) and Rural Service Areas (RSAs) as defined by Public Notice Report No. CL–92–40 ''Common Carrier Public Mobile Services Information, Cellular MSA/RSA Markets and Counties,'' dated January 24, 1992, DA 92–109, 7 FCC Rcd 742 (1992), with the following modifications:

(i) The service areas of cellular markets that border the U.S. coastline of the Gulf of Mexico extend 12 nautical miles from the U.S. Gulf coastline.

(ii) The service area of cellular market 306 that comprises the water area of the Gulf of Mexico extends from 12 nautical miles off the U.S. Gulf coast outward into the Gulf.

(2) Service areas for Blocks B (1720–1730 MHz and 2120–2130 MHz) and C (1730–1735 MHz and 2130–2135 MHz) are based on Economic Areas (EAs) as defined in paragraph (a) of this section.

(3) Service areas for blocks D (1735–1740 MHz and 2135–2140 MHz), E (1740–1745 MHz and 2140–2145 MHz) and F (1745–1755 MHz and 2145–2155 MHz) are based on Regional Economic Area Groupings (REAGs) as defined by paragraph (a) of this section.

(i) *2000–2020 MHz and 2180–2200 MHz bands.* AWS service areas for the 2000–2020 MHz and 2180–2200 MHz bands are based on Economic Areas (EAs) as defined in paragraph (a) of this section.

(j) *1915–1920 MHz and 1995–2000 MHz bands.* AWS service areas for the 1915–1920 MHz and 1995–2000 MHz bands are based on Economic Areas (EAs) as defined in paragraph (a) of this section.

(k) *1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz bands.* AWS service areas for the 1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz bands are as follows:

(1) Service areas for Block G (1755–1760 MHz and 2155–2160 MHz) are based on cellular markets comprising Metropolitan Statistical Areas (MSAs) and Rural Service Areas (RSAs) as defined by Public Notice Report No. CL–92–40 ''Common Carrier Public Mobile Services Information, Cellular MSA/RSA Markets and Counties,'' dated January 24, 1992, DA 92–109, 7 FCC Rcd 742 (1992), with the following modifications:

(i) The service areas of cellular markets that border the U.S. coastline of the Gulf of Mexico extend 12 nautical miles from the U.S. Gulf coastline.

(ii) The service area of cellular market 306 that comprises the water area of the Gulf of Mexico extends from 12 nautical miles off the U.S. Gulf coast outward into the Gulf.

(2) Service areas for Blocks H (1760–1765 MHz and 2160–2165 MHz), I (1765–1770 MHz and 2165–2170 MHz), J (1770–1780 MHz and 2170–2180 MHz), A1 (1695–

1700 MHz) and B1 (1700–1710 MHz) are based on Economic Areas (EAs) as defined in paragraph (a) of this section.

(l) *600 MHz band.* Service areas for the 600 MHz band are based on Partial Economic Areas (PEAs), as defined by Public Notice: ''Wireless Telecommunications Bureau Provides Details About Partial Economic Areas,'' DA 14–759, dated June 2, 2014. The service areas of PEAs that border the U.S. coastline of the Gulf of Mexico extend 12 nautical miles from the U.S. Gulf coastline. The service area of the Gulf of Mexico PEA that comprises the water area of the Gulf of Mexico extends from 12 nautical miles off the U.S. Gulf coast outward into the Gulf. Maps of the PEAs and the FEDERAL REGISTER notice that established the 416 PEAs are available for public inspection and copying at the Reference Center, Room CY A–257, 445 12th St. SW., Washington, DC 20554. These maps and data are also available on the FCC Web site at: *http://www.fcc.gov/oet/info/maps/areas/.* The specific title, reference number, and date of the public notice will be determined in light of further proceedings pursuant to Docket No. 12–268 and the rule will be updated accordingly.

[62 FR 9658, Mar. 3, 1997]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 27.6, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.fdsys.gov.

§ 27.9 Operation of certificated signal boosters.

Individuals and non-individuals may operate certificated Consumer Signal Boosters on frequencies regulated under this part provided that such operation complies with all applicable rules under this part and § 20.21 of this chapter. Failure to comply with all applicable rules voids the authority to operate a signal booster.

[78 FR 21564, Apr. 11, 2013]

Subpart B—Applications and Licenses

§ 27.10 Regulatory status.

The following rules apply concerning the regulatory status in the frequency bands specified in § 27.5.

(a) *Single authorization.* Authorization will be granted to provide any or a combination of the following services in a single license: common carrier, non-common carrier, private internal communications, and broadcast services. A licensee may render any kind of communications service consistent with the regulatory status in its license and with the Commission's rules applicable to that service. An applicant or licensee may submit a petition at any time requesting clarification of the regulatory status for which authorization is required to provide a specific communications service.

(b) *Designation of regulatory status in initial application.* An applicant shall specify in its initial application if it is requesting authorization to provide common carrier, non-common carrier, private internal communications, or broadcast services, or a combination thereof.

(c) *Amendment of pending applications.* The following rules apply to amendments of a pending application.

(1) Any pending application may be amended to:

(i) Change the carrier regulatory status requested, or

(ii) Add to the pending request in order to obtain common carrier, non-common carrier, private internal communications, or broadcast services status, or a combination thereof, in a single license.

(2) Amendments to change, or add to, the carrier regulatory status in a pending application are minor amendments filed under § 1.927 of this chapter.

(d) *Modification of license.* The following rules apply to amendments of a license.

(1) A licensee may modify a license to:

(i) Change the regulatory status authorized, or

(ii) Add to the status authorized in order to obtain a combination of services of different regulatory status in a single license.

(2) Applications to change, or add to, the carrier status in a license are modifications not requiring prior Commission authorization. The licensee must notify the Commission within 30 days of the change. If the change results in

the discontinuance, reduction, or impairment of an existing service, the licensee is subject to the provisions of § 27.66.

[65 FR 3146, Jan. 20, 2000, as amended at 65 FR 17602, Apr. 4, 2000; 67 FR 5510, Feb. 6, 2002; 67 FR 41854, June 20, 2002; 68 FR 66286, Nov. 25, 2003; 72 FR 27709, May 16, 2007]

§ 27.11 Initial authorization.

(a) An applicant must file a single application for an initial authorization for all markets won and frequency blocks desired. Initial authorizations shall be granted in accordance with § 27.5. Applications for individual sites are not required and will not be accepted, except where required for environmental assessments, in accordance with §§ 1.1301 through 1.1319 of this chapter.

(b) *2305–2320 MHz and 2345–2360 MHz bands.* Initial authorizations for the 2305–2320 MHz and 2345–2360 MHz bands shall be for 10 megahertz of spectrum in accordance with § 27.5(a).

(1) Authorizations for Blocks A and B will be based on Major Economic Areas (MEAs), as specified in § 27.6(a)(1).

(2) Authorizations for Blocks C and D will be based on Regional Economic Area Groupings (REAGs), as specified in § 27.6(a)(2).

(c) *746–758 MHz, 775–788 MHz, and 805–806 MHz bands.* Initial authorizations for the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands shall be for paired channels of 1, 5, 6, or 11 megahertz of spectrum in accordance with § 27.5(b).

(1) Authorizations for Block A, consisting of two paired channels of 1 megahertz each, will be based on those geographic areas specified in § 27.6(b)(1).

(2) Authorizations for Block B, consisting of two paired channels of 1 megahertz each, will be based on those geographic areas specified in § 27.6(b)(1).

(3) Authorizations for Block C, consisting of two paired channels of 11 megahertz each, will be based on those geographic areas specified in § 27.6(b)(2). In the event that no licenses granting authorizations for Block C, consisting of two paired channels of 11 megahertz each, are assigned based on the results of the first auction in which such licenses are offered because the auction results do not satisfy the applicable reserve price, then the authorizations for the spectrum in the 746–757 MHz and 776–787 MHz bands will instead be as follows:

(i) Authorizations for Block C1, consisting of two paired channels of 6 megahertz each in the 746–752 MHz and 776–782 MHz bands, will be based on those geographic areas specified in § 27.6(b)(2)(i).

(ii) Authorizations for Block C2, consisting of two paired channels of 5 megahertz each in the 752–757 MHz and 782–787 MHz bands, will be based on those geographic areas specified in § 27.6(b)(2)(ii).

(d) *698–746 MHz band.* Initial authorizations for the 698–746 MHz band shall be for 6 or 12 megahertz of spectrum in accordance with § 27.5(c).

(1) Authorizations for Block A, consisting of two paired channels of 6 megahertz each, will be based on those geographic areas specified in § 27.6(c)(1).

(2) Authorizations for Block B, consisting of two paired channels of 6 megahertz each, will be based on those geographic areas specified in § 27.6(c)(2).

(3) Authorizations for Block C, consisting of two paired channels of 6 megahertz each, will be based on those geographic areas specified in § 27.6(c)(2).

(4) Authorizations for Block D, consisting of an unpaired channel block of 6 megahertz, will be based on those geographic areas specified in § 27.6(c)(3).

(5) Authorizations for Block E, consisting of an unpaired channel block of 6 megahertz, will be based on those geographic areas specified in § 27.6(c)(1).

(e) *1390–1392 MHz band.* Initial authorizations for the 1390–1392 MHz band shall be for 2 megahertz of spectrum in accordance with § 27.5(d). Authorizations will be based on Major Economic Areas (MEAs), as specified in § 27.6(d).

(f) *The paired 1392–1395 MHz and 1432–1435 MHz bands.* Initial authorizations for the paired 1392–1395 MHz and 1432–1435 MHz bands shall be for 3 megahertz of paired spectrum in accordance with § 27.5(e). Authorization for Blocks A and B will be based on Economic Areas Groupings (EAGs), as specified in § 27.6(e).

(g) *1670–1675 MHz band.* Initial authorizations for the 1670–1675 MHz band shall be for 5 megahertz of spectrum in

accordance with §27.5(f). Authorizations will be on a nationwide basis.

(h) [Reserved]

(i) *1710–1755 MHz and 2110–2155 MHz bands.* Initial authorizations for the 1710–1755 MHz and 2110–2155 MHz bands shall be for 5 or 10 megahertz of spectrum in each band in accordance with §27.5(h) of this part.

(1) Authorizations for Block A, consisting of two paired channels of 10 megahertz each, will be based on those geographic areas specified in §27.6(h)(1).

(2) Authorizations for Block B, consisting of two paired channels of 10 megahertz each, will be based on those geographic areas specified in §27.6(h)(2).

(3) Authorizations for Block C, consisting of two paired channels of 5 megahertz each, will be based on those geographic areas specified in §27.6(h)(2).

(4) Authorizations for Blocks D, consisting of two paired channels of 5 megahertz each, will be based on those geographic areas specified in §27.6(h)(3).

(5) Authorizations for Blocks E, consisting of two paired channels of 5 megahertz each, will be based on those geographic areas specified in §27.6(h)(3).

(6) Authorizations for Block F, consisting of two paired channels of 10 megahertz each, will be based on those geographic areas specified in §27.6(h)(3).

(j) *1695–1710 MHz, 1755–1780 MHz and 2155–2180 MHz bands.* (1) Initial authorizations for the 1695–1710 MHz band shall be based on the frequency blocks specified in §27.5(h)(3) and the corresponding service area specified in §27.6(k)(2).

(2) Initial authorizations for the 1755–1780 MHz and 2155–2180 MHz shall be based on the paired frequency blocks specified in §27.5(h)(1) and (2) and the corresponding service areas specified in §27.6(k)(1) and (2).

(k) *600 MHz band.* Initial authorizations for the 600 MHz band will be based on Partial Economic Areas (PEAs), as specified in §27.6(1), and, shall be paired channels that each consist of a 5 megahertz channel block in the 600 MHz downlink band, paired with a 5 megahertz channel block in the 600 MHz uplink band. The specific frequencies and number of channel blocks will be determined in light of further proceedings pursuant to Docket No. 12–268 and the rule will be updated accordingly pursuant to a future public notice.

[62 FR 9658, Mar. 3, 1997, as amended at 63 FR 68954, Dec. 14, 1998; 65 FR 3146, Jan. 20, 2000; 67 FR 5511, Feb. 6, 2002; 67 FR 41854, June 20, 2002; 69 FR 5715, Feb. 6, 2004; 69 FR 39867, July 1, 2004; 69 FR 77950, Dec. 29, 2004; 70 FR 58065, Oct. 5, 2005; 72 FR 48845, Aug. 24, 2007; 79 FR 597, Jan. 6, 2014; 79 FR 32410, June 4, 2014; 79 FR 48536, Aug. 15, 2014]

§27.12 Eligibility.

(a) Except as provided in paragraph (b) and in §§27.604, 27.1201, and 27.1202, any entity other than those precluded by section 310 of the Communications Act of 1934, as amended, 47 U.S.C. 310, is eligible to hold a license under this part.

(b) A person described in 47 U.S.C. 1404(c) is ineligible to hold a license that is required by 47 U.S.C. Chapter 13 (Middle Class Tax Relief and Job Creation Act of 2012 (Pub. L. 112–96, 125 Stat. 156 (2012)) to be assigned by a system of competitive bidding under §309(j) of the Communications Act, 47 U.S.C. 309(j).

[78 FR 50254, Aug. 16, 2013]

§27.13 License period.

(a) *2305–2320 MHz and 2345–2360 MHz bands.* Initial WCS authorizations for the 2305–2320 MHz and 2345–2360 MHz bands will have a term not to exceed ten years from the date of original issuance or renewal.

(b) *698–763 MHz, 776–793, 775–776, and 805–806 MHz bands.* Initial authorizations for the 698–758 MHz and 776–788 MHz bands will extend for a term not to exceed ten years from June 13, 2009, except that initial authorizations for a part 27 licensee that provides broadcast services, whether exclusively or in combination with other services, will not exceed eight years. Initial authorizations for the 775–776 MHz and 805–806 MHz bands shall not exceed April 27, 2015. Licensees that initiate the provision of a broadcast service, whether exclusively or in combination with other services, may not provide this service

for more than eight years or beyond the end of the license term if no broadcast service had been provided, whichever period is shorter in length.

(c) *1390–1392 MHz band.* Initial authorizations for the 1390–1392 MHz band will have a term not to exceed ten years from the date of initial issuance or renewal.

(d) *The paired 1392–1395 and 1432–1435 MHz bands.* Initial WCS authorizations for the paired 1392–1395 MHz and 1432–1435 MHz bands will have a term not to exceed ten years from the date of initial issuance or renewal.

(e) *1670–1675 MHz band.* Initial authorizations for the 1670–1675 MHz band will have a term not to exceed ten years from the date of initial issuance or renewal.

(f) [Reserved]

(g) *1710–1755 MHz and 2110–2155 MHz bands.* Authorizations for the 1710–1755 MHz and 2110–2155 MHz bands will have a term not to exceed ten years from the date of initial issuance or renewal, except that authorizations issued on or before December 31, 2009, shall have a term of fifteen years.

(h) *BRS and EBS.* BRS and EBS authorizations shall have a term not to exceed ten years from the date of original issuance or renewal. Unless otherwise specified by the Commission, incumbent BRS authorizations shall expire on May 1 in the year of expiration.

(i) *2000–2020 MHz and 2180–2200 MHz bands.* Authorizations for the 2000–2020 MHz and 2180–2200 MHz bands will have a term not to exceed ten years from the date of issuance or renewal.

(j) *1915–1920 MHz and 1995–2000 MHz bands.* Authorizations for 1915–1920 MHz and 1995–2000 MHz bands will have a term not to exceed ten years from the date of issuance or renewal.

(k) *1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz bands.* Authorizations for the 1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz bands will have a term not to exceed twelve (12) years from the date of issuance and ten (10) years from the date of any subsequent license renewal.

(l) *600 MHz band.* Authorizations for the 600 MHz band will have an initial term not to exceed twelve years from the date of issuance and ten years from the date of any subsequent license renewal.

[65 FR 3146, Jan. 20, 2000]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 27.13, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.fdsys.gov.

§ 27.14 Construction requirements; Criteria for renewal.

(a) AWS and WCS licensees, with the exception of WCS licensees holding authorizations for the 600 MHz band, Block A in the 698–704 MHz and 728–734 MHz bands, Block B in the 704–710 MHz and 734–740 MHz bands, Block E in the 722–728 MHz band, Block C, C1 or C2 in the 746–757 MHz and 776–787 MHz bands, Block A in the 2305–2310 MHz and 2350–2355 MHz bands, Block B in the 2310–2315 MHz and 2355–2360 MHz bands, Block C in the 2315–2320 MHz band, and Block D in the 2345–2350 MHz band, and with the exception of licensees holding AWS authorizations in the 1915–1920 MHz and 1995–2000 MHz bands, the 2000–2020 MHz and 2180–2200 MHz bands, or 1695–1710 MHz, 1755–1780 MHz and 2155–2180 MHz bands, must, as a performance requirement, make a showing of ''substantial service'' in their license area within the prescribed license term set forth in § 27.13. ''Substantial service'' is defined as service which is sound, favorable and substantially above a level of mediocre service which just might minimally warrant renewal. Failure by any licensee to meet this requirement will result in forfeiture of the license and the licensee will be ineligible to regain it.

(b) A renewal applicant involved in a comparative renewal proceeding shall receive a preference, commonly referred to as a renewal expectancy, which is the most important comparative factor to be considered in the proceeding, if its past record for the relevant license period demonstrates that:

(1) The renewal applicant has provided ''substantial'' service during its past license term; and

(2) The renewal applicant has substantially complied with applicable FCC rules, policies and the Communications Act of 1934, as amended.

(c) In order to establish its right to a renewal expectancy, a WCS renewal applicant involved in a comparative renewal proceeding must submit a showing explaining why it should receive a renewal expectancy. At a minimum, this showing must include:

(1) A description of its current service in terms of geographic coverage and population served;

(2) An explanation of its record of expansion, including a timetable of new construction to meet changes in demand for service;

(3) A description of its investments in its WCS system; and

(4) Copies of all FCC orders finding the licensee to have violated the Communications Act or any FCC rule or policy; and a list of any pending proceedings that relate to any matter described in this paragraph.

(d) In making its showing of entitlement to a renewal expectancy, a renewal applicant may claim credit for any system modification applications that were pending on the date it filed its renewal application. Such credit will not be allowed if the modification application is dismissed or denied.

(e) Comparative renewal proceedings do not apply to WCS licensees holding authorizations for Block A in the 698–704 MHz and 728–734 MHz bands, Block B in the 704–710 MHz and 734–740 MHz bands, Block C in the 710–716 MHz and 740–746 MHz bands, Block D in the 716–722 MHz band, Block E in the 722–728 MHz band, or Block C, C1 or C2 in the 746–757 MHz and 776–787 MHz bands. Each of these licensees must file a renewal application in accordance with the provisions set forth in §1.949, and must make a showing of substantial service, independent of its performance requirements, as a condition for renewal at the end of each license term.

(f) Comparative renewal proceedings do not apply to WCS licensees holding authorizations for the 600 MHz band, 698–746 MHz, 747–762 MHz, and 777–792 MHz bands or licensees holding AWS authorizations for the 1915–1920 MHz and 1995–2000 MHz bands or the 2000–2020 MHz and 2180–2200 MHz bands, or the 1695–1710 MHz, or the 1755–1780 MHz and 2155–2180 MHz bands. These licensees must file a renewal application in accordance with the provisions set forth in §1.949 of this chapter.

(g) WCS licensees holding EA authorizations for Block A in the 698–704 MHz and 728–734 MHz bands, cellular market authorizations for Block B in the 704–710 MHz and 734–740 MHz bands, or EA authorizations for Block E in the 722–728 MHz band, if the results of the first auction in which licenses for such authorizations are offered satisfy the reserve price for the applicable block, shall provide signal coverage and offer service over at least 35 percent of the geographic area of each of their license authorizations no later than June 13, 2013 (or within four years of initial license grant if the initial authorization in a market is granted after June 13, 2009), and shall provide such service over at least 70 percent of the geographic area of each of these authorizations by the end of the license term. In applying these geographic benchmarks, licensees are not required to include land owned or administered by government as a part of the relevant service area. Licensees may count covered government land for purposes of meeting their geographic construction benchmark, but are required to add the covered government land to the total geographic area used for measurement purposes. Licensees are required to include those populated lands held by tribal governments and those held by the Federal Government in trust or for the benefit of a recognized tribe.

(1) If an EA or CMA licensee holding an authorization in these particular blocks fails to provide signal coverage and offer service over at least 35 percent of the geographic area of its license authorization by no later than June 13, 2013 (or within four years of initial license grant, if the initial authorization in a market is granted after June 13, 2009), the term of that license authorization will be reduced by two years and such licensee may be subject to enforcement action, including forfeitures. In addition, an EA or CMA licensee that provides signal coverage and offers service at a level that is below this interim benchmark may lose authority to operate in part of the remaining unserved areas of the license.

(2) If any such EA or CMA licensee fails to provide signal coverage and offer service to at least 70 percent of the geographic area of its license authorization by the end of the license term, that licensee's authorization will terminate automatically without Commission action for those geographic portions of its license in which the licensee is not providing service, and those unserved areas will become available for reassignment by the Commission. Such licensee may also be subject to enforcement action, including forfeitures. In addition, an EA or CMA licensee that provides signal coverage and offers service at a level that is below this end-of-term benchmark may be subject to license termination. In the event that a licensee's authority to operate in a license area terminates automatically without Commission action, such areas will become available for reassignment pursuant to the procedures in paragraph (j) of this section.

(3) For licenses under paragraph (g) of this section, the geographic service area to be made available for reassignment must include a contiguous area of at least 130 square kilometers (50 square miles), and areas smaller than a contiguous area of at least 130 square kilometers (50 square miles) will not be deemed unserved.

(h) WCS licensees holding REAG authorizations for Block C in the 746–757 MHz and 776–787 MHz bands or REAG authorizations for Block C2 in the 752–757 MHz and 782–787 MHz bands shall provide signal coverage and offer service over at least 40 percent of the population in each EA comprising the REAG license area no later than June 13, 2013 (or within four years of initial license grant, if the initial authorization in a market is granted after June 13, 2009), and shall provide such service over at least 75 percent of the population of each of these EAs by the end of the license term. For purposes of compliance with this requirement, licensees should determine population based on the most recently available U.S. Census Data.

(1) If a licensee holding a Block C authorization fails to provide signal coverage and offer service over at least 40 percent of the population in each EA comprising the REAG license area by no later than June 13, 2013 (or within four years of initial license grant if the initial authorization in a market is granted after June 13, 2009), the term of the license authorization will be reduced by two years and such licensee may be subject to enforcement action, including forfeitures. In addition, a licensee that provides signal coverage and offers service at a level that is below this interim benchmark may lose authority to operate in part of the remaining unserved areas of the license.

(2) If a licensee holding a Block C authorization fails to provide signal coverage and offer service over at least 75 percent of the population in any EA comprising the REAG license area by the end of the license term, for each such EA that licensee's authorization will terminate automatically without Commission action for those geographic portions of its license in which the licensee is not providing service. Such licensee may also be subject to enforcement action, including forfeitures. In the event that a licensee's authority to operate in a license area terminates automatically without Commission action, such areas will become available for reassignment pursuant to the procedures in paragraph (j) of this section. In addition, a REAG licensee that provides signal coverage and offers service at a level that is below this end-of-term benchmark within any EA may be subject to license termination within that EA.

(3) For licenses under paragraph (h), the geographic service area to be made available for reassignment must include a contiguous area of at least 130 square kilometers (50 square miles), and areas smaller than a contiguous area of at least 130 square kilometers (50 square miles) will not be deemed unserved.

(i) WCS licensees holding EA authorizations for Block A in the 698–704 MHz and 728–734 MHz bands, cellular market authorizations for Block B in the 704–710 MHz and 734–740 MHz bands, or EA authorizations for Block E in the 722–728 MHz band, if the results of the first auction in which licenses for such authorizations in Blocks A, B, and E are offered do not satisfy the reserve price for the applicable block, as well as EA

authorizations for Block C1 in the 746–752 MHz and 776–782 MHz bands, are subject to the following:

(1) If a licensee holding a cellular market area or EA authorization subject to this paragraph (i) fails to provide signal coverage and offer service over at least 40 percent of the population in its license area by no later than June 13, 2013 (or within four years of initial license grant, if the initial authorization in a market is granted after June 13, 2009), the term of that license authorization will be reduced by two years and such licensee may be subject to enforcement action, including forfeitures. In addition, such licensee that provides signal coverage and offers service at a level that is below this interim benchmark may lose authority to operate in part of the remaining unserved areas of the license. For purposes of compliance with this requirement, licensees should determine population based on the most recently available U.S. Census Data.

(2) If a licensee holding a cellular market area or EA authorization subject to this paragraph (i) fails to provide signal coverage and offer service over at least 75 percent of the population in its license area by the end of the license term, that licensee's authorization will terminate automatically without Commission action for those geographic portions of its license in which the licensee is not providing service, and those unserved areas will become available for reassignment by the Commission. Such licensee may also be subject to enforcement action, including forfeitures. In the event that a licensee's authority to operate in a license area terminates automatically without Commission action, such areas will become available for reassignment pursuant to the procedures in paragraph (j) of this section. In addition, such a licensee that provides signal coverage and offers service at a level that is below this end-of-term benchmark may be subject to license termination. For purposes of compliance with this requirement, licensees should determine population based on the most recently available U.S. Census Data.

(3) For licenses under paragraph (i), the geographic service area to be made available for reassignment must include a contiguous area of at least 130 square kilometers (50 square miles), and areas smaller than a contiguous area of at least 130 square kilometers (50 square miles) will not be deemed unserved.

(j) In the event that a licensee's authority to operate in a license area terminates automatically under paragraphs (g), (h), or (i) of this section, such areas will become available for reassignment pursuant to the following procedures:

(1) The Wireless Telecommunications Bureau is delegated authority to announce by public notice that these license areas will be made available and establish a 30-day window during which third parties may file license applications to serve these areas. During this 30-day period, licensees that had their authority to operate terminate automatically for unserved areas may not file applications to provide service to these areas. Applications filed by third parties that propose areas overlapping with other applications will be deemed mutually exclusive, and will be resolved through an auction. The Wireless Telecommunications Bureau, by public notice, may specify a limited period before the filing of short-form applications (FCC Form 175) during which applicants may enter into a settlement to resolve their mutual exclusivity, subject to the provisions of §1.935 of this chapter.

(2) Following this 30-day period, the original licensee and third parties can file license applications for remaining unserved areas where licenses have not been issued or for which there are no pending applications. If the original licensee or a third party files an application, that application will be placed on public notice for 30 days. If no mutually exclusive application is filed, the application will be granted, provided that a grant is found to be in the public interest. If a mutually exclusive application is filed, it will be resolved through an auction. The Wireless Telecommunications Bureau, by public notice, may specify a limited period before the filing of short-form applications (FCC Form 175) during which applicants may enter into a settlement to

resolve their mutual exclusivity, subject to the provisions of §1.935 of this chapter.

(3) The licensee will have one year from the date the new license is issued to complete its construction and provide signal coverage and offer service over 100 percent of the geographic area of the new license area. If the licensee fails to meet this construction requirement, its license will automatically terminate without Commission action and it will not be eligible to apply to provide service to this area at any future date.

(k) Licensees holding WCS or AWS authorizations in the spectrum blocks enumerated in paragraphs (g), (h), (i), (q), (r), (s), and (t) of this section, including any licensee that obtained its license pursuant to the procedures set forth in paragraph (j) of this section, shall demonstrate compliance with performance requirements by filing a construction notification with the Commission, within 15 days of the expiration of the applicable benchmark, in accordance with the provisions set forth in §1.946(d) of this chapter. The licensee must certify whether it has met the applicable performance requirements. The licensee must file a description and certification of the areas for which it is providing service. The construction notifications must include electronic coverage maps, supporting technical documentation and any other information as the Wireless Telecommunications Bureau may prescribe by public notice.

(l) WCS licensees holding authorizations in the spectrum blocks enumerated in paragraphs (g), (h), or (i) of this section, excluding any licensee that obtained its license pursuant to the procedures set forth in subsection (j) of this section, shall file reports with the Commission that provide the Commission, at a minimum, with information concerning the status of their efforts to meet the performance requirements applicable to their authorizations in such spectrum blocks and the manner in which that spectrum is being utilized. The information to be reported will include the date the license term commenced, a description of the steps the licensee has taken toward meeting its construction obligations in a timely manner, including the technology or technologies and service(s) being provided, and the areas within the license area in which those services are available. Each of these licensees shall file its first report with the Commission no later than June 13, 2011 and no sooner than 30 days prior to this date. Each licensee that meets its interim benchmarks shall file a second report with the Commission no later than June 13, 2016 and no sooner than 30 days prior to this date. Each licensee that does not meet its interim benchmark shall file this second report no later than on June 13, 2015 and no sooner than 30 days prior to this date.

(m)–(n) [Reserved]

(o) BRS and EBS licensees originally issued a BRS or EBS license prior to November 6, 2009 must make a showing of substantial service no later than May 1, 2011. With respect to initial BRS licenses issued on or after November 6, 2009, the licensee must make a showing of substantial service within four years from the date of issue of the license. Incumbent BRS licensees that are required to demonstrate substantial service by May 1, 2011 must file their substantial service showings with their renewal applications. ''Substantial service'' is defined as service which is sound, favorable, and substantially above a level of mediocre service which just might minimally warrant renewal. Substantial service for BRS and EBS licensees is satisfied if a licensee meets the requirements of paragraph (o)(1), (o)(2), or (o)(3) of this section. If a licensee has not met the requirements of paragraph (o)(1), (o)(2), or (o)(3) of this section, then demonstration of substantial service shall proceed on a case-by-case basis. Except as provided in paragraphs (o)(4) and (o)(5) of this section, all substantial service determinations will be made on a license-by-license basis. Failure by any licensee to demonstrate substantial service will result in forfeiture of the license and the licensee will be ineligible to regain it.

(1) A BRS or EBS licensee has provided ''substantial service'' by:

(i) Constructing six permanent links per one million people for licensees providing fixed point-to-point services;

(ii) Providing coverage of at least 30 percent of the population of the licensed area for licensees providing mobile services or fixed point-to-multipoint services;

(iii) Providing service to ''rural areas'' (a county (or equivalent) with a population density of 100 persons per square mile or less, based upon the most recently available Census data) and areas with limited access to telecommunications services:

(A) For mobile service, where coverage is provided to at least 75% of the geographic area of at least 30% of the rural areas within its service area; or

(B) for fixed service, where the BRS or EBS licensee has constructed at least one end of a permanent link in at least 30% of the rural areas within its licensed area.

(iv) Providing specialized or technologically sophisticated service that does not require a high level of coverage to benefit consumers; or

(v) Providing service to niche markets or areas outside the areas served by other licensees.

(2) An EBS licensee has provided ''substantial service'' when:

(i) The EBS licensee is using its spectrum (or spectrum to which the EBS licensee's educational services are shifted) to provide educational services within the EBS licensee's GSA;

(ii) the EBS licensee's license is actually being used to serve the educational mission of one or more accredited public or private schools, colleges or universities providing formal educational and cultural development to enrolled students; or

(iii) the level of service provided by the EBS licensee meets or exceeds the minimum usage requirements specified in § 27.1214.

(3) An EBS or BRS licensee may be deemed to provide substantial service through a leasing arrangement if the lessee is providing substantial service under paragraph (o)(1) of this section. The EBS licensee must also be otherwise in compliance with this Chapter (including the programming requirements in § 27.1203 of this subpart).

(4) If the GSA of a licensee is less than 1924 square miles in size, and there is an overlapping co-channel station licensed or leased by the licensee or its affiliate, substantial service may be demonstrated by meeting the requirements of paragraph (o)(1) or (o)(2) of this section with respect to the combined GSAs of both stations.

(5) If the GSA of a BTA authorization holder, is less than one-half of the area within the BTA for every BRS channel, substantial service may be demonstrated for the licenses in question by meeting the requirements of paragraph (o)(1) or (o)(2) of this section with respect to the combined GSAs of the BTA authorization holder, together with any incumbent authorizations licensed or leased by the licensee or its affiliates.

(p) This section enumerates performance requirements for licensees holding authorizations for Block A in the 2305–2310 MHz and 2350–2355 MHz bands, Block B in the 2310–2315 MHz and 2355–2360 MHz bands, Block C in the 2315–2320 MHz band, and Block D in the 2345–2350 MHz band.

(1) For mobile and point-to-multipoint systems in Blocks A and B, and point-to-multipoint systems in Blocks C and D, a licensee must provide reliable signal coverage and offer service to at least 40 percent of the license area's population by March 13, 2017, and to at least 75 percent of the license area's population by September 13, 2019. If, when filing the construction notification required under § 1.946(d) of this chapter, a WCS licensee demonstrates that 25 percent or more of the license area's population for Block A, B or D is within a coordination zone as defined by § 27.73(a) of the rules, the foregoing population benchmarks are reduced to 25 and 50 percent, respectively. The percentage of a license area's population within a coordination zone equals the sum of the Census Block Centroid Populations within the area, divided by the license area's total population.

(2) For point-to-point fixed systems, except those deployed in the Gulf of Mexico license area, a licensee must construct and operate a minimum of 15 point-to-point links per million persons (one link per 67,000 persons) in a license area by March 13, 2017, and 30 point-to-point links per million persons (one link per 33,500 persons) in a licensed area by September 13, 2019.

The exact link requirement is calculated by dividing a license area's total population by 67,000 and 33,500 for the respective milestones, and then rounding upwards to the next whole number. For a link to be counted towards these benchmarks, both of its endpoints must be located in the license area. If only one endpoint of a link is located in a license area, it can be counted as a one- half link towards the benchmarks.

(3) For point-to-point fixed systems deployed on any spectrum block in the Gulf of Mexico license area, a licensee must construct and operate a minimum of 15 point-to-point links by March 13, 2017, and a minimum of 15 point-to-point links by September 13, 2019.

(4) Under paragraph (p)(2) and (p)(3) of this section, each fixed link must provide a minimum bit rate, in bits per second, equal to or greater than the bandwidth specified by the emission designator in Hertz (*e.g.*, equipment transmitting at a 5 Mb/s rate must not require a bandwidth of greater than 5 MHz).

(5) If an initial authorization for a license area is granted after March 13, 2013, then the applicable benchmarks in paragraphs (p)(1), (2) and (3) of this section must be met within 48 and 78 months, respectively, of the initial authorization grant date.

(6) Licensees must use the most recently available U.S. Census Data at the time of measurement to meet these performance requirements.

(7) Licensees must certify compliance with the applicable performance requirements by filing a construction notification with the Commission, within 15 days of the expiration of the relevant performance milestone, pursuant to §1.946(d) of this chapter. Each construction notification must include electronic coverage maps, supporting technical documentation, and any other information as the Wireless Telecommunications Bureau may prescribe by public notice. Electronic coverage maps must accurately depict the boundaries of each license area (Regional Economic Area Grouping, REAG, or Major Economic Area, MEA) in the licensee's service territory. Further, REAG maps must depict MEA boundaries and MEA maps must depict Economic Area boundaries. If a licensee does not provide reliable signal coverage to an entire license area, its map must accurately depict the boundaries of the area or areas within each license area not being served. Each licensee also must file supporting documentation certifying the type of service it is providing for each REAG or MEA within its service territory and the type of technology used to provide such service. Supporting documentation must include the assumptions used to create the coverage maps, including the propagation model and the signal strength necessary to provide reliable service with the licensee's technology.

(8) If a licensee fails to meet any applicable performance requirement, its authorization will terminate automatically without further Commission action as of the applicable performance milestone and the licensee will be ineligible to regain it.

(q) The following provisions apply to any licensee holding an AWS authorization in the 2000–2020 MHz and 2180–2200 MHz bands (an ''AWS–4 licensee''):

(1) An AWS–4 licensee shall provide terrestrial signal coverage and offer terrestrial service within four (4) years from the date of the license to at least forty (40) percent of the total population in the aggregate service areas that it has licensed in the 2000–2020 MHz and 2180–2200 MHz bands (''AWS–4 Interim Buildout Requirement''). For purposes of this subpart, a licensee's total population shall be calculated by summing the population of each license area that a licensee holds in the 2000–2020 MHz and 2180–2200 MHz bands; and

(2) An AWS–4 licensee shall provide terrestrial signal coverage and offer terrestrial service within seven (7) years from the date of the license to at least seventy (70) percent of the population in each of its license areas in the 2000–2020 MHz and 2180–2200 MHz bands (''AWS–4 Final Buildout Requirement'').

(3) If any AWS–4 licensee fails to establish that it meets the AWS–4 Interim Buildout Requirement, the AWS–4 Final Buildout requirement shall be

accelerated by one year from (seven to six years).

(4) If any AWS–4 licensee fails to establish that it meets the AWS–4 Final Buildout Requirement in any of its license areas in the 2000–2020 MHz and 2180–2200 MHz bands, its authorization for each license area in which it fails to meet the requirement shall terminate automatically without Commission action. To the extent that the AWS–4 licensee also holds the 2 GHz MSS rights for the affected license area, failure to meet the AWS–4 Final Buildout Requirement in an EA shall also result in the MSS protection rule in §27.1136 no longer applying in that license area.

(5) To demonstrate compliance with these performance requirements, licensees shall use the most recently available U.S. Census Data at the time of measurement and shall base their measurements of population served on areas no larger than the Census Tract level. The population within a specific Census Tract (or other acceptable identifier) will only be deemed served by the licensee if it provides signal coverage to and offers service within the specific Census Tract (or other acceptable identifier). To the extent the Census Tract (or other acceptable identifier) extends beyond the boundaries of a license area, a licensee with authorizations for such areas may only include the population within the Census Tract (or other acceptable identifier) towards meeting the performance requirement of a single, individual license.

(6) Failure by any AWS–4 licensee to meet the AWS–4 Final Buildout Requirement in paragraph (q)(4) of this section will result in forfeiture of the license and the licensee will be ineligible to regain it.

(7) *Renewal showing.* An applicant for renewal of a geographic-area authorization in the 2000–2020 MHz and 2180–2200 MHz service bands must make a renewal showing, independent of its performance requirements, as a condition of renewal. The showing must include a detailed description of the applicant's provision of service during the entire license period and address:

(i) The level and quality of service provided by the applicant (including the population served, the area served, the number of subscribers, the services offered);

(ii) The date service commenced, whether service was ever interrupted, and the duration of any interruption or outage;

(iii) The extent to which service is provided to rural areas;

(iv) The extent to which service is provided to qualifying tribal land as defined in §1.2110(f)(3)(i) of this chapter; and

(v) Any other factors associated with the level of service to the public.

(r) The following provisions apply to any licensee holding an AWS authorization in the 1915–1920 MHz and 1995–2000 MHz bands:

(1) A licensee shall provide signal coverage and offer service within four (4) years from the date of the initial license to at least forty (40) percent of the population in each of its licensed areas (''Interim Buildout Requirement'').

(2) A licensee shall provide signal coverage and offer service within ten (10) years from the date of the initial license to at least seventy-five (75) percent of the population in each of its licensed areas (''Final Buildout Requirement'').

(3) If a licensee fails to establish that it meets the Interim Buildout Requirement for a particular licensed area, then the Final Buildout Requirement (in this paragraph (r)) and the license term (as set forth in §27.13(j)) for each license area in which it fails to meet the Interim Buildout Requirement shall be accelerated by two years (from ten to eight years).

(4) If a licensee fails to establish that it meets the Final Buildout Requirement for a particular licensed area, its authorization for each license area in which it fails to meet the Final Buildout Requirement shall terminate automatically without Commission action and the licensee will be ineligible to regain it if the Commission makes the license available at a later date.

(5) To demonstrate compliance with these performance requirements, licensees shall use the most recently available U.S. Census Data at the time of measurement and shall base their measurements of population served on areas no larger than the Census Tract

level. The population within a specific Census Tract (or other acceptable identifier) will only be deemed served by the licensee if it provides signal coverage to and offers service within the specific Census Tract (or other acceptable identifier). To the extent the Census Tract (or other acceptable identifier) extends beyond the boundaries of a license area, a licensee with authorizations for such areas may only include the population within the Census Tract (or other acceptable identifier) towards meeting the performance requirement of a single, individual license.

(6) An applicant for renewal of a license covered by this paragraph (r) must make a renewal showing, independent of its performance requirements, as a condition of renewal. The showing must include a detailed description of the applicant's provision of service during the entire license period and address:

(i) The level and quality of service provided by the applicant (including the population served, the area served, the number of subscribers, the services offered);

(ii) The date service commenced, whether service was ever interrupted, and the duration of any interruption or outage;

(iii) The extent to which service is provided to rural areas;

(iv) The extent to which service is provided to qualifying tribal land as defined in §1.2110(f)(3)(i) of this chapter; and

(v) Any other factors associated with the level of service to the public.

(s) The following provisions apply to any licensee holding an AWS authorization in the 1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz bands:

(1) A licensee shall provide reliable signal coverage and offer service within six (6) years from the date of the initial license to at least forty (40) percent of the population in each of its licensed areas (''Interim Buildout Requirement'').

(2) A licensee shall provide reliable signal coverage and offer service within twelve (12) years from the date of the initial license to at least seventy-five (75) percent of the population in each of its licensed areas (''Final Buildout Requirement'').

(3) If a licensee fails to establish that it meets the Interim Buildout Requirement for a particular licensed area, then the Final Buildout Requirement (in this paragraph (s)) and the AWS license term (as set forth in §27.13(k)) for each license area in which it fails to meet the Interim Buildout Requirement shall be accelerated by two (2) years (from twelve (12) to ten (10) years).

(4) If a licensee fails to establish that it meets the Final Buildout Requirement for a particular licensed area, its authorization for each license area in which it fails to meet the Final Buildout Requirement shall terminate automatically without Commission action and the licensee will be ineligible to regain it if the Commission makes the license available at a later date.

(5) To demonstrate compliance with these performance requirements, licensees shall use the most recently available U.S. Census Data at the time of measurement and shall base their measurements of population served on areas no larger than the Census Tract level. The population within a specific Census Tract (or other acceptable identifier) will be deemed served by the licensee only if it provides signal coverage to and offers service within the specific Census Tract (or other acceptable identifier). To the extent the Census Tract (or other acceptable identifier) extends beyond the boundaries of a license area, a licensee with authorizations for such areas may include only the population within the Census Tract (or other acceptable identifier) towards meeting the performance requirement of a single, individual license. For the Gulf of Mexico license area, the licensee shall demonstrate compliance with these performance requirements, using off-shore platforms, including production, manifold, compression, pumping and valving platforms as a proxy for population in the Gulf of Mexico.

(6) An applicant for renewal of a license covered by paragraph (s) of this section must make a renewal showing, independent of its performance requirements, as a condition of each renewal. The showing must include a detailed

description of the applicant's provision of service during the entire license period and address:

(i) The level and quality of service provided by the applicant (including the population served, the area served, the number of subscribers, the services offered);

(ii) The date service commenced, whether service was ever interrupted, and the duration of any interruption or outage;

(iii) The extent to which service is provided to rural areas;

(iv) The extent to which service is provided to qualifying tribal land as defined in §1.2110(f)(3)(i) of this chapter; and

(v) Any other factors associated with the level of service to the public.

(t) The following provisions apply to any licensee holding an authorization in the 600 MHz band:

(1) A licensee shall provide reliable signal coverage and offer service within six (6) years from the date of the initial license to at least forty (40) percent of the population in each of its license areas (''Interim Buildout Requirement'').

(2) A licensee shall provide reliable signal coverage and offer service within twelve (12) years from the date of the initial license to at least seventy-five (75) percent of the population in each of its license areas (''Final Buildout Requirement'').

(3) If a licensee fails to establish that it meets the Interim Buildout Requirement for a particular licensed area, then the Final Buildout Requirement (in this paragraph (t)) and the license term (as set forth in §27.13(l)) for each license area in which it fails to meet the Interim Buildout Requirement shall be accelerated by two (2) years (from twelve (12) to ten (10) years).

(4) If a licensee fails to establish that it meets the Final Buildout Requirement for a particular license area, its authorization for each license area in which it fails to meet the Final Buildout Requirement shall terminate automatically without Commission action, and the licensee will be ineligible to regain it if the Commission makes the license available at a later date.

(5) To demonstrate compliance with these performance requirements, licensees shall use the most recently available decennial U.S. Census Data at the time of measurement and shall base their measurements of population served on areas no larger than the Census Tract level. The population within a specific Census Tract (or other acceptable identifier) will be deemed served by the licensee only if it provides reliable signal coverage to and offers service within the specific Census Tract (or other acceptable identifier). To the extent the Census Tract (or other acceptable identifier) extends beyond the boundaries of a license area, a licensee with authorizations for such areas may include only the population within the Census Tract (or other acceptable identifier) towards meeting the performance requirement of a single, individual license. For the Gulf of Mexico license area, the licensee shall demonstrate compliance with these performance requirements, using offshore platforms, including production, manifold, compression, pumping and valving platforms as a proxy for population in the Gulf of Mexico.

(6) An applicant for renewal of a license covered by this paragraph (t) must make a renewal showing, independent of its performance requirements, as a condition of each renewal. The showing must include a detailed description of the applicant's provision of service during the entire license period and address:

(i) The level and quality of service provided by the applicant (including the population served, the area served, the number of subscribers, the services offered);

(ii) The date service commenced, whether service was ever interrupted, and the duration of any interruption or outage;

(iii) The extent to which service is provided to rural areas;

(iv) The extent to which service is provided to qualifying tribal land as defined in §1.2110(f)(3)(i) of this chapter; and

(v) Any other factors associated with the level of service to the public.

[62 FR 9658, Mar. 3, 1997]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §27.14, see the List of CFR Sections Affected, which appears in the

Finding Aids section of the printed volume and at www.fdsys.gov.

§ 27.15 Geographic partitioning and spectrum disaggregation.

(a) *Eligibility.* (1) Parties seeking approval for partitioning and disaggregation shall request from the Commission an authorization for partial assignment of a license pursuant to § 1.948.

(2) AWS and WCS licensees may apply to partition their licensed geographic service area or disaggregate their licensed spectrum at any time following the grant of their licenses.

(b) *Technical Standards*—(1) *Partitioning.* In the case of partitioning, applicants and licensees must file FCC Form 603 pursuant to section 1.948 and list the partitioned service area on a schedule to the application. The geographic coordinates must be specified in degrees, minutes, and seconds to the nearest second of latitude and longitude and must be based upon the 1983 North American Datum (NAD83).

(2) *Disaggregation.* Spectrum may be disaggregated in any amount.

(3) *Combined partitioning and disaggregation.* The Commission will consider requests for partial assignment of licenses that propose combinations of partitioning and disaggregation.

(4) *Signal levels.* For purposes of partitioning and disaggregation, part 27 systems must be designed so as not to exceed the signal level specified for the particular spectrum block in § 27.55 at the licensee's service area boundary, unless the affected adjacent service area licensees have agreed to a different signal level.

(c) *License term.* The license term for a partitioned license area and for disaggregated spectrum shall be the remainder of the original licensee's license term as provided for in § 27.13.

(d) *Compliance with construction requirements*—(1) *Partitioning.* (i) Except for WCS licensees holding authorizations for the 600 MHz band, Block A in the 698–704 MHz and 728–734 MHz bands, Block B in the 704–710 MHz and 734–740 MHz bands, Block E in the 722–728 MHz band, or Blocks C, C1, and C2 in the 746–757 MHz and 776–787 MHz bands; and for licensees holding AWS authorizations in the 1915–1920 MHz and 1995–2000 MHz bands, the 2000–2020 MHz and 2180–2200 MHz bands; or the 1695–1710 MHz, 1755–1780 MHz and 2155–2180 MHz bands the following rules apply to WCS and AWS licensees holding authorizations for purposes of implementing the construction requirements set forth in § 27.14. Parties to partitioning agreements have two options for satisfying the construction requirements set forth in § 27.14. Under the first option, the partitioner and partitionee each certifies that it will independently satisfy the substantial service requirement for its respective partitioned area. If a licensee subsequently fails to meet its substantial service requirement, its license will be subject to automatic cancellation without further Commission action. Under the second option, the partitioner certifies that it has met or will meet the substantial service requirement for the entire, pre-partitioned geographic service area. If the partitioner subsequently fails to meet its substantial service requirement, only its license will be subject to automatic cancellation without further Commission action.

(ii) For WCS licensees holding authorizations for Block A in the 698–704 MHz and 728–734 MHz bands, Block B in the 704–710 MHz and 734–740 MHz bands, Block E in the 722–728 MHz band, or Blocks C, C1, and C2 in the 746–757 MHz and 776–787 MHz bands, the following rules apply for purposes of implementing the construction requirements set forth in § 27.14. Parties to partitioning agreements have two options for satisfying the construction requirements set forth in § 27.14. Under the first option, the partitioner and partitionee each certifies that they will collectively share responsibility for meeting the construction requirement for the entire pre-partition geographic license area. If the partitioner and partitionee collectively fail to meet the construction requirement, then both the partitioner and partitionee will be subject to the consequences enumerated in § 27.14(g) and (h) for this failure. Under the second option, the partitioner and partitionee

each certifies that it will independently meet the construction requirement for its respective partitioned license area. If the partitioner or partitionee fails to meet the construction requirement for its respective partitioned license area, then the consequences for this failure shall be those enumerated in § 27.14(g) and (h).

(iii) For licensees holding authorizations for the 600 MHz band, AWS authorizations in the 1915–1920 MHz and 1995–2000 MHz bands, or the 2000–2020 MHz and 2180–2200 MHz bands, or the 1695–1710 MHz, 1755–1780 MHz and 2155–2180 MHz bands, the following rules apply for purposes of implementing the construction requirements set forth in § 27.14. Each party to a geographic partitioning must individually meet any service-specific performance requirements (i.e., construction and operation requirements). If a partitioner or partitionee fails to meet any service-specific performance requirements on or before the required date, then the consequences for this failure shall be those enumerated in § 27.14(q) for 2000–2020 MHz and 2180–2200 MHz licenses, those enumerated in § 27.14(r) for 1915–1920 MHz and 1995–2000 MHz licenses, and those enumerated in § 27.14(s) for 1695–1710 MHz, 1755–1780 MHz and 2155–2180 MHz licenses, and those enumerated in § 27.14(t) for 600 MHz band licenses.

(2) *Disaggregation.* (i) Except for WCS licensees holding authorizations for the 600 MHz band, Block A in the 698–704 MHz and 728–734 MHz bands, Block B in the 704–710 MHz and 734–740 MHz bands, Block E in the 722–728 MHz band, or Blocks C, C1, or C2 in the 746–757 MHz and 776–787 MHz bands; and for licensees holding AWS authorizations in the 1915–1920 MHz and 1995–2000 MHz bands, the 2000–2020 MHz and 2180–2200 MHz bands or the 1695–1710 MHz, 1755–1780 MHz and 2155–2180 MHz bands; the following rules apply to WCS and AWS licensees holding authorizations for purposes of implementing the construction requirements set forth in § 27.14. Parties to disaggregation agreements have two options for satisfying the construction requirements set forth in § 27.14. Under the first option, the disaggregator and disaggregatee each certifies that it will share responsibility for meeting the substantial service requirement for the geographic service area. If the parties choose this option and either party subsequently fails to satisfy its substantial service responsibility, both parties' licenses will be subject to forfeiture without further Commission action. Under the second option, both parties certify either that the disaggregator or the disaggregatee will meet the substantial service requirement for the geographic service area. If the parties choose this option, and the party responsible subsequently fails to meet the substantial service requirement, only that party's license will be subject to forfeiture without further Commission action.

(ii) For WCS licensees holding authorizations for Block A in the 698–704 MHz and 728–734 MHz bands, Block B in the 704–710 MHz and 734–740 MHz bands, Block E in the 722–728 MHz band, and Blocks C, C1, or C2 in the 746–757 MHz and 776–787 MHz bands, the following rules apply for purposes of implementing the construction requirements set forth in § 27.14. If either the disaggregator or the disaggregatee meets the construction requirements set forth in § 27.14, then these requirements will be considered to be satisfied for both parties. If neither the disaggregator nor the disaggregatee meets the construction requirements, then both parties will be subject to the consequences enumerated in § 27.14(g) and (h) for this failure.

(iii) For licensees holding authorizations for the 600 MHz band, AWS authorizations in the 1915–1920 MHz and 1995–2000 MHz bands, or the 2000–2020 MHz and 2180–2200 MHz bands, or the 1695–1710 MHz, 1755–1780 MHz and 2155–2180 MHz bands, the following rules apply for purposes of implementing the construction requirements set forth in § 27.14. Each party to a spectrum disaggregation must individually meet any service-specific performance requirements (i.e., construction and operation requirements). If a disaggregator or a disaggregatee fails to meet any service-specific performance requirements on or before the required date, then the consequences for this failure shall be those enumerated in § 27.14(q) for 2000–2020 MHz and 2180–2200 MHz licenses, those enumerated in § 27.14(r)

for 1915–1920 MHz and 1995–2000 MHz licenses, those enumerated in §27.14(s) for 1695–1710 MHz, 1755–1780 MHz and 2155–2180 MHz licenses, and those enumerated in §27.14(t) for 600 MHz band licenses.

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§27.16 Network access requirements for Block C in the 746–757 and 776–787 MHz bands.

(a) *Applicability.* This section shall apply only to the authorizations for Block C in the 746–757 and 776–787 MHz bands assigned and only if the results of the first auction in which licenses for such authorizations are offered satisfied the applicable reserve price.

(b) *Use of devices and applications.* Licensees offering service on spectrum subject to this section shall not deny, limit, or restrict the ability of their customers to use the devices and applications of their choice on the licensee's C Block network, except:

(1) Insofar as such use would not be compliant with published technical standards reasonably necessary for the management or protection of the licensee's network, or

(2) As required to comply with statute or applicable government regulation.

(c) *Technical standards.* For purposes of paragraph (b)(1) of this section:

(1) Standards shall include technical requirements reasonably necessary for third parties to access a licensee's network via devices or applications without causing objectionable interference to other spectrum users or jeopardizing network security. The potential for excessive bandwidth demand alone shall not constitute grounds for denying, limiting or restricting access to the network.

(2) To the extent a licensee relies on standards established by an independent standards-setting body which is open to participation by representatives of service providers, equipment manufacturers, application developers, consumer organizations, and other interested parties, the standards will carry a presumption of reasonableness.

(3) A licensee shall publish its technical standards, which shall be non-proprietary, no later than the time at which it makes such standards available to any preferred vendors, so that the standards are readily available to customers, equipment manufacturers, application developers, and other parties interested in using or developing products for use on a licensee's networks.

(d) *Access requests.* (1) Licensees shall establish and publish clear and reasonable procedures for parties to seek approval to use devices or applications on the licensees' networks. A licensee must also provide to potential customers notice of the customers' rights to request the attachment of a device or application to the licensee's network, and notice of the licensee's process for customers to make such requests, including the relevant network criteria.

(2) If a licensee determines that a request for access would violate its technical standards or regulatory requirements, the licensee shall expeditiously provide a written response to the requester specifying the basis for denying access and providing an opportunity for the requester to modify its request to satisfy the licensee's concerns.

(e) *Handset locking prohibited.* No licensee may disable features on handsets it provides to customers, to the extent such features are compliant with the licensee's standards pursuant to paragraph (b)of this section, nor configure handsets it provides to prohibit use of such handsets on other providers' networks.

(f) *Burden of proof.* Once a complainant sets forth a prima facie case that the C Block licensee has refused to attach a device or application in violation of the requirements adopted in this section, the licensee shall have the burden of proof to demonstrate that it has adopted reasonable network standards and reasonably applied those standards in the complainant's case. Where the licensee bases its network restrictions on industry-wide consensus standards, such restrictions would be presumed reasonable.

[72 FR 48849, Aug. 24, 2007]

§ 27.17 Discontinuance of service in the 600 MHz band and the 1695–1710 MHz, 1755–1780 MHz, 1915–1920 MHz, 1995–2000 MHz, 2000–2020 MHz, 2155–2180 MHz, and 2180–2200 MHz bands.

(a) *Termination of authorization.* A 600 MHz band authorization and an AWS authorization in the 1695–1710 MHz, 1755–1780 MHz, 1915–1920 MHz, 1995–2000 MHz, 2000–2020 MHz, 2155–2180 MHz, and 2180–2200 MHz bands will automatically terminate, without specific Commission action, if the licensee permanently discontinues service either during the initial license term or during any subsequent license term, as follows:

(1) After the interim buildout deadline as specified in § 27.14(r), (s), or (t) as applicable (where the licensee meets the Interim Buildout Requirement), or after the accelerated Final Buildout Requirement (where the licensee failed to meet the Interim Buildout Requirement).

(2) After the AWS–4 final buildout deadline as specified in § 27.14(q)(1) (where the licensee meets the AWS–4 interim buildout requirement), or after the accelerated final buildout deadline specified in § 27.14(q)(3) (where the licensee failed to meet its AWS–4 interim buildout requirement).

(b) For licensees with common carrier or non-common carrier regulatory status that hold 600 MHz band authorizations or AWS authorizations in the 1695–1710 MHz, 1755–1780 MHz, 1915–1920 MHz, 1995–2000 MHz, 2000–2020 MHz, 2155–2180 MHz, and 2180–2200 MHz bands, permanent discontinuance of service is defined as 180 consecutive days during which a licensee does not provide service to at least one subscriber that is not affiliated with, controlled by, or related to the licensee in the individual license area. For licensees with private, internal communications regulatory status that hold 600 MHz band authorizations or AWS authorizations in the 1695–1710 MHz, 1755–1780 MHz, 1915–1920 MHz, 1995–2000 MHz, 2000–2020 MHz, 2155–2180 MHz, and 2180–2200 MHz bands, permanent discontinuance of service is defined as 180 consecutive days during which a licensee does not operate.

(c) *Filing requirements.* A licensee that holds a 600 MHz band authorization or an AWS authorization in the 1695–1710 MHz, 1755–1780 MHz, 1915–1920 MHz, 1995–2000 MHz, 2000–2020 MHz, 2155–2180 MHz, and 2180–2200 MHz bands, that permanently discontinues service as defined in this section must notify the Commission of the discontinuance within 10 days by filing FCC Form 601 or 605 requesting license cancellation. An authorization will automatically terminate, without specific Commission action, if service is permanently discontinued as defined in this section, even if a licensee fails to file the required form requesting license cancellation.

[79 FR 32412, June 4, 2014, as amended at 79 FR 48538, Aug. 15, 2014]

§ 27.19 Requirements for operation of base and fixed stations in the 600 MHz downlink band in close proximity to Radio Astronomy Observatories.

(a) Licensees must make reasonable efforts to protect the radio astronomy observatory at Green Bank, WV, Arecibo, PR, and those identified in § 15.712(h)(3) of this chapter as part of the Very Long Baseline Array (VLBA) from interference.

(b) 600 MHz band base and fixed stations in the 600 MHz downlink band within 25 kilometers of VLBA observatories are subject to coordination with the National Science Foundation (NSF) prior to commencing operations. The appropriate NSF contact point to initiate coordination is Electromagnetic Spectrum Manager, NSF, 4201 Wilson Blvd., Suite 1045, Arlington, VA 22203, fax 703–292–9034, email *esm@nsf.gov*.

(c) Any licensee that intends to operate base and fixed stations in the 600 MHz downlink band in locations near the Radio Astronomy Observatory site located in Green Bank, Pocahontas County, West Virginia, or near the Arecibo Observatory in Puerto Rico, must comply with the provisions in § 1.924 of this chapter.

[79 FR 48538, Aug. 15, 2014]

§ 27.20 Digital television transition education reports.

(a) The requirements of this section shall apply only with regard to WCS license authorizations in Block A in the 698–704 MHz and 728–734 MHz bands, Block B in the 704–710 MHz and 734–740 MHz bands, Block E in the 722–728 MHz band, and Block C, C1 or C2 in the 746–757 MHz and 776–787 MHz bands.

(b) By the tenth day of the first calendar quarter after the initial grant of a WCS license authorization subject to the requirements of this section—and on a quarterly basis thereafter as specified in paragraph (c) of this section—the licensee holding such authorization must file a report with the Commission indicating whether, in the previous quarter, it has taken any outreach efforts to educate consumers about the transition from analog broadcast television service to digital broadcast television service (DTV) and, if so, what specific efforts were undertaken. Thus, for example, if the license authorization is granted during the April-June quarter of 2008, the licensee must file its first report by July 10, 2008. Each quarterly report, either paper or electronic, must be filed with the Commission in Docket Number 07–148. If the quarterly report is a paper filing, the cover sheet must clearly state ''Report,'' whereas if the report is filed electronically using the Commission's Electronic Comment File System (ECFS), the ''Document Type'' on the cover sheet should indicate ''REPORT.''

(c) The reporting requirements under this section cover the remaining period of the DTV transition. Accordingly, once the licensee files its quarterly report covering the second quarter of 2009, the requirements of this section terminate.

[73 FR 15448, Mar. 24, 2008, as amended at 74 FR 8878, Feb. 27, 2009; 79 FR 597, Jan. 6, 2014]

Subpart C—Technical Standards

§ 27.50 Power limits and duty cycle.

(a) The following power limits and related requirements apply to stations transmitting in the 2305–2320 MHz band or the 2345–2360 MHz band.

(1) *Base and fixed stations.* (i) For base and fixed stations transmitting in the 2305–2315 MHz band or the 2350–2360 MHz band:

(A) The average equivalent isotropically radiated power (EIRP) must not exceed 2,000 watts within any 5 megahertz of authorized bandwidth and must not exceed 400 watts within any 1 megahertz of authorized bandwidth.

(B) The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB. The PAPR measurements should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities to determine that PAPR will not exceed 13 dB for more than 0.1 percent of the time or other Commission approved procedure. The measurement must be performed using a signal corresponding to the highest PAPR expected during periods of continuous transmission.

(ii) For base and fixed stations transmitting in the 2315–2320 MHz band or the 2345–2350 MHz band, the peak EIRP must not exceed 2,000 watts.

(2) *Fixed customer premises equipment stations.* For fixed customer premises equipment (CPE) stations transmitting in the 2305–2320 MHz band or in the 2345–2360 MHz band, the peak EIRP must not exceed 20 watts within any 5 megahertz of authorized bandwidth. Fixed CPE stations transmitting in the 2305–2320 MHz band or in the 2345–2360 MHz band must employ automatic transmit power control when operating so the stations operate with the minimum power necessary for successful communications. The use of outdoor antennas for CPE stations or outdoor CPE station installations operating with 2 watts per 5 megahertz or less average EIRP using the stepped emissions mask prescribed in § 27.53(a)(3) is prohibited except if professionally installed in locations removed by 20 meters from roadways or in locations where it can be shown that the ground power level of -44 dBm in the A or B blocks or -55 dBm in the C or D blocks will not be exceeded at the nearest road location. The use of outdoor antennas for fixed CPE stations operating with 2 watts per 5 megahertz or less average EIRP and the emissions mask

prescribed in § 27.53(a)(1)(i) through (iii) is permitted in all locations. For fixed WCS CPE using TDD technology, the duty cycle must not exceed 38 percent;

(3) *Mobile and portable stations.* (i) For mobile and portable stations transmitting in the 2305–2315 MHz band or the 2350–2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, *except that* for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth. For mobile and portable stations using time division duplexing (TDD) technology, the duty cycle must not exceed 38 percent in the 2305–2315 MHz and 2350–2360 MHz bands. Mobile and portable stations using FDD technology are restricted to transmitting in the 2305–2315 MHz band. Power averaging shall not include intervals in which the transmitter is off.

(ii) Mobile and portable stations are not permitted to transmit in the 2315–2320 MHz and 2345–2350 MHz bands.

(iii) *Automatic transmit power control.* Mobile and portable stations transmitting in the 2305–2315 MHz band or in the 2350–2360 MHz band must employ automatic transmit power control when operating so the stations operate with the minimum power necessary for successful communications.

(iv) *Prohibition on external vehicle-mounted antennas.* The use of external vehicle-mounted antennas for mobile and portable stations transmitting in the 2305–2315 MHz band or the 2350–2360 MHz band is prohibited.

(b) The following power and antenna height limits apply to transmitters operating in the 746–758 MHz, 775–788 MHz and 805–806 MHz bands:

(1) Fixed and base stations transmitting a signal in the 757–758 and 775–776 MHz bands must not exceed an effective radiated power (ERP) of 1000 watts and an antenna height of 305 m height above average terrain (HAAT), except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 1000 watts ERP in accordance with Table 1 of this section.

(2) Fixed and base stations transmitting a signal in the 746–757 MHz and 776–787 MHz bands with an emission bandwidth of 1 MHz or less must not exceed an ERP of 1000 watts and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 1000 watts ERP in accordance with Table 1 of this section.

(3) Fixed and base stations located in a county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, and transmitting a signal in the 746–757 MHz and 776–787 MHz bands with an emission bandwidth of 1 MHz or less must not exceed an ERP of 2000 watts and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 2000 watts ERP in accordance with Table 2 of this section.

(4) Fixed and base stations transmitting a signal in the 746–757 MHz and 776–787 MHz bands with an emission bandwidth greater than 1 MHz must not exceed an ERP of 1000 watts/MHz and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 1000 watts/MHz ERP in accordance with Table 3 of this section.

(5) Fixed and base stations located in a county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, and transmitting a signal in the 746–757 MHz and 776–787 MHz bands with an emission bandwidth greater than 1 MHz must not exceed an ERP of 2000 watts/MHz and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 2000 watts/MHz ERP in accordance with Table 4 of this section.

(6) Licensees of fixed or base stations transmitting a signal in the 746–757 MHz and 776–787 MHz bands at an ERP greater than 1000 watts must comply

with the provisions set forth in paragraph (b)(8) of this section and § 27.55(c).

(7) Licensees seeking to operate a fixed or base station located in a county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, and transmitting a signal in the 746–757 MHz and 776–787 MHz bands at an ERP greater than 1000 watts must:

(i) Coordinate in advance with all licensees authorized to operate in the 698–758 MHz, 775–788, and 805–806 MHz bands within 120 kilometers (75 miles) of the base or fixed station;

(ii) coordinate in advance with all regional planning committees, as identified in § 90.527 of this chapter, with jurisdiction within 120 kilometers (75 miles) of the base or fixed station.

(8) Licensees authorized to transmit in the 746–757 MHz and 776–787 MHz bands and intending to operate a base or fixed station at a power level permitted under the provisions of paragraph (b)(6) of this section must provide advanced notice of such operation to the Commission and to licensees authorized in their area of operation. Licensees who must be notified are all licensees authorized to operate in the 758–775 MHz and 788–805 MHz bands under part 90 of this chapter within 75 km of the base or fixed station and all regional planning committees, as identified in § 90.527 of this chapter, with jurisdiction within 75 km of the base or fixed station. Notifications must provide the location and operating parameters of the base or fixed station, including the station's ERP, antenna coordinates, antenna height above ground, and vertical antenna pattern, and such notifications must be provided at least 90 days prior to the commencement of station operation.

(9) Control stations and mobile stations transmitting in the 746–757 MHz, 776–788 MHz, and 805–806 MHz bands and fixed stations transmitting in the 787–788 MHz and 805–806 MHz bands are limited to 30 watts ERP.

(10) Portable stations (hand-held devices) transmitting in the 746–757 MHz, 776–788 MHz, and 805–806 MHz bands are limited to 3 watts ERP.

(11) For transmissions in the 757–758, 775–776, 787–788, and 805–806 MHz bands, maximum composite transmit power shall be measured over any interval of continuous transmission using instrumentation calibrated in terms of RMS-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, etc., so as to obtain a true maximum composite measurement for the emission in question over the full bandwidth of the channel.

(12) For transmissions in the 746–757 and 776–787 MHz bands, licensees may employ equipment operating in compliance with either the measurement techniques described in paragraph (b)(11) of this section or a Commission-approved average power technique. In both instances, equipment employed must be authorized in accordance with the provisions of § 27.51.

(c) The following power and antenna height requirements apply to stations transmitting in the 600 MHz band and the 698–746 MHz band:

(1) Fixed and base stations transmitting a signal with an emission bandwidth of 1 MHz or less must not exceed an effective radiated power (ERP) of 1000 watts and an antenna height of 305 m height above average terrain (HAAT), except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 1000 watts ERP in accordance with Table 1 of this section;

(2) Fixed and base stations located in a county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, and transmitting a signal with an emission bandwidth of 1 MHz or less must not exceed an ERP of 2000 watts and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 2000 watts ERP in accordance with Table 2 of this section;

(3) Fixed and base stations transmitting a signal with an emission bandwidth greater than 1 MHz must not exceed an ERP of 1000 watts/MHz and an

antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 1000 watts/MHz ERP in accordance with Table 3 of this section;

(4) Fixed and base stations located in a county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, and transmitting a signal with an emission bandwidth greater than 1 MHz must not exceed an ERP of 2000 watts/MHz and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 2000 watts/MHz ERP in accordance with Table 4 of this section;

(5) Licensees, except for licensees operating in the 600 MHz downlink band, seeking to operate a fixed or base station located in a county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, and transmitting a signal at an ERP greater than 1000 watts must:

(i) Coordinate in advance with all licensees authorized to operate in the 698–758 MHz, 775–788, and 805–806 MHz bands within 120 kilometers (75 miles) of the base or fixed station;

(ii) coordinate in advance with all regional planning committees, as identified in § 90.527 of this chapter, with jurisdiction within 120 kilometers (75 miles) of the base or fixed station.

(6) Licensees of fixed or base stations transmitting a signal at an ERP greater than 1000 watts and greater than 1000 watts/MHz must comply with the provisions of paragraph (c)(8) of this section and § 27.55(b), except that licensees of fixed or base stations located in a county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, must comply with the provisions of paragraph (c)(8) of this section and § 27.55(b) only if transmitting a signal at an ERP greater than 2000 watts and greater than 2000 watts/MHz;

(7) A licensee authorized to operate in the 710–716 or 740–746 MHz bands may operate a fixed or base station at an ERP up to a total of 50 kW within its authorized, 6 megahertz spectrum block if the licensee complies with the provisions of § 27.55(b). The antenna height for such stations is limited only to the extent required to satisfy the requirements of § 27.55(b).

(8) Licensees intending to operate a base or fixed station at a power level permitted under the provisions of paragraph (c)(6) of this section must provide advanced notice of such operation to the Commission and to licensees authorized in their area of operation. Licensees who must be notified are all licensees authorized under this part to operate on an adjacent spectrum block within 75 km of the base or fixed station. Notifications must provide the location and operating parameters of the base or fixed station, including the station's ERP, antenna coordinates, antenna height above ground, and vertical antenna pattern, and such notifications must be provided at least 90 days prior to the commencement of station operation.

(9) Control and mobile stations in the 698–746 MHz band are limited to 30 watts ERP.

(10) Portable stations (hand-held devices) in the 600 MHz uplink band and the 698–746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

(11) Licensees may employ equipment operating in compliance with either the measurement techniques described in paragraph (b)(11) of this section or a Commission-approved average power technique. In both instances, equipment employed must be authorized in accordance with the provisions of § 27.51.

(12) A licensee authorized to operate in the 716–722 or 722–728 MHz bands may operate a fixed or base station at an ERP up to a total of 50 kW within its authorized, 6 megahertz spectrum block if the licensee complies with the provisions of § 27.55(b), obtains written concurrences from all affected licensees in the 698–746 MHz bands within 120 km of the proposed high power site, and files a copy of each written concurrences with the Wireless Telecommunications Bureau on FCC Form 601. The

antenna height for such stations is limited only to the extent required to satisfy the requirements of § 27.55(b).

(13) Licensees authorized to operate in the 716–722 or 722–728 MHz bands must coordinate with licensees with uplink operations in the 698–716 MHz band to mitigate the potential for harmful interference. Licensees authorized to operate in the 716–722 or 722–728 MHz bands must mitigate harmful interference to licensees' uplink operations in the 698–716 MHz band within 30 days after receiving written notice from the affected licensees. A licensee authorized to operate in the 716–722 or 722–728 MHz bands must ensure that 716–728 MHz band transmissions are filtered at least to the extent that the 716–728 MHz band transmissions are filtered in markets where the 716–728 MHz band licensee holds any license in the 698–716 band, as applicable. For purposes of coordination and mitigations measures in paragraphs (i) and (iii) below, network will be deemed ''deployed'' as of the date upon which the network is able to support a commercial mobile or data service. The coordination and mitigation measures should include, but are not limited to, the following:

(i) If a licensee operating in the 698–716 and 728–746 MHz band deploys a network after the 716–722 or 722–728 MHz bands licensee deploys a network on its 716–722 or 722–728 MHz spectrum in the same geographic market, the 716–722 or 722–728 MHz bands licensee will work with the licensee with uplink operations in the 698–716 MHz band to identify sites that will require additional filtering, and will help the licensee operating in the 698–716 and 728–746 MHz bands to identify proper filters;

(ii) The 716–722 or 722–728 MHz bands licensee must permit licensees operating in the 698–716 and 728–746 MHz bands to collocate on the towers it owns at prevailing market rates; and

(iii) If a 698–716 and 728–746 MHz bands licensee deploys a network before a licensee in the 716–722 or 722–728 MHz bands deploys a network in the same geographic market, the 716–722 or 722–728 MHz bands licensee will work with licensees in the 698–716 and 728–746 MHz bands to identify sites that will need additional filtering and will purchase and pay for installation of required filters on such sites.

(d) The following power and antenna height requirements apply to stations transmitting in the 1695–1710 MHz, 1710–1755 MHz, 1755–1780 MHz, 1915–1920 MHz, 1995–2000 MHz, 2000–2020 MHz, 2110–2155 MHz, 2155–2180 MHz and 2180–2200 MHz bands:

(1) The power of each fixed or base station transmitting in the 1995–2000 MHz, 2110–2155 MHz, 2155–2180 MHz or 2180–2200 MHz band and located in any county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, is limited to:

(i) An equivalent isotropically radiated power (EIRP) of 3280 watts when transmitting with an emission bandwidth of 1 MHz or less;

(ii) An EIRP of 3280 watts/MHz when transmitting with an emission bandwidth greater than 1 MHz.

(2) The power of each fixed or base station transmitting in the 1995–2000 MHz, the 2110–2155 MHz 2155–2180 MHz band, or 2180–2200 MHz band and situated in any geographic location other than that described in paragraph (d)(1) of this section is limited to:

(i) An equivalent isotropically radiated power (EIRP) of 1640 watts when transmitting with an emission bandwidth of 1 MHz or less;

(ii) An EIRP of 1640 watts/MHz when transmitting with an emission bandwidth greater than 1 MHz.

(3) A licensee operating a base or fixed station in the 2110–2155 MHz band utilizing a power greater than 1640 watts EIRP and greater than 1640 watts/MHz EIRP must coordinate such operations in advance with all Government and non-Government satellite entities in the 2025–2110 MHz band. A licensee operating a base or fixed station in the 2110–2180 MHz band utilizing power greater than 1640 watts EIRP and greater than 1640 watts/MHz EIRP must be coordinated in advance with the following licensees authorized to operate within 120 kilometers (75 miles) of the base or fixed station operating in this band: All Broadband Radio Service (BRS) licensees authorized under this part in the 2155–2160 MHz band and all advanced wireless

services (AWS) licensees authorized to operate on adjacent frequency blocks in the 2110–2180 MHz band.

(4) Fixed, mobile, and portable (handheld) stations operating in the 1710–1755 MHz band and mobile and portable stations operating in the 1695–1710 MHz and 1755–1780 MHz bands are limited to 1 watt EIRP. Fixed stations operating in the 1710–1755 MHz band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

(5) Equipment employed must be authorized in accordance with the provisions of §24.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

(6) Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

(7) Fixed, mobile, and portable (handheld) stations operating in the 2000–2020 MHz band are limited to 2 watts EIRP, except that the total power of any portion of an emission that falls within the 2000–2005 MHz band may not exceed 5 milliwatts. A licensee of AWS–4 authority may enter into private operator-to-operator agreements with all 1995–2000 MHz licensees to operate in 2000–2005 MHz at power levels above 5 milliwatts EIRP; except the total power of the AWS–4 mobile emissions may not exceed 2 watts EIRP.

(8) A licensee operating a base or fixed station in the 2180–2200 MHz band utilizing a power greater than 1640 watts EIRP and greater than 1640 watts/MHz EIRP must be coordinated in advance with all AWS licensees authorized to operate on adjacent frequency blocks in the 2180–2200 MHz band.

(9) Fixed, mobile and portable (handheld) stations operating in the 1915–1920 MHz band are limited to 300 milliwatts EIRP.

(10) A licensee operating a base or fixed station in the 1995–2000 MHz band utilizing a power greater than 1640 watts EIRP and greater than 1640 watts/MHz EIRP must be coordinated in advance with all PCS G Block licensees authorized to operate on adjacent frequency blocks in the 1990–1995 MHz band within 120 kilometers of the base or fixed station operating in this band.

(e) The following power limits apply to the paired 1392–1395 MHz and 1432–1435 MHz bands as well as the unpaired 1390–1392 MHz band (1.4 GHz band):

(1) Fixed stations transmitting in the 1390–1392 MHz and 1432–1435 MHz bands are limited to 2000 watts EIRP peak power. Fixed stations transmitting in the 1392–1395 MHz band are limited to 100 watts EIRP peak power.

(2) Mobile stations transmitting in the 1390–1392 MHz and 1432–1435 MHz bands are limited to 4 watts EIRP peak power. Mobile stations transmitting in the1392–1395 MHz band are limited to 1 watt EIRP peak power.

(f) The following power limits apply to the 1670–1675 MHz band:

(1) Fixed and base stations are limited to 2000 watts EIRP peak power.

(2) Mobile stations are limited to 4 watts EIRP peak power.

(g) [Reserved]

(h) The following power limits shall apply in the BRS and EBS:

(1) *Main, booster and base stations.* (i) The maximum EIRP of a main, booster or base station shall not exceed 33 dBW + 10log(X/Y) dBW, where X is the actual channel width in MHz and Y is either 6 MHz if prior to transition or the station is in the MBS following transition or 5.5 MHz if the station is in the LBS and UBS following transition, except as provided in paragraph (h)(1)(ii) of this section.

(ii) If a main or booster station sectorizes or otherwise uses one or more transmitting antennas with a non-omnidirectional horizontal plane radiation pattern, the maximum EIRP in dBW in a given direction shall be determined by the following formula: EIRP = 33 dBW + 10 log(X/Y) dBW + 10 log(360/beamwidth) dBW, where X is the actual channel width in MHz, Y is either (i) 6 MHz if prior to transition or the station is in the MBS following transition or (ii) 5.5 MHz if the station is in the LBS and UBS following transition, and beamwidth is the total horizontal plane beamwidth of the individual transmitting antenna for the station or any sector measured at the half-power points.

(2) *Mobile and other user stations.* Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

(3) For television transmission, the peak power of the accompanying aural signal must not exceed 10 percent of the peak visual power of the transmitter. The Commission may order a reduction in aural signal power to diminish the potential for harmful interference.

(4) For main, booster and response stations utilizing digital emissions with non-uniform power spectral density (*e.g.* unfiltered QPSK), the power measured within any 100 kHz resolution bandwidth within the 6 MHz channel occupied by the non-uniform emission cannot exceed the power permitted within any 100 kHz resolution bandwidth within the 6 MHz channel if it were occupied by an emission with uniform power spectral density, *i.e.*, if the maximum permissible power of a station utilizing a perfectly uniform power spectral density across a 6 MHz channel were 2000 watts EIRP, this would result in a maximum permissible power flux density for the station of 2000/60 = 33.3 watts EIRP per 100 kHz bandwidth. If a non-uniform emission were substituted at the station, station power would still be limited to a maximum of 33.3 watts EIRP within any 100 kHz segment of the 6 MHz channel, irrespective of the fact that this would result in a total 6 MHz channel power of less than 2000 watts EIRP.

(i) Peak transmit power shall be measured over any interval of continuous transmission using instrumentation calibrated in terms of rms-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

TABLE 1 TO § 27.50—PERMISSIBLE POWER AND ANTENNA HEIGHTS FOR BASE AND FIXED STATIONS IN THE 757–758 AND 775–776 MHZ BANDS AND FOR BASE AND FIXED STATIONS IN THE 600 MHZ, 698–757 MHZ, 758–763 MHZ, 776–787 MHZ AND 788–793 MHZ BANDS TRANSMITTING A SIGNAL WITH AN EMISSION BANDWIDTH OF 1 MHZ OR LESS

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) (watts)
Above 1372 (4500)	65
Above 1220 (4000) To 1372 (4500)	70
Above 1067 (3500) To 1220 (4000)	75
Above 915 (3000) To 1067 (3500)	100
Above 763 (2500) To 915 (3000)	140
Above 610 (2000) To 763 (2500)	200
Above 458 (1500) To 610 (2000)	350
Above 305 (1000) To 458 (1500)	600
Up to 305 (1000)	1000

TABLE 2 TO § 27.50—PERMISSIBLE POWER AND ANTENNA HEIGHTS FOR BASE AND FIXED STATIONS IN THE 600 MHZ, 698–757 MHZ, 758–763 MHZ, 776–787 MHZ AND 788–793 MHZ BANDS TRANSMITTING A SIGNAL WITH AN EMISSION BANDWIDTH OF 1 MHZ OR LESS

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) (watts)
Above 1372 (4500)	130
Above 1220 (4000) To 1372 (4500)	140
Above 1067 (3500) To 1220 (4000)	150
Above 915 (3000) To 1067 (3500)	200
Above 763 (2500) To 915 (3000)	280
Above 610 (2000) To 763 (2500)	400
Above 458 (1500) To 610 (2000)	700
Above 305 (1000) To 458 (1500)	1200
Up to 305 (1000)	2000

TABLE 3 TO § 27.50—PERMISSIBLE POWER AND ANTENNA HEIGHTS FOR BASE AND FIXED STATIONS IN THE 600 MHZ, 698–757 MHZ, 758–763 MHZ, 776–787 MHZ AND 788–793 MHZ BANDS TRANSMITTING A SIGNAL WITH AN EMISSION BANDWIDTH GREATER THAN 1 MHZ

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) per MHz (watts/MHz)
Above 1372 (4500)	65
Above 1220 (4000) To 1372 (4500)	70
Above 1067 (3500) To 1220 (4000)	75
Above 915 (3000) To 1067 (3500)	100
Above 763 (2500) To 915 (3000)	140
Above 610 (2000) To 763 (2500)	200
Above 458 (1500) To 610 (2000)	350
Above 305 (1000) To 458 (1500)	600
Up to 305 (1000)	1000

TABLE 4 TO § 27.50—PERMISSIBLE POWER AND ANTENNA HEIGHTS FOR BASE AND FIXED STATIONS IN THE 600 MHZ, 698–757 MHZ, 758–763 MHZ, 776–787 MHZ AND 788–793 MHZ BANDS TRANSMITTING A SIGNAL WITH AN EMISSION BANDWIDTH GREATER THAN 1 MHZ

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) per MHz (watts/MHz)
Above 1372 (4500)	130
Above 1220 (4000) To 1372 (4500)	140
Above 1067 (3500) To 1220 (4000)	150
Above 915 (3000) To 1067 (3500)	200
Above 763 (2500) To 915 (3000)	280
Above 610 (2000) To 763 (2500)	400
Above 458 (1500) To 610 (2000)	700
Above 305 (1000) To 458 (1500)	1200
Up to 305 (1000)	2000

[62 FR 16497, Apr. 7, 1997]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 27.50, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at *www.fdsys.gov*.

EFFECTIVE DATE NOTE: At 72 FR 27709, May 16, 2007, § 27.50 was amended, in part, by revising paragraph (c). Paragraphs (c) (5) and (8) contain information collection and recordkeeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

§ 27.51 Equipment authorization.

(a) Each transmitter utilized for operation under this part must be of a type that has been authorized by the Commission under its certification procedure.

(b) Any manufacturer of radio transmitting equipment to be used in these services may request equipment authorization following the procedures set forth in subpart J of part 2 of this chapter. Equipment authorization for an individual transmitter may be requested by an applicant for a station authorization by following the procedures set forth in part 2 of this chapter.

[65 FR 3147, Jan. 20, 2000]

§ 27.52 RF safety.

Licensees and manufacturers are subject to the radio frequency radiation exposure requirements specified in sections 1.1307(b), 2.1091, and 2.1093 of this chapter, as appropriate. Applications for equipment authorization of mobile or portable devices operating under this section must contain a statement confirming compliance with these requirements for both fundamental emissions and unwanted emissions. Technical information showing the basis for this statement must be submitted to the Commission upon request.

§ 27.53 Emission limits.

(a) For operations in the 2305–2320 MHz band and the 2345–2360 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power P (with averaging performed only during periods of transmission) within the licensed band(s) of operation, in watts, by the following amounts:

(1) For base and fixed stations' operations in the 2305–2320 MHz band and the 2345–2360 MHz band:

(i) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, and not less than 75 + 10 log (P) dB on all frequencies between 2320 and 2345 MHz;

(ii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2300 and 2305 MHz, 70 + 10 log (P) dB on all frequencies between 2287.5 and 2300 MHz, 72 + 10 log (P) dB on all frequencies between 2285 and 2287.5 MHz, and 75 + 10 log (P) dB below 2285 MHz;

(iii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2362.5 MHz, 55 + 10 log (P) dB on all frequencies between 2362.5 and 2365 MHz, 70 + 10 log (P) dB on all frequencies between 2365 and 2367.5 MHz, 72 + 10 log (P) dB on all frequencies between 2367.5 and 2370 MHz, and 75 + 10 log (P) dB above 2370 MHz.

(2) For fixed customer premises equipment (CPE) stations operating in the 2305–2320 MHz band and the 2345–2360 MHz band transmitting with more than 2 watts per 5 megahertz average EIRP:

(i) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, and not less than 75 + 10 log (P) dB on all frequencies between 2320 and 2345 MHz;

(ii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2300 and 2305 MHz, 70 + 10 log (P) dB on all frequencies between 2287.5 and 2300 MHz, 72 + 10 log (P) dB on all frequencies between 2285 and 2287.5 MHz, and 75 + 10 log (P) dB below 2285 MHz;

(iii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2362.5 MHz, 55 + 10 log (P) dB on all frequencies between 2362.5 and 2365 MHz, 70 + 10 log (P) dB on all frequencies between 2365 and 2367.5 MHz, 72 + 10 log (P) dB on all frequencies between 2367.5 and 2370 MHz, and 75 + 10 log (P) dB above 2370 MHz.

(3) For fixed CPE stations operating in the 2305–2320 MHz and 2345–2360 MHz bands transmitting with 2 watts per 5 megahertz average EIRP or less:

(i) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than 55 + 10 log (P) dB on all frequencies between 2320 and 2324 MHz and between 2341 and 2345 MHz, not less than 61 + 10 log (P) dB on all frequencies between 2324 and 2328 MHz and between 2337 and 2341 MHz, and not less than 67 + 10 log (P) dB on all frequencies between 2328 and 2337 MHz;

(ii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2300 and 2305 MHz, 55 + 10 log (P) dB on all frequencies between 2296 and 2300

MHz, 61 + 10 log (P) dB on all frequencies between 2292 and 2296 MHz, 67 + 10 log (P) dB on all frequencies between 2288 and 2292 MHz, and 70 + 10 log (P) dB below 2288 MHz;

(iii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz.

(4) For mobile and portable stations operating in the 2305–2315 MHz and 2350–2360 MHz bands:

(i) By a factor of not less than: 43 + 10 log (P) dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than 55 + 10 log (P) dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than 61 + 10 log (P) dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than 67 + 10 log (P) dB on all frequencies between 2328 and 2337 MHz;

(ii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2300 and 2305 MHz, 55 + 10 log (P) dB on all frequencies between 2296 and 2300 MHz, 61 + 10 log (P) dB on all frequencies between 2292 and 2296 MHz, 67 + 10 log (P) dB on all frequencies between 2288 and 2292 MHz, and 70 + 10 log (P) dB below 2288 MHz;

(iii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz.

(5) *Measurement procedure.* Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the channel blocks at 2305, 2310, 2315, 2320, 2345, 2350, 2355, and 2360 MHz, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (*i.e.,* 1 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(6) [Reserved]

(7) The measurements of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power;

(8) Waiver requests of any of the out-of-band emission limits in paragraphs (a)(1) through (a)(7) of this section shall be entertained only if interference protection equivalent to that afforded by the limits is shown;

(9) [Reserved]

(10) The out-of-band emissions limits in paragraphs (a)(1) through (a)(3) of this section may be modified by the private contractual agreement of all affected licensees, who must maintain a copy of the agreement in their station files and disclose it to prospective assignees, transferees, or spectrum lessees and, upon request, to the Commission.

(b) *For WCS Satellite DARS operations:* The limits set forth in § 25.202(f) of this chapter shall apply, except that Satellite DARS operations shall be limited to a maximum power flux density of −197 dBW/m^2/4 kHz in the 2370–2390 MHz band at Arecibo, Puerto Rico.

(c) For operations in the 746–758 MHz band and the 776–788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On any frequency outside the 746–758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;

(2) On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;

(3) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than 76 + 10 log (P) dB in a 6.25 kHz band segment, for base and fixed stations;

(4) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations;

(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

(6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

(d) [Reserved]

(e) For operations in the 775–776 MHz and 805–806 MHz bands, transmitters must comply with either paragraphs (d)(1) through (5) of this section or the ACP emission limitations set forth in paragraphs (d)(6) to (d)(9) of this section.

(1) On all frequencies between 758–775 MHz and 788–805 MHz, the power of any emission outside the licensee's frequency bands of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by a factor not less than 76 + 10 log (P) dB in a 6.25 kHz band segment, for base and fixed stations;

(2) On all frequencies between 758–775 MHz and 788–805 MHz, the power of any emission outside the licensee's frequency bands of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations;

(3) On any frequency outside the 775–776 MHz and 805–806 MHz bands, the power of any emission shall be attenuated outside the band below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB;

(4) Compliance with the provisions of paragraphs (e)(1) and (e)(2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment;

(5) Compliance with the provisions of paragraph (e)(3) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed.

(6) The adjacent channel power (ACP) requirements for transmitters designed for various channel sizes are shown in the following tables. Mobile station requirements apply to handheld, car mounted and control station units. The tables specify a value for the ACP as a function of the displacement from the channel center frequency and measurement bandwidth. In the following tables, ''(s)'' indicates a swept measurement may be used.

6.25 kHz Mobile Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
6.25	6.25	−40
12.5	6.25	−60
18.75	6.25	−60
25.00	6.25	−65
37.50	25.00	−65
62.50	25.00	−65
87.50	25.00	−65
150.00	100.00	−65
250.00	100.00	−65
350.00	100.00	−65
>400 kHz to 12 MHz	30(s)	−75
12 MHz to paired receive band	30(s)	−75
In the paired receive band	30(s)	−100

12.5 kHz Mobile Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
9.375	6.25	−40
15.625	6.25	−60
21.875	6.25	−60
37.50	25.00	−60
62.50	25.00	−65
87.50	25.00	−65
150.00	100	−65
250.00	100	−65

12.5 kHz Mobile Transmitter ACP Requirements—Continued

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
350.00	100	−65
>400 to 12 MHz	30(s)	−75
12 MHz to paired receive band	30(s)	−75
In the paired receive band	30(s)	−100

25 kHz Mobile Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
15.625	6.25	−40
21.875	6.25	−60
37.50	25	−60
62.50	25	−65
87.50	25	−65
150.00	100	−65
250.00	100	−65
350.00	100	−65
>400 kHz to 12 MHz	30(s)	−75
12 MHz to paired receive band	30(s)	−75
In the paired receive band	30(s)	−100

150 kHz Mobile Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP relative (dBc)
100	50	−40
200	50	−50
300	50	−50
400	50	−50
600–1000	30(s)	−60
1000 to receive band	30(s)	−70
In the receive band	30(s)	−100

6.25 kHz Base Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
6.25	6.25	−40
12.50	6.25	−60
18.75	6.25	−60
25.00	6.25	−65
37.50	25	−65
62.50	25	−65
87.50	25	−65
150.00	100	−65
250.00	100	−65
350.00	100	−65
>400 kHz to 12 MHz	30(s)	−80
12 MHz to paired receive band	30(s)	−80

6.25 kHz Base Transmitter ACP Requirements—Continued

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
In the paired receive band	30(s)	[1] −85

[1] Although we permit individual base transmitters to radiate a maximum ACP of −85 dBc in the paired receive band, licensees deploying these transmitters may not exceed an ACP of −100 dBc in the paired receive band when measured at either the transmitting antenna input port or the output of the transmitter combining network. Consequently, licensees deploying these transmitters may need to use external filters to comply with the more restrictive ACP limit.

12.5 kHz Base Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
9.375	6.25	−40
15.625	6.25	−60
21.875	6.25	−60
37.5	25	−60
62.5	25	−65
87.5	25	−65
150	100	−65
250	100	−65
350.00	100	−65
>400 kHz to 12 MHz	30(s)	−80
12 MHz to paired receive band	30(s)	−80
In the paired receive band	30(s)	[1] −85

[1] Although we permit individual base transmitters to radiate a maximum ACP of −85 dBc in the paired receive band, licensees deploying these transmitters may not exceed an ACP of −100 dBc in the paired receive band when measured at either the transmitting antenna input port or the output of the transmitter combining network. Consequently, licensees deploying these transmitters may need to use external filters to comply with the more restrictive ACP limit.

25 kHz Base Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
15.625	6.25	−40
21.875	6.25	−60
37.5	25	−60
62.5	25	−65
87.5	25	−65
150	100	−65
250	100	−65
350	100.00	−65
>400 kHz to 12 MHz	30(s)	−80
12 MHz to paired receive band	30(s)	−80
In the paired receive band	30(s)	[1] −85

[1] Although we permit individual base transmitters to radiate a maximum ACP of −85 dBc in the paired receive band, licensees deploying these transmitters may not exceed an ACP of −100 dBc in the paired receive band when measured at either the transmitting antenna input port or the output of the transmitter combining network. Consequently, licensees deploying these transmitters may need to use external filters to comply with the more restrictive ACP limit.

150 kHz Base Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
100	50	−40
200	50	−50
300	50	−55
400	50	−60
600–1000	30(s)	−65
1000 to receive band	30(s)	−75 (continues at −6dB/oct
In the receive band	30(s)	[1] −85

[1] Although we permit individual base transmitters to radiate a maximum ACP of −85 dBc in the paired receive band, licensees deploying these transmitters may not exceed an ACP of −100 dBc in the paired receive band when measured at either the transmitting antenna input port or the output of the transmitter combining network. Consequently, licensees deploying these transmitters may need to use external filters to comply with the more restrictive ACP limit.

(7) *ACP measurement procedure.* The following procedures are to be followed for making ACP transmitter measurements. For time division multiple access (TDMA) systems, the measurements are to be made under TDMA operation only during time slots when the transmitter is on. All measurements must be made at the input to the transmitter's antenna. Measurement bandwidth used below implies an instrument that measures the power in many narrow bandwidths (*e.g.*, 300 Hz) and integrates these powers across a larger band to determine power in the measurement bandwidth.

(i) *Setting reference level.* Using a spectrum analyzer capable of ACP measurements, set the measurement bandwidth to the channel size. For example, for a 6.25 kHz transmitter, set the measurement bandwidth to 6.25 kHz; for a 150 kHz transmitter, set the measurement bandwidth to 150 kHz. Set the frequency offset of the measurement bandwidth to zero and adjust the center frequency of the spectrum analyzer to give the power level in the measurement bandwidth. Record this power level in dBm as the ''reference power level''.

(ii) *Non-swept power measurement.* Using a spectrum analyzer capable of ACP measurements, set the measurement bandwidth as shown in the tables above. Measure the ACP in dBm. These measurements should be made at maximum power. Calculate the coupled power by subtracting the measurements made in this step from the reference power measured in the previous step. The absolute ACP values must be less than the values given in the table for each condition above.

(iii) *Swept power measurement.* Set a spectrum analyzer to 30 kHz resolution bandwidth, 1 MHz video bandwidth and sample mode detection. Sweep ±MHz from the carrier frequency. Set the reference level to the RMS value of the transmitter power and note the absolute power. The response at frequencies greater than 600 kHz must be less than the values in the tables above.

(8) *Out-of-band emission limit.* On any frequency outside of the frequency ranges covered by the ACP tables in this section, the power of any emission must be reduced below the unmodulated carrier power (P) by at least 43 + 10 log (P) dB.

(9) *Authorized bandwidth.* Provided that the ACP requirements of this section are met, applicants may request any authorized bandwidth that does not exceed the channel size.

(f) For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

(g) For operations in the 600 MHz band and the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

(h) *AWS emission limits*—(1) *General protection levels.* Except as otherwise specified below, for operations in the 1695–1710 MHz, 1710–1755 MHz, 1755–1780

MHz, 1915–1920 MHz, 1995–2000 MHz, 2000–2020 MHz, 2110–2155 MHz, 2155–2180 MHz, and 2180–2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10} (P)$ dB.

(2) *Additional protection levels.* Notwithstanding the foregoing paragraph (h)(1) of this section:

(i) Operations in the 2180–2200 MHz band are subject to the out-of-band emission requirements set forth in § 27.1134 for the protection of federal government operations operating in the 2200–2290 MHz band.

(ii) For operations in the 2000–2020 MHz band, the power of any emissions below 2000 MHz shall be attenuated below the transmitter power (P) in watts by at least $70 + 10 \log_{10}(P)$ dB.

(iii) For operations in the 1915–1920 MHz band, the power of any emission between 1930–1995 MHz shall be attenuated below the transmitter power (P) in watts by at least $70 + 10 \log_{10}(P)$ dB.

(iv) For operations in the 1995–2000 MHz band, the power of any emission between 2005–2020 MHz shall be attenuated below the transmitter power (P) in watts by at least $70 + 10 \log_{10}(P)$ dB.

(3) *Measurement procedure.* (i) Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(ii) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges, both upper and lower, as the design permits.

(iii) The measurements of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.

(4) *Private agreements.* (i) For AWS operations in the 2000–2020 MHz and 2180–2200 MHz bands, to the extent a licensee establishes unified operations across the AWS blocks, that licensee may choose not to observe the emission limit specified in paragraph (h)(1), above, strictly between its adjacent block licenses in a geographic area, so long as it complies with other Commission rules and is not adversely affecting the operations of other parties by virtue of exceeding the emission limit.

(ii) For AWS operations in the 2000–2020 MHz band, a licensee may enter into private agreements with all licensees operating between 1995 and 2000 MHz to allow the $70 + 10 \log_{10}(P)$ dB limit to be exceeded within the 1995–2000 MHz band.

(iii) An AWS licensee who is a party to a private agreement described in this section (4) must maintain a copy of the agreement in its station files and disclose it, upon request, to prospective AWS assignees, transferees, or spectrum lessees and to the Commission.

(i) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

(j)(1) For operations in the unpaired 1390–1392 MHz band and the paired 1392–1395 MHz and 1432–1435 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) by at least $43 + 10 \log (P)$ dB. Compliance with these provisions is based on the procedures described in paragraph (a)(4) of this section.

(2) In the 1390–1395 MHz and 1432–1435 MHz bands, licensees are encouraged to take all reasonable steps to ensure that unwanted emission power does not exceed the following levels in the band 1400–1427 MHz:

(i) For stations of point-to-point systems in the fixed service: −45 dBW/27 MHz.

(ii) For stations in the mobile service: −60 dBW/27 MHz.

(k) For operations in the 1670–1675 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below

the transmitter power (P) by at least 43 + 10 log (P) dB. Compliance with these provisions is based on the procedures described in paragraph (a)(4) of this section.

(l) [Reserved]

(m) For BRS and EBS stations, the power of any emissions outside the licensee's frequency bands of operation shall be attenuated below the transmitter power (P) measured in watts in accordance with the standards below. If a licensee has multiple contiguous channels, out-of-band emissions shall be measured from the upper and lower edges of the contiguous channels.

(1) Prior to the transition, and thereafter, solely within the MBS, for analog operations with an EIRP in excess of −9 dBW, the signal shall be attenuated at the channel edges by at least 38 dB relative to the peak visual carrier, then linearly sloping from that level to at least 60 dB of attenuation at 1 MHz below the lower band edge and 0.5 MHz above the upper band edge, and attenuated at least 60 dB at all other frequencies.

(2) For digital base stations, the attenuation shall be not less than 43 + 10 log (P) dB, unless a documented interference complaint is received from an adjacent channel licensee with an overlapping Geographic Service Area. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS No. 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. Provided that a documented interference complaint cannot be mutually resolved between the parties prior to the applicable deadline, then the following additional attenuation requirements shall apply:

(i) If a pre-existing base station suffers harmful interference from emissions caused by a new or modified base station located 1.5 km or more away, within 24 hours of the receipt of a documented interference complaint the licensee of the new or modified base station must attenuate its emissions by at least 67 + 10 log (P) dB measured at 3 megahertz, above or below, from the channel edge of its frequency block and shall immediately notify the complaining licensee upon implementation of the additional attenuation. No later than 60 days after the implementation of such additional attenuation, the licensee of the complaining base station must attenuate its base station emissions by at least 67 + 10 log (P) dB measured at 3 megahertz, above or below, from the channel edge of its frequency block of the new or modified base station.

(ii) If a pre-existing base station suffers harmful interference from emissions caused by a new or modified base station located less than 1.5 km away, within 24 hours of receipt of a documented interference complaint the licensee of the new or modified base station must attenuate its emissions by at least 67 + 10 log (P)−20 log (Dkm/1.5) dB measured at 3 megahertz, above or below, from the channel edge of its frequency block of the complaining licensee, or if both base stations are colocated, limit its undesired signal level at the pre-existing base station receiver(s) to no more than −107 dBm measured in a 5.5 megahertz bandwidth and shall immediately notify the complaining licensee upon such reduction in the undesired signal level. No later than 60 days after such reduction in the undesired signal level, the complaining licensee must attenuate its base station emissions by at least 67 + 10 log (P) dB measured at 3 megahertz, above or below, from the channel edge of its frequency block of the new or modified base station.

(iii) If a new or modified base station suffers harmful interference from emissions caused by a pre-existing base station located 1.5 km or more away, within 60 days of receipt of a documented interference complaint the licensee of each base station must attenuate its base station emissions by at least 67 + 10 log (P) dB measured at 3 megahertz, above or below, from the channel edge of its frequency block of the other licensee.

(iv) If a new or modified base station suffers harmful interference from emissions caused by a pre-existing base station located less than 1.5 km away, within 60 days of receipt of a documented interference complaint: (a) The licensee of the new or modified base station must attenuate its OOBE by at

least 67 + 10 log (P) − 20 log (Dkm/1.5) measured 3 megahertz above or below, from the channel edge of its frequency block of the other licensee, or if the base stations are co-located, limit its undesired signal level at the other base station receiver(s) to no more than −107 dBm measured in a 5.5-megahertz bandwidth; and (b) the licensee causing the interference must attenuate its emissions by at least 67 + 10 log (P) dB measured at 3 megahertz, above or below, from the channel edge of its frequency block of the new or modified base station.

(v) For all fixed digital user stations, the attenuation factor shall be not less than 43 + 10 log (P) dB at the channel edge.

(3) Prior to transition and thereafter solely within the MBS, and notwithstanding paragraph (l)(2) of this section, the maximum out-of-band power of a digital transmitter operating on a single 6 MHz channel with an EIRP in excess of −9 dBW employing digital modulation for the primary purpose of transmitting video programming shall be attenuated at the 6 MHz channel edges at least 25 dB relative to the licensed average 6 MHz channel power level, then attenuated along a linear slope to at least 40 dB at 250 kHz beyond the nearest channel edge, then attenuated along a linear slope from that level to at least 60 dB at 3 MHz above the upper and below the lower licensed channel edges, and attenuated at least 60 dB at all other frequencies.

(4) For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

(5) Notwithstanding the provisions of paragraphs (l)(2) and (l)(4) of this section, prior to transition, a licensee may continue to operate facilities deployed as of January 10, 2005 provided that such facilities operate in compliance with the emission mask applicable to those services prior to January 10, 2005.

(6) *Measurement procedure.* Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed; for mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495–2496 MHz, in which case a resolution bandwidth of at least one percent may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495–2496 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.

(7) *Alternative out of band emission limit.* Licensees in this service may establish an alternative out of band emission limit to be used at specified band edge(s) in specified geographical

areas, in lieu of that set forth in this section, pursuant to a private contractual arrangement of all affected licensees and applicants. In this event, each party to such contract shall maintain a copy of the contract in their station files and disclose it to prospective assignees or transferees and, upon request, to the FCC.

(n) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

[62 FR 16497, Apr. 7, 1997]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §27.53, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at *www.fdsys.gov*.

§27.54 Frequency stability.

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

§27.55 Power strength limits.

(a) *Field strength limits.* For the following bands, the predicted or measured median field strength at any location on the geographical border of a licensee's service area shall not exceed the value specified unless the adjacent affected service area licensee(s) agree(s) to a different field strength. This value applies to both the initially offered service areas and to partitioned service areas.

(1) 1995–2000 MHz, 2110–2155, 2155–2180, 2180–2200, 2305–2320, and 2345–2360 MHz bands: 47 dBμV/m.

(2) 600 MHz, 698–758, and 775–787 MHz bands: 40 dBμV/m.

(3) The paired 1392–1395 MHz and 1432–1435 MHz bands and the unpaired 1390–1392 MHz band (1.4 GHz band): 47 dBμV/m.

(4) BRS and EBS: The predicted or measured median field strength at any location on the geographical border of a licensee's service area shall not exceed the value specified unless the adjacent affected service area licensee(s) agree(s) to a different field strength. This value applies to both the initially offered services areas and to partitioned services areas. Licensees may exceed this signal level where there is no affected licensee that is constructed and providing service. Once the affected licensee is providing service, the original licensee will be required to take whatever steps necessary to comply with the applicable power level at its GSA boundary, absent consent from the affected licensee.

(i) Prior to transition, the signal strength at any point along the licensee's GSA boundary does not exceed the greater of that permitted under the licensee's Commission authorizations as of January 10, 2005 or 47 dBμV/m.

(ii) Following transition, for stations in the LBS and UBS, the signal strength at any point along the licensee's GSA boundary must not exceed 47 dBμV/m. This field strength is to be measured at 1.5 meters above the ground over the channel bandwidth (*i.e.*, each 5.5 MHz channel for licensees that hold a full channel block, and for the 5.5 MHz channel for licensees that hold individual channels).

(iii) Following transition, for stations in the MBS, the signal strength at any point along the licensee's GSA boundary must not exceed the greater of $-73.0 + 10 \log(X/6)$ dBW/m^2, where X is the bandwidth in megahertz of the channel, or for facilities that are substantially similar to the licensee's pretransition facilities (including modifications that do not alter the fundamental nature or use of the transmissions), the signal strength at such point that resulted from the station's operations immediately prior to the transition, provided that such operations complied with paragraph (a)(4)(i) of this section.

(b) *Power flux density limit for stations operating in the 698–746 MHz bands.* For base and fixed stations operating in the 698–746 MHz band in accordance with the provisions of §27.50(c)(6), the power flux density that would be produced by such stations through a combination of antenna height and vertical gain pattern must not exceed 3000 microwatts per square meter on the ground over the area extending to 1 km from the base of the antenna mounting structure.

(c) *Power flux density limit for stations operating in the 746–757 MHz and 776–787 MHz bands.* For base and fixed stations operating in the 746–757 MHz and 776–

787 MHz bands in accordance with the provisions of § 27.50(b)(6), the power flux density that would be produced by such stations through a combination of antenna height and vertical gain pattern must not exceed 3000 microwatts per square meter on the ground over the area extending to 1 km from the base of the antenna mounting structure.

[69 FR 5715, Feb. 6, 2004, as amended at 69 FR 72034, Dec. 10, 2004; 72 FR 27712, May 16, 2007; 72 FR 48852, Aug. 24, 2007; 73 FR 26040, May 8, 2008; 78 FR 8270, Feb. 5, 2013; 78 FR 50256, Aug. 16, 2013; 79 FR 599, Jan. 6, 2014; 79 FR 32413, June 4, 2014; 79 FR 48539, Aug. 15, 2014]

§ 27.56 Antenna structures; air navigation safety.

A licensee that owns its antenna structure(s) must not allow such antenna structure(s) to become a hazard to air navigation. In general, antenna structure owners are responsible for registering antenna structures with the FCC if required by part 17 of this chapter, and for installing and maintaining any required marking and lighting. However, in the event of default of this responsibility by an antenna structure owner, the FCC permittee or licensee authorized to use an affected antenna structure will be held responsible by the FCC for ensuring that the antenna structure continues to meet the requirements of part 17 of this chapter. See § 17.6 of this chapter.

(a) *Marking and lighting.* Antenna structures must be marked, lighted and maintained in accordance with part 17 of this chapter and all applicable rules and requirements of the Federal Aviation Administration. For any construction or alteration that would exceed the requirements of section 17.7 of this chapter, licensees must notify the appropriate Regional Office of the Federal Aviation Administration (FAA Form 7460–1) and file a request for antenna height clearance and obstruction marking and lighting specifications (FCC Form 854) with the FCC, WTB, 1270 Fairfield Road, Gettysburg, PA 17325.

(b) *Maintenance contracts.* Antenna structure owners (or licensees and permittees, in the event of default by an antenna structure owner) may enter into contracts with other entities to monitor and carry out necessary maintenance of antenna structures. Antenna structure owners (or licensees and permittees, in the event of default by an antenna structure owner) that make such contractual arrangements continue to be responsible for the maintenance of antenna structures in regard to air navigation safety.

§ 27.57 International coordination.

(a) WCS operations in the border areas shall be subject to coordination with those countries and provide protection to non-U.S. operations in the 2305–2320 and 2345–2360 MHz bands as appropriate. In addition, satellite DARS operations in WCS spectrum shall be subject to international satellite coordination procedures.

(b) Wireless operations in the 512–608 MHz, 614–763 MHz, 775–793 MHz, and 805–806 MHz bands are subject to current and future international agreements between the United States and Canada and the United States and Mexico. Unless otherwise modified by international treaty, licenses must not cause interference to, and must accept harmful interference from, television broadcast operations in Mexico and Canada, where these services are coprimary in the band.

(c) Operation in the 1695–1710 MHz, 1710–1755 MHz, 1755–1780 MHz, 1915–1920 MHz, 1995–2000 MHz, 2000–2020 MHz, 2110–2155 MHz, 2155–2180 MHz, and 2180–2200 MHz bands is subject to international agreements with Mexico and Canada.

[62 FR 9658, Mar. 3, 1997, as amended at 67 FR 5511, Feb. 6, 2002; 69 FR 5715, Feb. 6, 2004; 72 FR 48852, Aug. 24, 2007; 79 FR 599, Jan. 6, 2014; 79 FR 32413, June 4, 2014; 79 FR 48539, Aug. 15, 2014]

§ 27.58 Interference to BRS/EBS receivers.

(a) WCS licensees shall bear full financial obligation to remedy interference to BRS/EBS block downconverters if all of the following conditions are met:

(1) The complaint is received by the WCS licensee prior to February 20, 2002;

(2) The BRS/EBS downconverter was installed prior to August 20, 1998;

(3) The WCS fixed or land station transmits at 50 or more watts peak EIRP;

(4) The BRS/EBS downconverter is located within a WCS transmitter's free space power flux density contour of −34 dBW/m^2; and

(5) The BRS/EBS customer or licensee has informed the WCS licensee of the interference within one year from the initial operation of the WCS transmitter or within one year from any subsequent power increases at the WCS station.

(b) Resolution of the complaint shall be at no cost to the complainant.

(c) Two or more WCS licensees collocating their antennas on the same tower shall assume shared responsibility for remedying interference complaints within the area determined by paragraph (a)(4) of this section unless an offending station can be readily determined and then that station shall assume full financial responsibility.

(d) If the WCS licensee cannot otherwise eliminate interference caused to BRS/EBS reception, then that licensee must cease operations from the offending WCS facility.

(e) At least 30 days prior to commencing operations from any new WCS transmission site or with increased power from any existing WCS transmission site, a WCS licensee shall notify all BRS/EBS licensees in or through whose licensed service areas they intend to operate of the technical parameters of the WCS transmission facility. WCS and BRS/EBS licensees are expected to coordinate voluntarily and in good faith to avoid interference problems and to allow the greatest operational flexibility in each other's operations.

[62 FR 16498, Apr. 7, 1997, as amended at 69 FR 72034, Dec. 10, 2004]

§ 27.59 [Reserved]

§ 27.60 TV/DTV interference protection criteria.

Base, fixed, control, and mobile transmitters in the 698–758 MHz, 775–788 MHz, and 805–806 MHz frequency bands must be operated only in accordance with the rules in this section to reduce the potential for interference to public reception of the signals of existing TV and DTV broadcast stations transmitting on TV Channels 51 through 68.

(a) *D/U ratios.* Licensees must choose site locations that are a sufficient distance from co-channel and adjacent channel TV and DTV stations, and/or must use reduced transmitting power or transmitting antenna height such that the following minimum desired signal-to-undesired signal ratios (D/U ratios) are met.

(1) The minimum D/U ratio for co-channel stations is:

(i) 40 dB at the hypothetical Grade B contour (64 dBμV/m) (88.5 kilometers (55 miles)) of the TV station;

(ii) For transmitters operating in the 698–746 MHz frequency band, 23 dB at the equivalent Grade B contour (41 dBμV/m) (88.5 kilometers (55 miles)) of the DTV station; or

(iii) For transmitters operating in the 746–758 MHz, 775–788 MHz, and 805–806 MHz frequency bands, 17 dB at the equivalent Grade B contour (41 dBμV/m) (88.5 kilometers (55 miles)) of the DTV station.

(2) The minimum D/U ratio for adjacent channel stations is 0 dB at the hypothetical Grade B contour (64 dBμV/m) (88.5 kilometers (55 miles)) of the TV station or −23 dB at the equivalent Grade B contour (41 dBμV/m) (88.5 kilometers (55 miles)) of the DTV station.

(b) *TV stations and calculation of contours.* The methods used to calculate TV contours and antenna heights above average terrain are given in §§ 73.683 and 73.684 of this chapter. Tables to determine the necessary minimum distance from the 698–758 MHz, 775–788 MHz, and 805–806 MHz station to the TV/DTV station, assuming that the TV/DTV station has a hypothetical or equivalent Grade B contour of 88.5 kilometers (55 miles), are located in § 90.309 of this chapter and labeled as Tables B, D, and E. The locations of existing and proposed TV/DTV stations during the period of transition from analog to digital TV service are given in part 73 of this chapter and in the final proceedings of MM Docket No. 87–268.

(1) Licensees of stations operating within the ERP and HAAT limits of § 27.50 must select one of four methods to meet the TV/DTV protection requirements, subject to Commission approval:

(i) Utilize the geographic separation specified in Tables B, D, and E of § 90.309 of this chapter, as appropriate;

(ii) When station parameters are greater than those indicated in the tables, calculate geographic separation in accordance with the required D/U ratios, as provided in paragraph (a) of this section;

(iii) Submit an engineering study justifying the proposed separations based on the parameters of the land mobile station and the parameters, including authorized and/or applied for facilities, of the TV/DTV station(s) it is trying to protect; or,

(iv) Obtain written concurrence from the applicable TV/DTV station(s). If this method is chosen, a copy of the agreement must be submitted with the application.

(2) The following is the method for geographic separations. (i) Base and fixed stations that operate in the 746–758 MHz and 775–787 MHz bands having an antenna height (HAAT) less than 152 m. (500 ft.) shall afford protection to co-channel and adjacent channel TV/DTV stations in accordance with the values specified in Table B (co-channel frequencies based on 40 dB protection) and Table E (adjacent channel frequencies based on 0 dB protection) in § 90.309 of this chapter. Base and fixed stations that operate in the 698–746 MHz band having an antenna height (HAAT) less than 152 m. (500 ft.) shall afford protection to adjacent channel DTV stations in accordance with the values specified in Table E in § 90.309 of this chapter, shall afford protection to co-channel DTV stations by providing 23 dB protection to such stations' equivalent Grade B contour (41 dBμV/m), and shall afford protection to co-channel and adjacent channel TV stations in accordance with the values specified in Table B (co-channel frequencies based on 40 dB protection) and Table E (adjacent channel frequencies based on 0 dB protection) in § 90.309 of this chapter. For base and fixed stations having an antenna height (HAAT) between 152–914 meters (500–3,000 ft.) the effective radiated power must be reduced below 1 kilowatt in accordance with the values shown in the power reduction graph in Figure B in § 90.309 of this chapter. For heights of more than 152 m. (500 ft.) above average terrain, the distance to the radio path horizon will be calculated assuming smooth earth. If the distance so determined equals or exceeds the distance to the hypothetical or equivalent Grade B contour of a co-channel TV/DTV station (*i.e.*, it exceeds the distance from the appropriate Table in § 90.309 of this chapter to the relevant TV/DTV station), an authorization will not be granted unless it can be shown in an engineering study (*see* paragraph (b)(1)(iii) of this section) that actual terrain considerations are such as to provide the desired protection at the actual Grade B contour (64 dBμV/m for TV and 41 dBμV/m for DTV stations) or unless the effective radiated power will be further reduced so that, assuming free space attenuation, the desired protection at the actual Grade B contour (64 dBμV/m for TV and 41 dBμV/m coverage contour for DTV stations) will be achieved. Directions for calculating powers, heights, and reduction curves are listed in § 90.309 of this chapter for land mobile stations. Directions for calculating coverage contours are listed in § 73.683 through 73.685 of this chapter for TV stations and in § 73.625 of this chapter for DTV stations.

(ii) Control, fixed, and mobile stations (including portables) that operate in the 787–788 MHz and 805–806 MHz bands and control and mobile stations (including portables) that operate in the 698–757 MHz and 776–787 MHz bands are limited in height and power and therefore shall afford protection to co-channel and adjacent channel TV/DTV stations in the following manner:

(A) For control, fixed, and mobile stations (including portables) that operate in the 787–788 MHz and 805–806 MHz bands and control and mobile stations (including portables) that operate in the 746–757 MHz and 776–787 MHz bands, co-channel protection shall be afforded in accordance with the values specified in Table D (co-channel frequencies based on 40 dB protection for TV stations and 17 dB for DTV stations) in § 90.309 of this chapter.

(B) For control and mobile stations (including portables) that operate in the 698–746 MHz band, co-channel protection shall be afforded to TV stations in accordance with the values specified

in Table D (co-channel frequencies based on 40 dB protection) and to DTV stations by providing 23 dB protection to such stations' equivalent Grade B contour (41 dBμV/m).

(C) For control, fixed, and mobile stations (including portables) that operate in the 787–788 MHz and 805–806 MHz bands and control and mobile stations (including portables) that operate in the 698–757 MHz and 776–787 MHz bands, adjacent channel protection shall be afforded by providing a minimum distance of 8 kilometers (5 miles) from all adjacent channel TV/DTV station hypothetical or equivalent Grade B contours (adjacent channel frequencies based on 0 dB protection for TV stations and −23 dB for DTV stations).

(D) Since control, fixed, and mobile stations may affect different TV/DTV stations than the associated base or fixed station, particular care must be taken by applicants/licensees to ensure that all appropriate TV/DTV stations are considered (*e.g.*, a base station may be operating within TV Channel 62 and the mobiles within TV Channel 67, in which case TV Channels 61, 62, 63, 66, 67 and 68 must be protected). Control, fixed, and mobile stations shall keep a minimum distance of 96.5 kilometers (60 miles) from all adjacent channel TV/DTV stations. Since mobiles and portables are able to move and communicate with each other, licensees must determine the areas where the mobiles can and cannot roam in order to protect the TV/DTV stations.

NOTE TO §27.60: The 88.5 km (55mi) Grade B service contour (64 dBμV/m) is based on a hypothetical TV station operating at an effective radiated power of one megawatt, a transmitting antenna height above average terrain of 610 meters (2000 feet) and the Commission's R–6602 F(50,50) curves. *See* §73.699 of this chapter. Maximum facilities for TV stations operating in the UHF band are 5 megawatts effective radiated power at an antenna HAAT of 610 meters (2,000 feet). *See* §73.614 of this chapter. The equivalent contour for DTV stations is based on a 41 dBμV/m signal strength and the distance to the F(50,90) curve. *See* §73.625 of this chapter.

[72 FR 48852, Aug. 24, 2007, as amended at 79 FR 599, Jan. 6, 2014]

§§ 27.61–27.62 [Reserved]

§ 27.64 Protection from interference.

Wireless Communications Service (WCS) stations operating in full accordance with applicable FCC rules and the terms and conditions of their authorizations are normally considered to be non-interfering. If the FCC determines, however, that interference which significantly interrupts or degrades a radio service is being caused, it may, after notice and an opportunity for a hearing, require modifications to any WCS station as necessary to eliminate such interference.

(a) *Failure to operate as authorized.* Any licensee causing interference to the service of other stations by failing to operate its station in full accordance with its authorization and applicable FCC rules shall discontinue all transmissions, except those necessary for the immediate safety of life or property, until it can bring its station into full compliance with the authorization and rules.

(b) *Intermodulation interference.* Licensees should attempt to resolve such interference by technical means.

(c) *Situations in which no protection is afforded.* Except as provided elsewhere in this part, no protection from interference is afforded in the following situations:

(1) *Interference to base receivers from base or fixed transmitters.* Licensees should attempt to resolve such interference by technical means or operating arrangements.

(2) *Interference to mobile receivers from mobile transmitters.* No protection is provided against mobile-to-mobile interference.

(3) *Interference to base receivers from mobile transmitters.* No protection is provided against mobile-to-base interference.

(4) *Interference to fixed stations.* Licensees should attempt to resolve such interference by technical means or operating arrangements.

(5) *Anomalous or infrequent propagation modes.* No protection is provided against interference caused by tropospheric and ionospheric propagation of signals.

(d) *Harmful interference to SDARS operations requiring resolution.* The following conditions will be presumed to constitute harmful interference to SDARS operations from WCS operations in the 2305–2320 MHz and 2345–2360 MHz bands and require WCS operators to work cooperatively with SDARS operators to address areas where such power levels are exceeded and harmful interference occurs:

(1) A WCS ground signal level greater than -44 dBm in the upper or lower A or B block, or -55 dBm in the C or D block, present at a location on a roadway, where a test demonstrates that SDARS service would be muted over a road distance of greater than 50 meters; or

(2) A WCS ground signal level exceeding -44 dBm in the upper or lower A or B block, or -55 dBm in the C or D block on a test drive route, which is mutually agreed upon by the WCS licensee and the SDARS licensee, for more than 1 percent of the cumulative surface road distance on that drive route, where a test demonstrates that SDARS service would be muted over a cumulative road distance of greater than 0.5 percent (incremental to any muting present prior to use of WCS frequencies in the area of that drive test).

[62 FR 9658, Mar. 3, 1997, as amended at 78 FR 9621, Feb. 11, 2013]

§ 27.65 Acceptance of interference in 2000–2020 MHz.

(a) Receivers operating in the 2000–2020 MHz band must accept interference from lawful operations in the 1995–2000 MHz band, where such interference is due to:

(1) The in-band power of any operations in 1995–2000 MHz (i.e., the portion transmit power contained in the 1995–2000 MHz band); or

(2) The portion of out-of-band emissions contained in 2000–2005 MHz.

(b) [Reserved]

[78 FR 8270, Feb. 5, 2013]

§ 27.66 Discontinuance, reduction, or impairment of service.

(a) *Involuntary act.* If the service provided by a fixed common carrier licensee, or a fixed common carrier operating on spectrum licensed to a Guard Band Manager, is involuntarily discontinued, reduced, or impaired for a period exceeding 48 hours, the licensee must promptly notify the Commission, in writing, as to the reasons for discontinuance, reduction, or impairment of service, including a statement when normal service is to be resumed. When normal service is resumed, the licensee must promptly notify the Commission.

(b) *Voluntary act by common carrier.* If a fixed common carrier licensee, or a fixed common carrier operating on spectrum licensed to a Guard Band Manager, voluntarily discontinues, reduces, or impairs service to a community or part of a community, it must obtain prior authorization as provided under § 63.71 of this chapter. An application will be granted within 31 days after filing if no objections have been received.

(c) *Voluntary act by non-common carrier.* If a fixed non-common carrier licensee, or a fixed non-common carrier operating on spectrum licensed to a Guard Band Manager, voluntarily discontinues, reduces, or impairs service to a community or part of a community, it must given written notice to the Commission within seven days.

(d) *Notifications and requests.* Notifications and requests identified in paragraphs(a) through (c) of this section should be sent to: Federal Communications Commission, Common Carrier Radio Services, 1270 Fairfield Road, Gettysburg, Pennsylvania, 17325.

[65 FR 3149, Jan. 20, 2000; 65 FR 12483, Mar. 9, 2000, as amended at 65 FR 17605, Apr. 4, 2000; 65 FR 57267, Sept. 21, 2000]

§ 27.70 Information exchange.

(a) *Prior notification.* Public safety licensees authorized to operate in the 758–775 MHz and 788–805 MHz bands may notify any licensee authorized to operate in the 746–757 or 776–787 MHz bands that they wish to receive prior notification of the activation or modification of the licensee's base or fixed stations in their area. Thereafter, the 746–757 or 776–787 MHz band licensee must provide the following information to the public safety licensee at least 10 business days before a new base or fixed station is activated or an existing base or fixed station is modified:

(1) Location;

(2) Effective radiated power;

(3) Antenna height; and
(4) Channels available for use.

(b) *Purpose of prior notification.* The prior coordination of base or fixed stations is for informational purposes only. Public safety licensees are not afforded the right to accept or reject the activation of a proposed base or fixed station or to unilaterally require changes in its operating parameters. The principal purposes of notification are to:

(1) Allow a public safety licensee to advise the 746–757 or 776–787 MHz band licensee whether it believes a proposed base or fixed station will generate unacceptable interference;

(2) Permit 746–757 and 776–787 MHz band licensees to make voluntary changes in base or fixed station parameters when a public safety licensee alerts them to possible interference; and,

(3) Rapidly identify the source if interference is encountered when the base or fixed station is activated.

[72 FR 27712, May 16, 2007, as amended at 72 FR 48853, Aug. 24, 2007; 79 FR 599, Jan. 6, 2014]

§ 27.72 Information sharing requirements.

This section requires WCS licensees in the 2305–2320 MHz and 2345–2360 MHz bands to share information regarding the location and operation of base and fixed stations (except fixed customer premises equipment) with Satellite Digital Audio Radio Service (SDARS) licensees in the 2320–2345 MHz band. Section 25.263 of this chapter requires SDARS licensees in the 2320–2345 MHz band to share information regarding the location and operation of terrestrial repeaters with WCS licensees in the 2305–2320 MHz and 2345–2360 MHz bands. WCS licensees are encouraged to develop separate coordination agreements with SDARS licensees to facilitate efficient deployment of and coexistence between each service. To the extent the provisions of any such coordination agreement conflict with the requirements set forth herein, the procedures established under a coordination agreement will control. WCS licensees must maintain a copy of any coordination agreement with an SDARS licensee in their station files and disclose it to prospective assignees, transferees, or spectrum lessees and, upon request, to the Commission.

(a) *Sites and frequency selections.* WCS licensees must select base and fixed station sites and frequencies, to the extent practicable, to minimize the possibility of harmful interference to operations in the SDARS 2320–2345 MHz band.

(b) *Prior notice periods.* WCS licensees that intend to operate a base or fixed station must, before commencing such operation, provide 10 business days prior notice to all SDARS licensees. WCS licensees that intend to modify an existing station must, before commencing such modified operation, provide 5 business days prior notice to all SDARS licensees. For the purposes of this section, a business day is defined by §1.4(e)(2) of this chapter.

(1) For modifications other than changes in location, a licensee may provide notice within 24 hours after the modified operation if the modification does not result in a predicted increase of the power flux density (PFD) at ground level by more than 1 dB since the last advance notice was given. If a demonstration is made by the SDARS licensee that such modifications may cause harmful interference to SDARS receivers, WCS licensees will be required to provide notice 5 business days in advance of additional station modifications.

(2) WCS base and fixed stations operating below 2 watts equivalent isotropically radiated power (EIRP) are exempt from the notice requirements set forth in this paragraph.

(3) WCS and SDARS licensees may enter into agreements regarding alternative notification procedures.

(c) *Contents of notice.* (1) Notification must be written (*e.g.*, certified letter, fax, or e-mail) and include the licensee's name, and the name, address, and telephone number of its coordination representative, unless the SDARS licensee and all potentially affected WCS licensees reach a mutual agreement to provide notification by some other means. WCS licensees and SDARS licensees may establish such a mutually agreeable alternative notification mechanism without prior Commission approval, provided that they comply

with all other requirements of this section.

(2) Regardless of the notification method, it must specify relevant technical details, including, at a minimum:

(i) The coordinates of the proposed base or fixed stations to an accuracy of no less than ±1 second latitude and longitude;

(ii) The proposed operating power(s), frequency band(s), and emission(s);

(iii) The antenna center height above ground and ground elevation above mean sea level, both to an accuracy of no less than ±1 meter;

(iv) The antenna gain pattern(s) in the azimuth and elevation planes that include the peak of the main beam; and

(v) The antenna downtilt angle(s).

(3) A WCS licensee operating base or fixed stations must maintain an accurate and up-to-date inventory of its stations, including the information set forth in §27.72(c)(2), which shall be available upon request by the Commission.

(d) *Calculation of notice period.* Notice periods are calculated from the date of receipt by the licensee being notified. If notification is by mail, the date of receipt is evidenced by the return receipt on certified mail. If notification is by fax, the date of receipt is evidenced by the notifying party's fax transmission confirmation log. If notification is by e-mail, the date of receipt is evidenced by a return e-mail receipt. If the SDARS licensee and all potentially affected WCS licensees reach a mutual agreement to provide notification by some other means, that agreement must specify the method for determining the beginning of the notice period.

(e) *Duty to cooperate.* WCS licensees must cooperate in good faith in the selection and use of new station sites and new frequencies to reduce interference and make the most effective use of the authorized facilities. WCS licensees should provide SDARS licensees as much lead time as practicable to provide ample time to conduct analyses and opportunity for prudent base station site selection prior to WCS licensees entering into real estate and tower leasing or purchasing agreements. WCS licensees must have sufficient operational flexibility in their network design to implement one or more technical solutions to remedy harmful interference. Licensees of stations suffering or causing harmful interference, as defined in §27.64(d), must cooperate in good faith and resolve such problems by mutually satisfactory arrangements. If the licensees are unable to do so, the Wireless Telecommunications Bureau, in consultation with the Office of Engineering and Technology and the International Bureau, will consider the actions taken by the parties to mitigate the risk of and remedy any alleged interference. In determining the appropriate action, the Bureau will take into account the nature and extent of the interference and act promptly to remedy the interference. The Bureau may impose restrictions on WCS licensees, including specifying the transmitter power, antenna height, or other technical or operational measures to remedy the interference, and will take into account previous measures by the licensees to mitigate the risk of interference.

[75 FR 45071, Aug. 2, 2010, as amended at 78 FR 9622, Feb. 11, 2013]

§ 27.73 WCS, AMT, and Goldstone coordination requirements.

This section requires Wireless Communications Services (WCS) licensees in the 2305–2320 MHz and 2345–2360 MHz bands, respectively, to coordinate the deployment of base and fixed stations (except fixed customer premises equipment) with the Goldstone, CA Deep Space Network (DSN) facility in the 2290–2300 MHz band and with Aeronautical Mobile Telemetry (AMT) facilities in the 2360–2395 MHz band; and to take all practicable steps necessary to minimize the risk of harmful interference to AMT and DSN facilities.

(a) WCS licensees operating base and fixed stations in the 2345–2360 MHz band must, prior to operation of such stations, achieve a mutually satisfactory coordination agreement with the AMT entity(ies) (*i.e.,* FCC licensee(s) and/or Federal operator(s)) for any AMT receiver facility within 45 kilometers or radio line of sight, whichever distance is larger, of the intended WCS base or fixed station location. The coordinator for the assignment of flight test frequencies in the 2360–2390 MHz band,

Aerospace and Flight Test Radio Coordination Council (AFTRCC) or successors of AFTRCC, will facilitate a mutually satisfactory coordination agreement between the WCS licensee(s) and AMT entity(ies) for existing AMT receiver sites. The locations of current Federal and non-Federal AMT receiver sites may be obtained from AFTRCC at Post Office Box 12822 Wichita, KS 67277–2822, (316) 946–8826, or successor frequency coordinators of AFTRCC. Such coordination agreement shall provide protection to existing AMT receiver stations consistent with International Telecommunication Union (ITU) Recommendation ITU–R M.1459, ''Protection criteria for telemetry systems in the aeronautical mobile service and mitigation techniques to facilitate sharing with geostationary broadcasting-satellite and mobile-satellite services in the frequency bands 1 452–1 525 MHz and 2 310–2 360 MHz May 2000 edition,'' adopted May 2000, as adjusted using generally accepted engineering practices and standards to take into account the local conditions and operating characteristics of the applicable AMT and WCS facilities. This ITU document is incorporated by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51 and approved by the Director of Federal Register. Copies of the recommendation may be obtained from ITU, Place des Nations, 1211 Geneva 20, Switzerland, or online at *http://www.itu.int/en/publications/Pages/default.aspx*. You may inspect a copy at the Federal Communications Commission, 445 12th Street SW., Washington, DC 20554, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www/archives.gov/federal__register/code__of__federal__regulations/ibr__locations.html*.

(b) WCS licensees operating base and fixed stations in the 2305–2320 MHz band must, prior to operation of such stations, achieve a mutually satisfactory coordination agreement with the National Aeronautics and Space Administration (NASA) within 145 kilometers of the Goldstone, CA earth station site (35°25′33″ N, 116°53′23″ W).

(c) After base or fixed station operations commence, upon receipt of a complaint of harmful interference, the WCS licensee(s) receiving the complaint, no matter the distance from the NASA Goldstone, CA earth station or from an AMT site, operating in the 2305–2320 or 2345–2360 MHz bands, respectively, shall take all practicable steps to immediately eliminate the interference.

(d) *Duty to cooperate.* WCS licensees, AFTRCC, and NASA must cooperate in good faith in the coordination and deployment of new facilities. WCS licensees must also cooperate in good faith in the selection and use of new station sites and new frequencies when within radio line of site of AMT receiver facilities to reduce the risk of harmful interference and make the most effective use of the authorized facilities. Licensees of stations suffering or causing harmful interference must cooperate in good faith and resolve such problems by mutually satisfactory arrangements. If the licensees are unable to do so, the Wireless Telecommunications Bureau, in consultation with the Office of Engineering and Technology and the National Telecommunications and Information Administration may impose restrictions including specifying the transmitter power, antenna height, or area or hours of operation of the stations.

[75 FR 45072, Aug. 2, 2010, as amended at 78 FR 9622, Feb. 11, 2013]

§ 27.75 Basic interoperability requirement.

(a)(1) Mobile and portable stations that operate on any portion of frequencies in the paired 1755–1780 MHz and 2155–2180 MHz band must be capable of operating on all frequencies in the paired 1710–1780 MHz and 2110–2180 MHz band, using the same air interfaces that the equipment utilizes on any frequencies in the paired 1710–1780 MHz and 2110–2180 MHz band.

(2) Mobile and portable stations that operate on any portion of frequencies in the 600 MHz band must be capable of operating on all frequencies in the 600 MHz band using the same air interfaces that the equipment utilizes on any frequencies in the 600 MHz band.

(b) The basic interoperability requirement in paragraph (a) of this section does not require a licensee to use any particular industry standard. Devices may also contain functions that are not operational in U.S. Territories.

[79 FR 32413, June 4, 2014, as amended at 79 FR 48539, Aug. 15, 2014]

§ 27.77 Restriction on mobile and portable equipment in the 1695–1710 MHz and 1755–1780 MHz bands.

Mobile and portable stations in the 1695–1710 MHz and 1755–1780 MHz bands may operate only when under the control of a base station. Base stations that enable mobile or portable equipment to operate in the 1695–1710 MHz and 1755–1780 MHz band are subject to prior coordination requirements. See § 27.1134 (Protection of Federal Government operations).

[79 FR 32413, June 4, 2014]

Subpart D—Competitive Bidding Procedures for the 2305–2320 MHz and 2345–2360 MHz Bands

§ 27.201 WCS in the 2305–2320 MHz and 2345–2360 MHz bands subject to competitive bidding.

Mutually exclusive initial applications for WCS licenses in the 2305–2320 MHz and 2345–2360 MHz bands are subject to competitive bidding. The general competitive bidding procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this subpart.

[67 FR 45373, July 9, 2002]

§§ 27.202–27.208 [Reserved]

§ 27.209 Designated entities; bidding credits; unjust enrichment.

(a) Designated entities entitled to preferences in the WCS in the 2305–2320 and 2345–2360 bands auction are small businesses and very small businesses as defined in § 27.110(b). Designated entities will be eligible for bidding credits, as defined in paragraphs (b) and (c) of this section.

(b) A winning bidder that qualifies as a *small business* may use a bidding credit of 25 percent to lower the cost of its winning bid.

(c) A winning bidder that qualifies as a *very small business* may use a bidding credit of 35 percent to lower the cost of its winning bid.

[62 FR 9658, Mar. 3, 1997, as amended at 63 FR 2349, Jan. 15, 1998; 65 FR 57268, Sept. 21, 2000; 67 FR 45373, July 9, 2002]

§ 27.210 Definitions.

(a) *Scope.* The definitions in this section apply to § 27.209, unless otherwise specified in those sections.

(b) *Small and very small business.* (1) A *small business* is an entity that, together with its affiliates and controlling interests, has average annual gross revenues that are not more than $40 million for the preceding three years.

(2) *A very small business* is an entity that, together with its affiliates and controlling interests, has average annual gross revenues that are not more than $15 million for the preceding three years.

[67 FR 45373, July 9, 2002, as amended at 68 FR 43000, July 21, 2003]

Subpart E—Application, Licensing, and Processing Rules for WCS

§ 27.301 [Reserved]

§ 27.302 Eligibility.

(a) General. Authorizations will be granted upon proper application if:

(1) The applicant is qualified under the applicable laws and the regulations, policies and decisions issued under those laws, including § 27.12;

(2) There are frequencies available to provide satisfactory service; and

(3) The public interest, convenience or necessity would be served by a grant.

(b) Alien Ownership. A WCS authorization may not be granted to or held by an entity not meeting the requirements of section 310 of the Communications Act of 1934, as amended, 47 U.S.C. section 310 insofar as applicable to the particular service in question.

§ 27.303 Upper 700 MHz commercial and public safety coordination zone.

(a) *General.* CMRS operators are required, prior to commencing operations on fixed or base station transmitters

on the 776–787 MHz band that are located within 500 meters of existing or planned public safety base station receivers, to submit a description of their proposed facility to a Commission-approved public safety coordinator.

(i) The frequency or frequencies on which the facility will operate;

(ii) Antenna location and height;

(iii) Type of emission;

(iv) Effective radiated power;

(v) A description of the area served and the operator's name.

(2) It is the CMRS operator's responsibility to determine whether referral is required for stations constructed in its area of license. Public safety base stations are considered ''planned'' when public safety operators have notified, or initiated coordination with, a Commission-approved public safety coordinator.

(b) CMRS operators must wait at least 10 business days after submission of the required description before commencing operations on the referenced facility, or implementing modifications to an existing facility.

(c) The potential for harmful interference between the CMRS and public safety facilities will be evaluated by the public safety coordinator.

(1) With regard to existing public safety facilities, the coordinator's determination to disapprove a proposed CMRS facility (or modification) to be located within 500 meters of the public safety facilities will be presumed correct, but the CMRS operator may seek Commission review of such determinations. Pending Commission review, the CMRS operator will not activate the facility or implement proposed modifications.

(2) With regard to proposed public safety facilities, the coordinator's determination to disapprove a proposed CMRS facility (or modification) to be located within 500 meters of the public safety facilities will be presumed correct, but the CMRS operator may seek Commission review and, pending completion of review, operate the facility during construction of the public safety facilities. If coordination or Commission review has not been completed when the public safety facilities are ready to operate, the CMRS operator must cease operations pending completion of coordination or Commission review. Such interim operation of the CMRS facility within the coordination zone (or implementation of modifications) will not be relied on by the Commission in its subsequent review and determination of measures necessary to control interference, including relocation or modification of the CMRS facility.

(d) If, in the event of harmful interference between facilities located within 500 meters proximity, the parties are unable, with the involvement of the coordinator, to resolve the problem by mutually satisfactory arrangements, the Commission may impose restrictions on the operations of any of the parties involved.

[67 FR 49245, July 30, 2002, as amended at 72 FR 48853, Aug. 24, 2007; 79 FR 599, Jan. 6, 2014]

§§ 27.304–27.307 [Reserved]

§ 27.308 Technical content of applications.

All applications required by this part shall contain all technical information required by the application forms or associated public notice(s). Applications other than initial applications for a WCS license must also comply with all technical requirements of the rules governing the applicable frequency band (see subparts C, D, F, and G of this part, as appropriate).

[65 FR 57268, Sept. 21, 2000]

§§ 27.310–27.320 [Reserved]

§ 27.321 Mutually exclusive applications.

(a) Two or more pending applications are mutually exclusive if the grant of one application would effectively preclude the grant of one or more of the others under the Commission's rules governing the Wireless Communications Services involved. The Commission uses the general procedures in this section for processing mutually exclusive applications in the Wireless Communications Services.

(b) An application will be entitled to comparative consideration with one or more conflicting applications only if the Commission determines that such comparative consideration will serve the public interest.

§§ 27.322–27.325 [Reserved]

Subpart F—Competitive Bidding Procedures for the 698–806 MHz Band

SOURCE: 65 FR 3149, Jan. 20, 2000, unless otherwise noted.

§ 27.501 746–758 MHz, 775–788 MHz, and 805–806 MHz bands subject to competitive bidding.

Mutually exclusive initial applications for licenses in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands are subject to competitive bidding. The general competitive bidding procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this subpart.

[79 FR 600, Jan. 6, 2014]

§ 27.502 Designated entities.

Eligibility for small business provisions:

(a)(1) A small business is an entity that, together with its controlling interests and affiliates, has average gross revenues not exceeding $40 million for the preceding three years.

(2) A very small business is an entity that, together with its controlling interests and affiliates, has average gross revenues not exceeding $15 million for the preceding three years.

(b) *Bidding credits.* A winning bidder that qualifies as a small business or a consortium of small businesses as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter. A winning bidder that qualifies as a very small business or a consortium of very small businesses as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter.

[72 FR 63499, Nov. 9, 2007]

Subpart G— Guard Band A and B Blocks (757–758/787–788 MHz and 775–776/805–806 MHz Bands)

SOURCE: 65 FR 17605, Apr. 4, 2000, unless otherwise noted.

§ 27.601 Authority and coordination requirements.

(a) Subject to the provisions of § 27.2(b), a Guard Band licensee may allow a spectrum lessee, pursuant to a spectrum lease arrangement under part 1, subpart X of this chapter, to construct and operate stations at any available site within the licensed area and on any channel for which the Guard Band licensee is licensed, provided such stations comply with Commission Rules and coordination requirements.

(b) Subject to the provisions of § 27.2(b), a Guard Band licensee may allow a spectrum lessee, pursuant to a spectrum lease arrangement under part 1, subpart X of this chapter, to delete, move or change the operating parameters of any of the user's stations that are covered under the Guard Band licensee's authorization without prior Commission approval, provided such stations comply with Commission Rules and coordination requirements.

(c) *Frequency coordination.* (1) A Guard Band licensee, or a spectrum lessee operating at 775–776 MHz and 805–806 MHz pursuant to a spectrum lease arrangement under §§ 1.9030 and 1.9035 of this chapter, must notify Commission-recognized public safety frequency coordinators for the 700 MHz Public Safety band and adjacent-area Guard Band licensees within one business day after the licensee or the spectrum lessee has:

(i) Coordinated a new station or modification of an existing station; or

(ii) Filed an application for an individual station license with the Commission.

(2) The notification required in paragraph (c)(1) of this section must include, at a minimum—

(i) The frequency or frequencies coordinated;

(ii) Antenna location and height;

(iii) Type of emission;

(iv) Effective radiated power;

(v) A description of the service area, date of coordination, and user name or, in the alternative, a description of the type of operation.

(3) In the event a licensee partitions its service area or disaggregates its spectrum, it is required to submit the notification required in paragraph

(c)(1) of this section to other Guard Band licensees in the same geographic area.

(4) Entities coordinated by a Guard Band licensee, or a spectrum lessee operating pursuant to a spectrum lease arrangement under §§1.9030 and 1.9035 of this chapter, must wait at least 10 business days after the notification required in paragraph (c)(1) of this section before operating under the license.

(d) Where a deletion, move or change authorized under paragraph (b) of this section constitutes a discontinuance, reduction, or impairment of service under §27.66 or where discontinuance, reduction or impairment of service results from an involuntary act subject to §27.66(a), the licensee must comply with the notification and authorization requirements set forth in that section.

[72 FR 27712, May 16, 2007, as amended at 72 FR 48853, Aug. 24, 2007]

§27.602 Lease agreements.

Guard Band licensees may enter into spectrum leasing arrangements under part 1, subpart X of this chapter regarding the use of their licensed spectrum by spectrum lessees, subject to the following conditions:

(a) The spectrum lease agreement between the licensee and the spectrum lessee must specify in detail the operating parameters of the spectrum lessee's system, including power, maximum antenna heights, frequencies of operation, base station location(s), area(s) of operation, and other parameters specified in Commission rules for the use of spectrum identified in §27.5(b)(1) and (b)(2).

(b) The spectrum lease agreement must require the spectrum lessee to use Commission-approved equipment where appropriate and to complete post-construction proofs of system performance prior to system activation.

[72 FR 27713, May 16, 2007]

§27.604 Limitation on licenses won at auction.

(a) For the first auction of licenses in Blocks A and B, as defined in §27.5, no applicant may be deemed the winning bidder of both a Block A and a Block B license in a single geographic service area.

(b) For purposes of paragraph (a) of this section, licenses will be deemed to be won by the same bidder if an entity that wins one license at the auction is an affiliate of any other entity that wins a license at the auction.

§27.607 Performance requirements and annual reporting requirement.

(a) Guard Band licensees are subject to the performance requirements specified in §27.14(a).

(b) Guard Band licensees are required to file an annual report providing the Commission with information about the manner in which their spectrum is being utilized. Such reports shall be filed with the Commission on a calendar year basis, no later than the March 1 following the close of each calendar year, unless another filing date is specified by Public Notice.

(c) Guard Band licensees must, at a minimum, include the following information in their annual reports:

(1) The total number of spectrum lessees;

(2) The amount of the licensee's spectrum being used pursuant to spectrum lease agreements;

(3) The nature of the spectrum use of the licensee's customers; and,

(4) The length of term of each spectrum lease agreement, and whether the agreement is a spectrum manager lease agreement, or a *de facto* transfer lease agreement.

(d) The specific information that licensees will provide and the procedures that they will follow in submitting their annual reports will be announced in a Public Notice issued by the Wireless Telecommunications Bureau.

[72 FR 27713, May 16, 2007]

Subpart H—Competitive Bidding Procedures for the 698–746 MHz Band

SOURCE: 67 FR 5512, Feb. 6, 2002, unless otherwise noted.

§27.701 698–746 MHz bands subject to competitive bidding.

Mutually exclusive initial applications for licenses in the 698–746 MHz band are subject to competitive bidding. The general competitive bidding

procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this subpart.

[67 FR 45374, July 9, 2002]

§ 27.702 Designated entities.

(a) *Eligibility for small business provisions.* (1) An entrepreneur is an entity that, together with its controlling interests and affiliates, has average gross revenues not exceeding $3 million for the preceding three years. This definition applies only with respect to licenses in Block C (710–716 MHz and 740–746 MHz) as specified in § 27.5(c)(1).

(2) A very small business is an entity that, together with its controlling interests and affiliates, has average gross revenues not exceeding $15 million for the preceding three years.

(3) A small business is an entity that, together with its controlling interests and affiliates, has average gross revenues not exceeding $40 million for the preceding three years.

(b) *Bidding credits.* A winning bidder that qualifies as an entrepreneur, as defined in this section, or a consortium of entrepreneurs may use the bidding credit specified in § 1.2110(f)(2)(i) of this chapter. A winning bidder that qualifies as a very small business, as defined in this section, or a consortium of very small businesses may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter. A winning bidder that qualifies as a small business, as defined in this section, or a consortium of small businesses may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter.

[67 FR 5512, Feb. 6, 2002, as amended at 68 FR 43000, July 21, 2003]

Subpart I—1.4 GHz Band

SOURCE: 67 FR 41855, June 20, 2002, unless otherwise noted.

§ 27.801 Scope.

This subpart sets out the regulations governing service in the paired 1392–1395 MHz and 1432–1435 MHz bands as well as the unpaired 1390–1392 MHz band (1.4 GHz band).

§ 27.802 Permissible communications.

Licensees in the paired 1392–1395 MHz and 1432–1435 MHz bands and unpaired 1390–1392 MHz band are authorized to provide fixed or mobile service, except aeronautical mobile service, subject to the technical requirements of this subpart.

§ 27.803 Coordination requirements.

(a) Licensees in the 1.4 GHz band will be issued geographic area licenses in accordance with the service areas listed in § 27.6(d) and (e).

(b) Licensees in the 1.4 GHz Service must file a separate station application with the Commission and obtain an individual station license, prior to construction or operation, of any station:

(1) That requires submission of an Environmental Assessment under part 1, § 1.1307 of this chapter;

(2) That requires international coordination;

(3) That operates in areas listed in part 1, § 1.924 of this chapter; or

(4) That requires approval of the Frequency Advisory Subcommittee (FAS) of the Interdepartment Radio Advisory Committee (IRAC). Licensees in the 1432–1435 MHz band must receive FAS approval, prior to operation of fixed sites or mobile units within the NTIA recommended protection radii of the Government sites listed in footnote US83 of § 2.106 of this chapter.

(c) Prior to construction of a station, a licensee in the 1.4 GHz Band must register with the Commission any station antenna structure for which notification to the Federal Aviation Administration is required by part 17 of this chapter.

(d) It is the licensee's responsibility to determine whether an individual station needs referral to the Commission.

(e) The application required in paragraph (b) of this chapter must be filed on the Universal Licensing System.

[67 FR 41855, June 20, 2002, as amended at 69 FR 17958, Apr. 6, 2004; 80 FR 38908, July 7, 2015]

§ 27.804 Field strength limits at WMTS facility.

For any operation in the 1392–1395 MHz band, the predicted or measured field strength—into the WMTS band at

1395–1400 MHz—shall not exceed 150 uV/m at the location of any registered WMTS healthcare facility. When performing measurements to determine compliance with this provision, measurement instrumentation employing an average detector and a resolution bandwidth of 1 MHz may be used, provided it accurately represents the true interference potential of the equipment.

§ 27.805 Geographic partitioning and spectrum disaggregation.

An entity that acquires a portion of a 1.4 GHz band licensee's geographic area or spectrum subject to a geographic partitioning or spectrum disaggregation agreement under § 27.15 must function as a 1.4 GHz band licensee and is subject to the obligations and restrictions on the 1.4 GHz band license as set forth in this subpart.

§ 27.806 1.4 GHz service licenses subject to competitive bidding.

Mutually exclusive initial applications for 1.4 GHz Band licenses in the paired 1392–1395 MHz and 1432–1435 MHz bands as well as the unpaired 1390–1392 MHz band are subject to competitive bidding. The general competitive bidding procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this subpart.

§ 27.807 Designated entities.

(a) Eligibility for small business provisions for 1.4 GHz band licenses in the paired 1392–1395 MHz and 1432–1435 MHz bands and the unpaired 1390–1392 MHz band.

(1) A very small business is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding $15 million for the preceding three years.

(2) A small business is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding $40 million for the preceding three years.

(b) *Bidding credits.* A winning bidder that qualifies as a very small business, as defined in this section, or a consortium of very small businesses may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter. A winning bidder that qualifies as a small business, as defined in this section, or a consortium of small businesses may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter.

[67 FR 41855, June 20, 2002, as amended at 68 FR 43000, July 21, 2003]

Subpart J—1670–1675 MHz Band

SOURCE: 67 FR 41856, June 20, 2002, unless otherwise noted.

§ 27.901 Scope.

This subpart sets out the regulations governing service in the 1670–1675 MHz band (1670–1675 MHz band).

§ 27.902 Permissible communications.

Licensees in the 1670–1675 MHz band are authorized to provide fixed or mobile service, except aeronautical mobile service, subject to the technical requirements of this subpart.

§ 27.903 Coordination requirements.

(a) The licensee in the 1670–1675 MHz band will be issued a geographic area license on a nationwide basis in accordance with § 27.6(f).

(b) Licensees in the 1670–1675 MHz band must file a separate station application with the Commission and obtain an individual station license, prior to construction or operation, of any station:

(1) That requires submission of an Environmental Assessment under part 1, § 1.1307 of this chapter;

(2) That requires international coordination;

(3) That operates in areas listed under part 1, § 1.924 of this chapter.

(c) The application required in paragraph (b) of this section must be filed on the Universal Licensing System.

(d) Prior to construction of a station, a licensee must register with the Commission any station antenna structure for which notification to the Federal Aviation Administration is required by part 17 of this chapter.

(e) It is the licensee's responsibility to determine whether an individual station requires referral to the Commission.

[67 FR 41856, June 20, 2002, as amended at 69 FR 17958, Apr. 6, 2004]

§ 27.904 Geographic partitioning and spectrum disaggregation.

An entity that acquires a portion of a 1670–1675 MHz band licensee's geographic area or spectrum subject to a geographic partitioning or spectrum disaggregation agreement under § 27.15 must function as a 1670–1675 MHz licensee and is subject to the obligations and restrictions on the 1670–1675 MHz license as set forth in this subpart.

§ 27.905 1670–1675 MHz service licenses subject to competitive bidding.

Mutually exclusive initial applications for the 1670–1675 MHz Band license are subject to competitive bidding. The general competitive bidding procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this subpart.

§ 27.906 Designated entities.

(a) *Eligibility for small business provisions.* (1) A very small business is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding $15 million for the preceding three years.

(2) A small business is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding $40 million for the preceding three years.

(b) *Bidding credits.* A winning bidder that qualifies as a very small business, as defined in this section, or a consortium of very small businesses may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter. A winning bidder that qualifies as a small business, as defined in this section, or a consortium of small businesses may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter.

[67 FR 41856, June 20, 2002, as amended at 68 FR 43000, July 21, 2003]

Subpart K—1915–1920 MHz and 1995–2000 MHz

SOURCE: 78 FR 50257, Aug. 16, 2013, unless otherwise noted.

LICENSING AND COMPETITIVE BIDDING PROVISIONS

§ 27.1001 1915–1920 MHz and 1995–2000 MHz bands subject to competitive bidding.

Mutually exclusive initial applications for 1915–1920 MHz and 1995–2000 MHz band licenses are subject to competitive bidding. The general competitive bidding procedures set forth in 47 CFR part 1, subpart Q will apply unless otherwise provided in this subpart.

§ 27.1002 Designated entities in the 1915–1920 MHz and 1995–2000 MHz bands.

Eligibility for small business provisions:

(a)(1) A small business is an entity that, together with its affiliates, its controlling interests, the affiliates of its controlling interests, and the entities with which it has an attributable material relationship, has average gross revenues not exceeding $40 million for the preceding three years.

(2) A very small business is an entity that, together with its affiliates, its controlling interests, the affiliates of its controlling interests, and the entities with which it has an attributable material relationship, has average gross revenues not exceeding $15 million for the preceding three years.

(b) *Bidding credits.* A winning bidder that qualifies as a small business as defined in this section or a consortium of small businesses may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter. A winning bidder that qualifies as a very small business as defined in this section or a consortium of very small businesses may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter.

EFFECTIVE DATE NOTE: At 80 FR 56816, Sept. 18, 2015, § 27.1002 was amended by revising paragraph (a), effective Nov. 17, 2015. For the convenience of the user, the revised text is set forth as follows:

§ 27.1002 Designated entities in the 1915–1920 MHz and 1995–2000 MHz bands.

* * * * *

(a)(1) A small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling

interests, has average gross revenues not exceeding $40 million for the preceding three years.

(2) A very small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling interests, has average gross revenues not exceeding $15 million for the preceding three years.

* * * * *

REIMBURSEMENT OBLIGATION OF LICENSEES AT 1915–1920 MHZ AND 1995–2000 MHZ

§ 27.1021 Reimbursement obligation of licensees at 1915–1920 MHz.

A licensee in the 1915–1920 MHz band (Lower H Block) shall, within 30 days of grant of its long-form application, reimburse 25 percent of the total relocation costs incurred by UTAM, Inc. for relocating and clearing incumbent Fixed Microwave Service (FS) licensees from the 1910–1930 MHz band on a *pro rata* shared basis with other Lower H Block licensees as set forth in paragraphs (a) through (e) of this section.

(a)(1) If Lower H Block licenses granted as a result of the first auction for this spectrum cover, collectively, at least forty (40) percent of the nation's population, the amount owed to UTAM, Inc. by each individual Lower H Block licensee (reimbursement amount owed or RN) will be determined by dividing the gross winning bid (GWB) for each individual Lower H Block license (*i.e.*, an Economic Area (EA)) by the sum of the gross winning bids for all Lower H Block licenses for which there is a winning bid in the first auction, and then multiplying by $12,629,857.

RN = (EA GWB ÷ Sum of GWBs) × $12,629,857.00

(2) Except as provided in paragraphs (b) and (c) of this section, a licensee that obtains a license for a market in which no license is granted as a result of the first Lower H Block auction will not have a reimbursement obligation to UTAM, Inc.

(b) If Lower H Block licenses granted as a result of the first auction for this spectrum cover, collectively, less than forty (40) percent of the nation's population, then the pro rata amount that the licensee of an individual Lower H Block license must reimburse UTAM, Inc. shall be calculated by dividing the population of the individual EA by the total U.S. population, and then multiplying by $12,629,857. In this event, the same population data, e.g., 2010, used to calculate the RNs for Lower H Block licenses granted as a result of the first auction will apply to subsequent auctions of Lower H Block licenses that were not granted as a result of an earlier auction of Lower H Block licenses.

RN = (EA POP ÷ U.S. POP) × $12,629,857.00

(c) A winning bidder of a Lower H Block license that is not granted a license for any reason will be deemed to have triggered a reimbursement obligation to UTAM, Inc. This obligation will be owed to UTAM, Inc. by the licensee acquiring the Lower H Block license through a subsequent auction. The amount owed by the licensee acquiring the Lower H Block license at such auction will be the RN calculated for the EA license based on the first auction (calculated under paragraphs (a) or (b), as applicable, of this section).

(d) For purposes of compliance with this section, licensees should determine population based on 2010 U.S. Census Data or such other data or measurements that the Wireless Telecommunications Bureau proposes and adopts under the notice and comment process for the auction procedures.

(e) A payment obligation owed by a Lower H Block licensees under this section shall be made within thirty (30) days of the grant of the license (*i.e.*, grant of the long form application).

§ 27.1031 Reimbursement obligation of licensees at 1995–2000 MHz.

A licensee in the 1995–2000 MHz band (Upper H Block) shall, within 30 days of grant of its long-form application, reimburse one-seventh of the eligible expenses incurred by Sprint Nextel, Inc. (Sprint) for relocating and clearing Broadcast Auxiliary Service (BAS), Cable Television Relay Service (CARS), and Local Television Transmission Service (LTTS) incumbents from the 1990–2025 MHz band, on a *pro rata* shared basis with other Upper H Block licensees as set forth in paragraphs (a) through (e) of this section.

(a)(1) If Upper H Block licenses granted as a result of the first auction for

this spectrum cover, collectively, at least forty (40) percent of the nation's population, the amount owed to Sprint by the winning bidder of each individual Upper H Block license granted as a result of the first auction will be determined by dividing the gross winning bid (GWB) for each individual Upper H Block license (*i.e.*, an Economic Area (EA)) by the sum of the gross winning bids for all Upper H Block licenses for which there is a winning bid in the first auction, and then multiplying by $94,875,516.

RN = (EA GWB ÷ Sum of GWBs) × $94,875,516

(2) Except as provided in paragraphs (b) and (c) of this section, a licensee that obtains a license for a market in which no license was granted as a result of the first Upper H Block auction will not have a reimbursement obligation to Sprint.

(b) If Upper H Block licenses granted as a result of the first auction for this spectrum cover, collectively, less than forty (40) percent of the nation's population, then the amount that the licensee of an individual Upper H Block license must reimburse Sprint shall be calculated by dividing the population of the individual EA by the total U.S. population, and then multiplying by $94,875,516. In this event, the same population data, e.g., 2010, used to calculate the RNs for Upper H Block licenses granted as a result of the first auction will apply to subsequent auctions of Upper H Block licenses that were not granted as a result of an earlier auction of Upper H Block licenses.

RN = (EA POP ÷ U.S. POP) × $94,875,516

(c) A winning bidder of an Upper H Block license that is not granted a license for any reason will be deemed to have triggered a reimbursement obligation to Sprint. This obligation will be owed to Sprint by the licensee acquiring the Upper H Block license through a subsequent auction. The amount owed by the licensee acquiring the EA license at such auction will be based on the RN calculated for the EA license based on the first auction (calculated under paragraphs (a) or (b), as applicable, of this section).

(d) For purposes of compliance with this section, licensees should determine population based on 2010 U.S. Census Data or such other data or measurements that the Wireless Telecommunications Bureau proposes and adopts under the notice and comment process for the auction procedures.

(e) A payment obligation owed by a Upper H Block licensees under this section shall be made within thirty (30) days of the grant of the license (i.e., grant of the long form application).

§ 27.1041 Termination of cost-sharing obligations.

(a) The cost-sharing obligation adopted in this subpart for the Lower H Block and for the Upper H Block will sunset ten years after the first license is issued in the respective band.

(b) A Lower H Block licensee and an Upper H Block licensee must satisfy in full its payment obligations under this subpart K within thirty days of the grant of its long-form application. The failure to timely satisfy a payment obligation in full prior to the applicable sunset date will not terminate the debt owed or a party's right to collect the debt.

Subpart L—1695–1710 MHz, 1710–1755 MHz, 1755–1780 MHz, 2110–2155 MHz, 2155–2180 MHz, 2180–2200 MHz Bands

SOURCE: 69 FR 5716, Feb. 6, 2004, unless otherwise noted.

LICENSING AND COMPETITIVE BIDDING PROVISIONS

§ 27.1101 1710–1755 MHz and 2110–2155 MHz bands subject to competitive bidding.

Mutually exclusive initial applications for 1710–1755 MHz and 2110–2155 MHz band licenses are subject to competitive bidding. The general competitive bidding procedures set forth in 47 CFR part 1, subpart Q will apply unless otherwise provided in this subpart.

§ 27.1102 Designated Entities in the 1710–1755 MHz and 2110–2155 MHz bands.

(a) *Eligibility for small business provisions.* (1) A small business is an entity that, together with its affiliates, its controlling interests and the affiliates

of its controlling interests, has average gross revenues that are not more than $40 million for the preceding three years.

(2) A very small business is an entity that, together with its affiliates, its controlling interests and the affiliates of its controlling interests, has average gross revenues that are not more than $15 million for the preceding three years.

(b) *Bidding credits.* (1) A winning bidder that qualifies as a small business, as defined in this section, or a consortium of small businesses may use a bidding credit of 15 percent, as specified in §1.2110(f)(2)(iii) of this chapter, to lower the cost of its winning bid on any of the licenses in this part.

(2) A winning bidder that qualifies as a very small business, as defined in this section, or a consortium of very small businesses may use a bidding credit of 25 percent, as specified in §1.2110(f)(2)(ii) of this chapter, to lower the cost of its winning bid on any of the licenses in this part.

§ 27.1103 2000–2020 MHz and 2180–2200 MHz bands subject to competitive bidding.

Mutually exclusive initial applications for 2000–2020 MHz and 2180–2200 MHz band licenses are subject to competitive bidding. The general competitive bidding procedures set forth in 47 CFR part 1, subpart Q will apply unless otherwise provided in this subpart.

[78 FR 8270, Feb. 5, 2013]

§ 27.1104 Designated Entities in the 2000–2020 MHz and 2180–2200 MHz bands.

Eligibility for small business provisions:

(a) *Small business.* (1) A small business is an entity that, together with its affiliates, its controlling interests, the affiliates of its controlling interests, and the entities with which it has an attributable material relationship, has average gross revenues not exceeding $40 million for the preceding three years.

(2) A very small business is an entity that, together with its affiliates, its controlling interests, the affiliates of its controlling interests, and the entities with which it has an attributable material relationship, has average gross revenues not exceeding $15 million for the preceding three years.

(b) *Bidding credits.* A winning bidder that qualifies as a small business as defined in this section or a consortium of small businesses may use the bidding credit specified in §1.2110(f)(2)(iii) of this chapter. A winning bidder that qualifies as a very small business as defined in this section or a consortium of very small businesses may use the bidding credit specified in §1.2110(f)(2)(ii) of this chapter.

[78 FR 8270, Feb. 5, 2013]

EFFECTIVE DATE NOTE: At 80 FR 56816, Sept. 18, 2015, §27.1104 was amended by revising paragraph (a), effective Nov. 17, 2015. For the convenience of the user, the revised text is set forth as follows:

§ 27.1104 Designated Entities in the 2000–2020 MHz and 2180–2200 MHz bands.

* * * * *

(a) *Small business.* (1) A small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling interests, has average gross revenues not exceeding $40 million for the preceding three years.

(2) A very small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling interests, has average gross revenues not exceeding $15 million for the preceding three years.

* * * * *

§ 27.1105 1695–1710 MHz, 1755–1780 MHz and 2155–2180 MHz bands subject to competitive bidding.

Mutually exclusive initial applications for 1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz band licenses are subject to competitive bidding. The general competitive bidding procedures set forth in 47 CFR part 1, subpart Q will apply unless otherwise provided in this subpart.

[79 FR 32413, June 4, 2014]

§ 27.1106 Designated Entities in the 1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz bands.

Eligibility for small business provisions:

(a) *Small business.* (1) A small business is an entity that, together with its affiliates, its controlling interests, the affiliates of its controlling interests, and the entities with which it has an attributable material relationship, has average gross revenues not exceeding $40 million for the preceding three (3) years.

(2) A very small business is an entity that, together with its affiliates, its controlling interests, the affiliates of its controlling interests, and the entities with which it has an attributable material relationship, has average gross revenues not exceeding $15 million for the preceding three (3) years.

(b) *Bidding credits.* A winning bidder that qualifies as a small business as defined in this section or a consortium of small businesses may use the bidding credit specified in §1.2110(f)(2)(iii) of this chapter. A winning bidder that qualifies as a very small business as defined in this section or a consortium of very small businesses may use the bidding credit specified in §1.2110(f)(2)(ii) of this chapter.

[79 FR 32413, June 4, 2014]

EFFECTIVE DATE NOTE: At 80 FR 56816, Sept. 18, 2015, §27.1106 was amended by revising paragraph (a), effective Nov. 17, 2015. For the convenience of the user, the revised text is set forth as follows:

§ 27.1106 Designated Entities in the 1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz bands.

* * * * *

(a) *Small business.* (1) A small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling interests, has average gross revenues not exceeding $40 million for the preceding three (3) years.

(2) A very small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling interests, has average gross revenues not exceeding $15 million for the preceding three (3) years.

* * * * *

RELOCATION OF INCUMBENTS

§ 27.1111 Relocation of fixed microwave service licensees in the 2110–2150 and 2160–2200 MHz bands.

Part 22, subpart E and part 101, subpart B of this chapter contain provisions governing the relocation of incumbent fixed microwave service licensees in the 2110–2150 MHz and 2160–2200 MHz bands.

[79 FR 32414, June 4, 2014]

PROTECTION OF INCUMBENT OPERATIONS

§ 27.1131 Protection of part 101 operations.

All AWS licensees, prior to initiating operations from any base or fixed station, must coordinate their frequency usage with co-channel and adjacent-channel incumbent, 47 CFR part 101 fixed-point-to-point microwave licensees operating in the 2110–2150 MHz and 2160–2200 MHz bands. Coordination shall be conducted in accordance with the provisions of §24.237 of this chapter.

[79 FR 32414, June 4, 2014]

§ 27.1132 Protection of incumbent operations in the 2150–2160/62 MHz band.

All AWS licensees, prior to initiating operations from any base or fixed station in the 2110–2180 MHz band, shall follow the provisions of §27.1255.

[79 FR 32414, June 4, 2014]

§ 27.1133 Protection of part 74 and part 78 operations.

AWS operators must protect previously licensed Broadcast Auxiliary Service (BAS) or Cable Television Radio Service (CARS) operations in the adjacent 2025–2110 MHz band. In satisfying this requirement AWS licensees must, before constructing and operating any base or fixed station, determine the location and licensee of all BAS or CARS stations authorized in their area of operation, and coordinate their planned stations with those licensees. In the event that mutually satisfactory coordination agreements cannot be reached, licensees may seek the assistance of the Commission, and the Commission may, at its discretion,

impose requirements on one or both parties.

§ 27.1134 Protection of Federal Government operations.

(a) *Protection of Department of Defense operations in the 1710–1755 MHz band.* The Department of Defense (DoD) operates communications systems in the 1710–1755 MHz band at 16 protected facilities, nationwide. AWS licensees must accept any interference received from these facilities and must protect the facilities from interference. AWS licensees shall protect the facilities from interference by restricting the operation of their base and fixed stations from any locations that could potentially permit AWS mobile, fixed, and portable stations transmitting in the 1710–1755 MHz band to cause interference to government operations within the radii of operation of the 16 facilities (the radii of operation of each facility is indicated in the third column of Table 1 immediately following paragraph (a)(3) of this section). In addition, AWS licensees shall be required to coordinate any operations that could permit mobile, fixed, and portable stations to operate in the specified areas of the 16 facilities, as defined in paragraph (a)(3) of this section. Protection of these facilities in this manner shall take place under the following conditions:

(1) At the Yuma, Arizona and Cherry Point, North Carolina facilities, all operations shall be protected indefinitely.

(2) At the remaining 14 facilities, airborne and military test range operations shall be protected until such time as these systems are relocated to other spectrum, and precision guided munitions (PGM) operations shall be protected until such time as these systems are relocated to other spectrum or until PGM inventory at each facility is exhausted, whichever occurs first.

(3) AWS licensees whose transmit operations in the 1710–1755 MHz band consist of fixed or mobile operations with nominal transmit EIRP values of 100 mW or less and antenna heights of 1.6 meters above ground or less shall coordinate their services around the 16 sites at the distance specified in row a. of Table 2. AWS licensees whose transmit operations in the 1710–1755 MHz band consist of fixed or mobile operations with nominal transmit EIRP values of 1 W or less and antenna heights of 10 meters above ground or less shall coordinate their services around the 16 sites at the distance specified in row b. of Table 2. These coordination distances shall be measured from the edge of the operational distances indicated in the third column of Table 1, and coordination with each affected DoD facility shall be accomplished through the Commander of the facility.

TABLE 1—PROTECTED DEPARTMENT OF DEFENSE FACILITIES

Location	Coordinates	Radius of operation (km)
Cherry Point, NC	34°58′ N, 076°56′ W	100
Yuma, AZ	32°32′ N, 113°58′ W	120
China Lake, CA	35°41′ N, 117°41′ W	120
Eglin AFB, FL	30°29′ N, 086°31′ W	120
Pacific Missile Test Range/Point Mugu, CA	34°07′ N, 119°30′ W	80
Nellis AFB, NV	36°14′ N, 115°02′ W	160
Hill AFB, UT	41°07′ N, 111°58′ W	160
Patuxent River, MD	38°17′ N, 076°25′ W	80
White Sands Missile Range, NM	33°00′ N, 106°30′ W	80
Fort Irwin, CA	35°16′ N, 116°41′ W	50
Fort Rucker, AL	31°13′ N, 085°49′ W	50
Fort Bragg, NC	35°09′ N, 079°01′ W	50
Fort Campbell, KY	36°41′ N, 087°28′ W	50
Fort Lewis, WA	47°05′ N, 122°36′ W	50
Fort Benning, GA	32°22′ N, 084°56′ W	50
Fort Stewart, GA	31°52′ N, 081°37′ W	50

TABLE 2—COORDINATION DISTANCES FOR THE PROTECTED DEPARTMENT OF DEFENSE FACILITIES

1710–1755 MHz transmit operations	Coordination distance (km)
a. EIRP < = 100 mW, antenna height < = 1.6 m AG	35
b. EIRP < = 1 W, antenna height < = 10 m AG	55

(b) *Protection of non-DoD operations in the 1710–1755 MHz and 1755–1761 MHz bands.* Until such time as non-DoD systems operating in the 1710–1755 MHz and 1755–1761 MHz bands are relocated to other spectrum, AWS licensees shall protect such systems by satisfying the appropriate provisions of TIA Telecommunications Systems Bulletin 10–F, ''Interference Criteria for Microwave Systems,'' May, 1994 (TSB 10–F).

(c) *Protection of Federal operations in the 1675–1710 MHz band*—(1) *27 Protection Zones.* Within 27 Protection Zones, prior to operating a base station that enables mobile or portable stations to transmit in the 1695–1710 MHz band, licensees must successfully coordinate such base station operations with Federal Government entities operating meteorological satellite Earth-station receivers in the 1675–1710 MHz band. See 47 CFR 2.106, footnote US 88, for the 27 Protection Zones and other details.

(2) *Operation outside of 27 Protection Zones.* Non-Federal operations, for mobile and portable stations operating at a maximum EIRP of 20 dBm, are permitted outside of the protection zones without coordination. All non-Federal operations for mobile and portables operating at a maximum EIRP of greater than 20 dBm and up to 30 dBm must be coordinated nationwide. All such operations may not cause harmful interference to the Federal operations protected in 47 CFR 2.106, footnote US 88.

(3) *Interference.* If protected Federal operations receive harmful interference from AWS operations in the 1695–1710 MHz band, an AWS licensee must, upon notification, modify its operations and/or technical parameters as necessary to eliminate the interference.

(4) *Point of contact.* AWS licensees in the 1695–1710 MHz band must provide and maintain a point of contact at all times so that immediate contact can be made should interference against protected Federal sites occur.

(5) *Coordination procedures.* Federal use of the radio spectrum is generally governed by the National Telecommunications and Information Administration (NTIA) while non-Federal use is governed by the Commission. As such, any guidance or details concerning Federal/non-Federal coordination must be issued jointly by NTIA and the Commission. The Commission may jointly issue with NTIA one or more public notices with guidance or details concerning the coordination procedures for the 1695–1710 MHz band.

(6) *Requirements for licensees operating in the 1710–1755 MHz band.* AWS licensees operating fixed stations in the 1710–1755 MHz band, if notified that such stations are causing interference to radiosonde receivers operating in the Meteorological Aids Service in the 1675–1700 MHz band or a meteorological-satellite earth receiver operating in the Meteorological-Satellite Service in the 1675–1710 MHz band, shall be required to modify the stations' location and/or technical parameters as necessary to eliminate the interference.

(d) *Recognition of NASA Goldstone facility operations in the 2110–2120 MHz band.* The National Aeronautics and Space Administration (NASA) operates the Deep Space Network (DSN) in the 2110–2120 MHz band at Goldstone, California (*see* Table 3). NASA will continue its operations of high power transmitters (nominal EIRP of 105.5 dBW with EIRP up to 119.5 dBW used under emergency conditions) in this band at this location. AWS licensees must accept any interference received from the Goldstone DSN facility in this band.

TABLE 3—LOCATION OF THE NASA GOLDSTONE DEEP SPACE FACILITY

Location	Coordinates	Maximum transmitter output power
Goldstone, California	35°18′ N 116°54′ W	500 kW

(e) *Protection of Federal operations in the 2200–2290 MHz band*—(1) *Default emission limits.* Except as provided in paragraph (e)(2) of this section, the following default out-of-band emissions limits shall apply for AWS–4 operations in the 2180–2200 MHz band.

(i) For these AWS–4 operations, the power of any emissions on all frequencies between 2200 and 2290 MHz shall not exceed an EIRP of −100.6 dBW/4 kHz.

(ii) No AWS–4 base station operating in the 2180–2200 MHz band shall be located less than 820 meters from a U.S. Earth Station facility operating in the 2200–2290 MHz band.

(2) *Agreements between AWS–4 operators and Federal government entities.* The out-of-band emissions limits in paragraph (e)(1) of this section may be modified by the private contractual agreement of licensees of AWS–4 operating authority and Federal government entities operating in the 2200–2290 MHz band. Such agreement shall be transmitted to the Commission by the National Telecommunications and Information Administration (NTIA) of the U.S. Department of Commerce. A licensee of AWS–4 operating authority who is a party to such an agreement must maintain a copy of the agreement in its station files and disclose it, upon request, to prospective AWS–4 assignees, transferees, or spectrum lessees, to Federal operators, and to the Commission.

(f) *Protection of Federal operations in the 1755–1780 MHz band.* The Federal Government operates communications systems in the 1755–1780 MHz band. Certain systems are expected to continue to operate in the band indefinitely. All other operations will be relocating to other frequencies or otherwise cease operations in the 1755–1780 MHz band in accordance with 47 CFR part 301. Until such a time as Federal operations in the 1755–1780 MHz bands vacate this spectrum, AWS licensees shall protect such systems and must accept any interference received from these Federal operations. See 47 CFR 2.106, footnote US 91, for details. AWS licensees must successfully coordinate proposed operations with all Federal incumbents prior to operation as follows:

(1) *Protection Zone(s).* A protection zone is established for each Federal operation pursuant to 47 CFR 2.106, footnote US 91. Unless otherwise specified in later Commission actions, the default protection zone is nationwide. A base station which enables mobile or portable stations to transmit in the 1755–1780 MHz band may not operate within the Protection Zone(s) of a Federal operation until the licensee successfully coordinates such base station operations with Federal Government entities as follows depending on the type of Federal incumbent authorization:

(i) *Federal US&P Assignments.* Each AWS licensee must coordinate with each Federal agency that has U.S. and Possessions (US&P) authority prior to its first operations in its licensed area to reach a coordination arrangement with each US&P agency on an operator-to-operator basis. (Agencies with U.S. and Possessions (US&P) authority do not operate nationwide and may be able to share, prior to relocation, in some areas.)

(ii) *Other Federal Assignments.* Each AWS licensee must successfully coordinate all base station operations within a Protection Zone with the Federal incumbents. The default requirement is a nationwide coordination zone with possible revisions to the Protection Zone and other details to be announced in a Joint FCC/NTIA public notice.

(2) *Interference.* If protected Federal operations receive harmful interference from AWS operations in the 1755–1780 MHz band, an AWS licensee must, upon notification, modify its operations and/or technical parameters as

necessary to eliminate the interference.

(3) *Point of contact.* AWS licensees in the 1755–1780 MHz band must provide and maintain a point of contact at all times so that immediate contact can be made should interference against protected Federal operations occur.

(4) *Coordination procedures.* Federal use of the radio spectrum is generally governed by the National Telecommunications and Information Administration (NTIA) while non-Federal use is governed by the Commission. As such, any guidance or details concerning Federal/non-Federal coordination must be issued jointly by NTIA and the Commission. The Commission may jointly issue with NTIA one or more public notices with guidance or details concerning the coordination procedures for the 1755–1780 MHz band.

[69 FR 5716, Feb. 6, 2004, as amended at 73 FR 50571, Aug. 27, 2008; 78 FR 8270, Jan. 5, 2013; 79 FR 32414, June 4, 2014]

§ 27.1135 Protection of non-Federal Government Meteorological-Satellite operations.

AWS licensees operating fixed stations in the 1710–1755 MHz band, if notified that such stations are causing interference to meteorological-satellite earth receivers operating in the Meteorological-Satellite Service in the 1675–1710 MHz band, shall be required to modify the stations' location and/or technical parameters as necessary to eliminate the interference.

§ 27.1136 Protection of mobile satellite services in the 2000–2020 MHz and 2180–2200 MHz bands.

An AWS licensee of the 2000–2020 MHz and 2180–2200 MHz bands must accept any interference received from duly authorized mobile satellite service operations in these bands. Any such AWS licensees must protect mobile satellite service operations in these bands from harmful interference.

[78 FR 8270, Jan. 5, 2013]

COST-SHARING POLICIES GOVERNING MICROWAVE RELOCATION FROM THE 2110–2150 MHZ AND 2160–2200 MHZ BANDS

SOURCE: Sections 27.1160 through 27.1174 appear at 71 FR 29835, May 24, 2006, unless otherwise noted.

§ 27.1160 Cost-sharing requirements for AWS.

Frequencies in the 2110–2150 MHz and 2160–2200 MHz bands listed in § 101.147 of this chapter have been reallocated from Fixed Microwave Services (FMS) to use by AWS (as reflected in § 2.106 of this chapter). In accordance with procedures specified in § 22.602 and §§ 101.69 through 101.82 of this chapter, AWS entities are required to relocate the existing microwave licensees in these bands if interference to the existing microwave licensee would occur. All AWS entities that benefit from the clearance of this spectrum by other AWS entities or by a voluntarily relocating microwave incumbent must contribute to such relocation costs. AWS entities may satisfy their reimbursement requirement by entering into private cost-sharing agreements or agreeing to terms other than those specified in § 27.1164. However, AWS entities are required to reimburse other AWS entities or voluntarily relocating microwave incumbents that incur relocation costs and are not parties to the alternative agreement. In addition, parties to a private cost-sharing agreement may seek reimbursement through the clearinghouse (as discussed in § 27.1162) from AWS entities or other Emerging Technologies (ET) entities, including Mobile Satellite Service (MSS) operators (for Ancillary Terrestrial Component (ATC) base stations), that are not parties to the agreement. The cost-sharing plan is in effect during all phases of microwave relocation specified in §§ 22.602 and 101.69 of this chapter. If an AWS licensee enters into a spectrum leasing arrangement (as set forth in part 1, subpart X of this chapter) and the spectrum lessee triggers a cost-sharing obligation, the licensee is

the AWS entity responsible for satisfying the cost-sharing obligations under §§ 27.1160–27.1174.

[71 FR 29835, May 24, 2006, as amended at 78 FR 8270, Feb. 5, 2013]

§ 27.1162 Administration of the Cost-Sharing Plan.

The Wireless Telecommunications Bureau, under delegated authority, will select one or more entities to operate as a neutral, not-for-profit clearinghouse(s). This clearinghouse(s) will administer the cost-sharing plan by, *inter alia*, determining the cost-sharing obligation of AWS and other ET entities for the relocation of FMS incumbents from the 2110–2150 MHz and 2160–2200 MHz bands. The clearinghouse filing requirements (see §§ 27.1166(a), 27.1170) will not take effect until an administrator is selected.

§ 27.1164 The cost-sharing formula.

An AWS relocator who relocates an interfering microwave link, *i.e.*, one that is in all or part of its market area and in all or part of its frequency band or a voluntarily relocating microwave incumbent, is entitled to *pro rata* reimbursement based on the following formula:

$$R_N = \frac{C}{N} \times \frac{\left[120 - (T_m)\right]}{120}$$

(a) R_N equals the amount of reimbursement.

(b) C equals the actual cost of relocating the link(s). Actual relocation costs include, but are not limited to, such items as: Radio terminal equipment (TX and/or RX—antenna, necessary feed lines, MUX/Modems); towers and/or modifications; back-up power equipment; monitoring or control equipment; engineering costs (design/path survey); installation; systems testing; FCC filing costs; site acquisition and civil works; zoning costs; training; disposal of old equipment; test equipment (vendor required); spare equipment; project management; prior coordination notification under § 101.103(d) of this chapter; site lease renegotiation; required antenna upgrades for interference control; power plant upgrade (if required); electrical grounding systems; Heating Ventilation and Air Conditioning (HVAC) (if required); alternate transport equipment; and leased facilities. Increased recurring costs represent part of the actual cost of relocation and, even if the compensation to the incumbent is in the form of a commitment to pay five years of charges, the AWS or MSS/ATC relocator is entitled to seek immediate reimbursement of the lump sum amount based on present value using current interest rates, provided it has entered into a legally binding agreement to pay the charges. C also includes voluntarily relocating microwave incumbent's independent third party appraisal of its compensable relocation costs and incumbent transaction expenses that are directly attributable to the relocation, subject to a cap of two percent of the ''hard'' costs involved. Hard costs are defined as the actual costs associated with providing a replacement system, such as equipment and engineering expenses. C may not exceed $250,000 per paired link, with an additional $150,000 permitted if a new or modified tower is required.

(c) N equals the number of AWS and MSS/ATC entities that have triggered a cost-sharing obligation. For the AWS relocator, $N = 1$. For the next AWS entity triggering a cost-sharing obligation, $N = 2$, and so on. In the case of a voluntarily relocating microwave incumbent, $N = 1$ for the first AWS entity triggering a cost-sharing obligation. For the next AWS or MSS/ATC entity triggering a cost-sharing obligation, $N = 2$, and so on.

(d) T_m equals the number of months that have elapsed between the month

the AWS or MSS/ATC relocator or voluntarily relocating microwave incumbent obtains reimbursement rights for the link and the month in which an AWS entity triggers a cost-sharing obligation. An AWS or MSS/ATC relocator obtains reimbursement rights for the link on the date that it signs a relocation agreement with a microwave incumbent. A voluntarily relocating microwave incumbent obtains reimbursement rights for the link on the date that the incumbent notifies the Commission that it intends to discontinue, or has discontinued, the use of the link, pursuant to §101.305 of the Commission's rules.

§27.1166 Reimbursement under the Cost-Sharing Plan.

(a) *Registration of reimbursement rights.* Claims for reimbursement under the cost-sharing plan are limited to relocation expenses incurred on or after the date when the first AWS license is issued in the relevant AWS band (start date). If a clearinghouse is not selected by that date (see §27.1162) claims for reimbursement (see §27.1166) and notices of operation (see §27.1170) for activities that occurred after the start date but prior to the clearinghouse selection must be submitted to the clearinghouse within 30 calendar days of the selection date.

(1) To obtain reimbursement, an AWS relocator must submit documentation of the relocation agreement to the clearinghouse within 30 calendar days of the date a relocation agreement is signed with an incumbent. In the case of involuntary relocation, an AWS relocator must submit documentation of the relocated system within 30 calendar days after the end of the relocation.

(2) To obtain reimbursement, a voluntarily relocating microwave incumbent must submit documentation of the relocation of the link to the clearinghouse within 30 calendar days of the date that the incumbent notifies the Commission that it intends to discontinue, or has discontinued, the use of the link, pursuant to §101.305 of the Commission's rules.

(b) *Documentation of expenses.* Once relocation occurs, the AWS relocator, or the voluntarily relocating microwave incumbent, must submit documentation itemizing the amount spent for items specifically listed in §27.1164(b), as well as any reimbursable items not specifically listed in §27.1164(b) that are directly attributable to actual relocation costs. Specifically, the AWS relocator, or the voluntarily relocating microwave incumbent must submit, in the first instance, only the uniform cost data requested by the clearinghouse along with a copy, without redaction, of either the relocation agreement, if any, or the third party appraisal described in (b)(1) of this section, if relocation was undertaken by the microwave incumbent. AWS relocators and voluntarily relocating microwave incumbents must maintain documentation of cost-related issues until the applicable sunset date and provide such documentation upon request, to the clearinghouse, the Commission, or entrants that trigger a cost-sharing obligation. If an AWS relocator pays a microwave incumbent a monetary sum to relocate its own facilities, the AWS relocator must estimate the costs associated with relocating the incumbent by itemizing the anticipated cost for items listed in §27.1164(b). If the sum paid to the incumbent cannot be accounted for, the remaining amount is not eligible for reimbursement.

(1) *Third party appraisal.* The voluntarily relocating microwave incumbent, must also submit an independent third party appraisal of its compensable relocation costs. The appraisal should be based on the actual cost of replacing the incumbent's system with comparable facilities and should exclude the cost of any equipment upgrades or items outside the scope of §27.1164(b).

(2) *Identification of links.* The AWS relocator or the voluntarily relocating microwave incumbent must identify the particular link associated with appropriate expenses (*i.e.*, costs may not be averaged over numerous links). Where the AWS relocator or voluntarily relocating microwave incumbent relocates both paths of a paired channel microwave link (*e.g.*, 2110–2130 MHz with 2160–2180 MHz and 2130–2150 MHz with 2180–2200 MHz), the AWS relocator or voluntarily relocating microwave

incumbent must identify the expenses associated with each paired microwave link.

(c) *Full Reimbursement.* An AWS relocator who relocates a microwave link that is either fully outside its market area or its licensed frequency band may seek full reimbursement through the clearinghouse of compensable costs, up to the reimbursement cap as defined in §27.1164(b). Such reimbursement will not be subject to depreciation under the cost-sharing formula.

(d) *Good Faith Requirement.* New entrants and incumbent licensees are expected to act in good faith in satisfying the cost-sharing obligations under §§27.1160 through 27.1174. The requirement to act in good faith extends to, but is not limited to, the preparation and submission of the documentation required in paragraph (b) of this section.

(e) *MSS Participation in the Clearinghouse.* MSS operators are not required to submit reimbursements to the clearinghouse for links relocated due to interference from MSS space-to-Earth downlink operations, but may elect to do so, in which case the MSS operator must identify the reimbursement claim as such and follow the applicable procedures governing reimbursement in part 27. MSS reimbursement rights and cost-sharing obligations for space-to-Earth downlink operations are governed by §101.82 of this chapter.

(f) *Reimbursement for Self-relocating FMS links in the 2130–2150 MHz and 2180–2200 MHz bands.* Where a voluntarily relocating microwave incumbent relocates a paired microwave link with paths in the 2130–2150 MHz and 2180–2200 MHz bands, it may not seek reimbursement from MSS operators, but is entitled to reimbursement from the first AWS beneficiary for its actual costs for relocating the paired link, subject to the reimbursement cap in §27.1164(b). This amount is subject to depreciation as specified in §27.1164(b). An AWS licensee who is obligated to reimburse relocation costs under this rule is entitled to obtain reimbursement from other AWS beneficiaries in accordance with §§27.1164 and 27.1168. For purposes of applying the cost-sharing formula relative to other AWS licensees that benefit from the self-relocation, depreciation shall run from the date on which the clearinghouse issues the notice of an obligation to reimburse the voluntarily relocating microwave incumbent.

[71 FR 29835, May 24, 2006, as amended at 78 FR 8270, Jan. 5, 2013]

§27.1168 Triggering a Reimbursement Obligation.

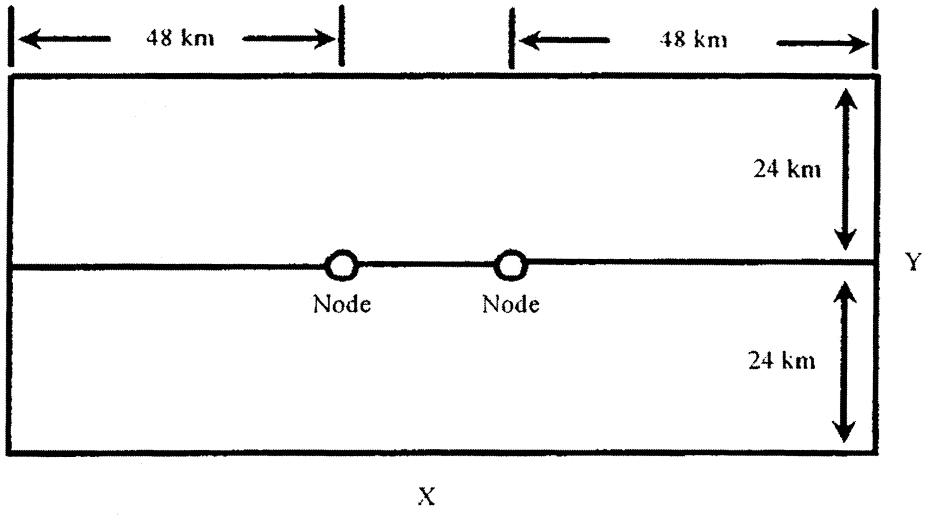
(a) The clearinghouse will apply the following test to determine when an AWS entity has triggered a cost-sharing obligation and therefore must pay an AWS relocator, MSS relocator, or a voluntarily relocating microwave incumbent in accordance with the formula detailed in §27.1164:

(1) All or part of the relocated microwave link was initially co-channel with the licensed AWS band(s) of the AWS entity or the selected assignment of the MSS operator that seeks and obtains ATC authority (see §25.149(a)(2)(i) of this chapter);

(2) An AWS relocator, MSS relocator or a voluntarily relocating microwave incumbent has paid the relocation costs of the microwave incumbent; and

(3) The AWS or MSS entity is operating or preparing to turn on a fixed base station at commercial power and the fixed base station is located within a rectangle (Proximity Threshold) described as follows:

(i) The length of the rectangle shall be x where x is a line extending through both nodes of the microwave link to a distance of 48 kilometers (30 miles) beyond each node. The width of the rectangle shall be y where y is a line perpendicular to x and extending for a distance of 24 kilometers (15 miles) on both sides of x. Thus, the rectangle is represented as follows:



(ii) If the application of the Proximity Threshold Test indicates that a reimbursement obligation exists, the clearinghouse will calculate the reimbursement amount in accordance with the cost-sharing formula and notify the AWS entity of the total amount of its reimbursement obligation.

(b) Once a reimbursement obligation is triggered, the AWS entity may not avoid paying its cost-sharing obligation by deconstructing or modifying its facilities.

[71 FR 29835, May 24, 2006, as amended at 78 FR 8271, Jan. 5, 2013]

§27.1170 Payment issues.

Prior to initiating operations for a newly constructed site or modified existing site, an AWS entity is required to file a notice containing site-specific data with the clearinghouse. The notice regarding the new or modified site must provide a detailed description of the proposed site's spectral frequency use and geographic location, including but not limited to the applicant's name and address, the name of the transmitting base station, the geographic coordinates corresponding to that base station, the frequencies and polarizations to be added, changed or deleted, and the emission designator. If a prior coordination notice (PCN) under §101.103(d) of this chapter is prepared, AWS entities can satisfy the site-data filing requirement by submitting a copy of their PCN to the clearinghouse. AWS entities that file either a notice or a PCN have a continuing duty to maintain the accuracy of the site-specific data on file with the clearinghouse. Utilizing the site-specific data, the clearinghouse will determine if any reimbursement obligation exists and notify the AWS entity in writing of its repayment obligation, if any. When the AWS entity receives a written copy of such obligation, it must pay directly to the relocator the amount owed within 30 calendar days.

[78 FR 8271, Jan. 5, 2013]

§27.1172 Dispute Resolution Under the Cost-Sharing Plan.

(a) Disputes arising out of the cost-sharing plan, such as disputes over the amount of reimbursement required, must be brought, in the first instance, to the clearinghouse for resolution. To the extent that disputes cannot be resolved by the clearinghouse, parties are encouraged to use expedited Alternative Dispute Resolution (ADR) procedures, such as binding arbitration, mediation, or other ADR techniques.

(b) *Evidentiary requirement.* Parties of interest contesting the clearinghouse's

determination of specific cost-sharing obligations must provide evidentiary support to demonstrate that their calculation is reasonable and made in good faith. Specifically, these parties are expected to exercise due diligence to obtain the information necessary to prepare an independent estimate of the relocation costs in question and to file the independent estimate and supporting documentation with the clearinghouse.

§ 27.1174 Termination of cost-sharing obligations.

The cost-sharing plan will sunset for all AWS and MSS entities on the same date on which the relocation obligation for the subject AWS band (*i.e.*, 2110–2150 MHz, 2160–2175 MHz, 2175–2180 MHz, 2180–2200 MHz) in which the relocated FMS link was located terminates. AWS or MSS entrants that trigger a cost-sharing obligation prior to the sunset date must satisfy their payment obligation in full.

[78 FR 8271, Feb. 5, 2013]

COST-SHARING POLICIES GOVERNING BROADBAND RADIO SERVICE RELOCATION FROM THE 2150–2160/62 MHZ BAND

SOURCE: Sections 27.1176 through 27.1190 appear at 71 FR 29835, May 24, 2006, unless otherwise noted.

§ 27.1176 Cost-sharing requirements for AWS in the 2150–2160/62 MHz band.

(a) Frequencies in the 2150–2160/62 MHz band have been reallocated from the Broadband Radio Service (BRS) to AWS. All AWS entities who benefit from another AWS entity's clearance of BRS incumbents from this spectrum, including BRS incumbents occupying the 2150–2162 MHz band on a primary basis, must contribute to such relocation costs. Only AWS entrants that relocate BRS incumbents are entitled to such reimbursement.

(b) AWS entities may satisfy their reimbursement requirement by entering into private cost-sharing agreements or agreeing to terms other than those specified in § 27.1180. However, AWS entities are required to reimburse other AWS entities that incur relocation costs and are not parties to the alternative agreement. In addition, parties to a private cost-sharing agreement may seek reimbursement through the clearinghouse (as discussed in § 27.1178) from AWS entities that are not parties to the agreement. The cost-sharing plan is in effect during all phases of BRS relocation until the end of the period specified in § 27.1190. If an AWS licensee enters into a spectrum leasing arrangement and the spectrum lessee triggers a cost-sharing obligation, the licensee is the AWS entity responsible for satisfying cost-sharing obligations under these rules.

§ 27.1178 Administration of the Cost-Sharing Plan.

The Wireless Telecommunications Bureau, under delegated authority, will select one or more entities to operate as a neutral, not-for-profit clearinghouse(s). This clearinghouse(s) will administer the cost-sharing plan by, *inter alia*, determining the cost-sharing obligations of AWS entities for the relocation of BRS incumbents from the 2150–2162 MHz band. The clearinghouse filing requirements (*see* §§ 27.1182(a), 27.1186) will not take effect until an administrator is selected.

§ 27.1180 The cost-sharing formula.

(a) An AWS licensee that relocates a BRS system with which it interferes is entitled to *pro rata* reimbursement based on the cost-sharing formula specified in § 27.1164, except that the depreciation factor shall be $[180 - T_m]/180$, and the variable *C* shall be applied as set forth in paragraph (b) of this section.

(b) *C* is the actual cost of relocating the system, and includes, but is not limited to, such items as: Radio terminal equipment (TX and/or RX—antenna, necessary feed lines, MUX/Modems); towers and/or modifications; back-up power equipment; monitoring or control equipment; engineering costs (design/path survey); installation; systems testing; FCC filing costs; site acquisition and civil works; zoning

costs; training; disposal of old equipment; test equipment (vendor required); spare equipment; project management; site lease renegotiation; required antenna upgrades for interference control; power plant upgrade (if required); electrical grounding systems; Heating Ventilation and Air Conditioning (HVAC) (if required); alternate transport equipment; leased facilities; and end user units served by the base station that is being relocated. In addition to actual costs, *C* may include the cost of an independent third party appraisal conducted pursuant to §27.1182(a)(3) and incumbent transaction expenses that are directly attributable to the relocation, subject to a cap of two percent of the ''hard'' costs involved. Hard costs are defined as the actual costs associated with providing a replacement system, such as equipment and engineering expenses. There is no cap on the actual costs of relocation.

(c) An AWS system shall be considered an interfering system for purposes of this rule if the AWS system is in all or part of the BRS frequency band and operates within line of sight to BRS operations under the applicable test specified in §27.1184. An AWS relocator that relocates a BRS system with which it does not interfere is entitled to full reimbursement, as specified in §27.1182(c).

§27.1182 Reimbursement under the Cost-Sharing Plan.

(a) *Registration of reimbursement rights.* (1) To obtain reimbursement, an AWS relocator must submit documentation of the relocation agreement to the clearinghouse within 30 calendar days of the date a relocation agreement is signed with an incumbent. In the case of involuntary relocation, an AWS relocator must submit documentation of the relocated system within 30 calendar days after the end of the one-year trial period.

(2) Registration of any BRS system shall include:

(i) A description of the system's frequency use;

(ii) If the system exclusively provides one-way transmissions to subscribers, the Geographic Service Area of the system; and

(iii) If the system does not exclusively provide one-way transmission to subscribers, the system hub antenna's geographic location and the above ground level height of the system's receiving antenna centerline.

(3) The AWS relocator must also include with its system registration an independent third party appraisal of the compensable relocation costs. The appraisal should be based on the actual cost of replacing the incumbent's system with comparable facilities and should exclude the cost of any equipment upgrades that are not necessary to the provision of comparable facilities. An AWS relocator may submit registration without a third party appraisal if it consents to binding resolution by the clearinghouse of any good faith cost disputes regarding the reimbursement claim, under the following standard: The relocator shall bear the burden of proof, and be required to demonstrate by clear and convincing evidence that its request does not exceed the actual cost of relocating the relevant BRS system or systems to comparable facilities. Failure to satisfy this burden of proof will result in loss of rights to subsequent reimbursement of the disputed costs from any AWS licensee.

(b) *Documentation of expenses.* Once relocation occurs, the AWS relocator must submit documentation itemizing the amount spent for items specifically listed in §27.1180(b), as well as any reimbursable items not specifically listed in §27.1180(b) that are directly attributable to actual relocation costs. Specifically, the AWS relocator must submit, in the first instance, only the uniform cost data requested by the clearinghouse along with copies, without redaction, of the relocation agreement, if any, and the third party appraisal described in (a)(3), of this section, if prepared. The AWS relocator must identify the particular system associated with appropriate expenses (*i.e.*, costs may not be averaged over numerous systems). If an AWS relocator pays a BRS incumbent a monetary sum to relocate its own facilities in whole or in part, the AWS relocator must itemize the actual costs to the extent determinable, and otherwise must estimate

the actual costs associated with relocating the incumbent and itemize these costs. If the sum paid to the incumbent cannot be accounted for, the remaining amount is not eligible for reimbursement. All AWS relocators seeking reimbursement through the clearinghouse have an ongoing duty to maintain all relevant records of BRS relocation-related expenses until the sunset of cost-sharing obligations, and to provide, upon request, such documentation, including a copy of the independent appraisal if one was conducted, to the clearinghouse, the Commission, or AWS entrants that trigger a cost-sharing obligation.

(c) *Full reimbursement.* An AWS relocator who relocates a BRS system that is either:

(1) Wholly outside its frequency band; or

(2) Not within line of sight of the relocator's transmitting base station may seek full reimbursement through the clearinghouse of compensable costs. Such reimbursement will not be subject to depreciation under the cost-sharing formula.

(d) *Good Faith Requirement.* New entrants and incumbent licensees are expected to act in good faith in satisfying the cost-sharing obligations under §§ 27.1176 through 27.1190. The requirement to act in good faith extends to, but is not limited to, the preparation and submission of the documentation required in paragraph (b) of this section.

§ 27.1184 Triggering a reimbursement obligation.

(a) The clearinghouse will apply the following test to determine when an AWS entity has triggered a cost-sharing obligation and therefore must pay an AWS relocator of a BRS system in accordance with the formula detailed in § 27.1180:

(1) All or part of the relocated BRS system was initially co-channel with the licensed AWS band(s) of the AWS entity;

(2) An AWS relocator has paid the relocation costs of the BRS incumbent; and

(3) The other AWS entity has turned on or is preparing to turn on a fixed base station at commercial power and the incumbent BRS system would have been within the line of sight of the AWS entity's fixed base station, defined as follows.

(i) For a BRS system using the 2150–2160/62 MHz band exclusively to provide one-way transmissions to subscribers, the clearinghouse will determine whether there is an unobstructed signal path (line of sight) to the incumbent licensee's geographic service area (GSA), based on the following criteria: use of 9.1 meters (30 feet) for the receiving antenna height, use of the actual transmitting antenna height and terrain elevation, and assumption of 4/3 Earth radius propagation conditions. Terrain elevation data must be obtained from the U.S. Geological Survey (USGS) 3-second database. All coordinates used in carrying out the required analysis shall be based upon use of NAD–83.

(ii) For all other BRS systems using the 2150–2160/62 MHz band, the clearinghouse will determine whether there is an unobstructed signal path (line of sight) to the incumbent licensee's receive station hub using the method prescribed in ''Methods for Predicting Interference from Response Station Transmitters and to Response Station Hubs and for Supplying Data on Response Station Systems. MM Docket 97–217,'' in Amendment of 47 CFR parts 1, 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions, MM Docket No. 97–217, *Report and Order on Further Reconsideration and Further Notice of Proposed Rulemaking,* 15 FCC Rcd 14566 at 14610, Appendix D.

(b) If the application of the trigger test described in paragraphs (a)(3)(i) and (ii) of this section, indicates that a reimbursement obligation exists, the clearinghouse will calculate the reimbursement amount in accordance with the cost-sharing formula and notify the subsequent AWS entity of the total amount of its reimbursement obligation.

(c) Once a reimbursement obligation is triggered, the AWS entity may not avoid paying its cost-sharing obligation by deconstructing or modifying its facilities.

§ 27.1186 Payment issues.

Payment of cost-sharing obligations for the relocation of BRS systems in the 2150–60/62 MHz band is subject to the rules set forth in § 27.1170. If an AWS licensee is initiating operations for a newly constructed site or modified existing site in licensed bands overlapping the 2150–2160/62 MHz band, the AWS licensee must file with the clearinghouse, in addition to the site-specific data required by § 27.1170, the above ground level height of the transmitting antenna centerline. AWS entities have a continuing duty to maintain the accuracy of the site-specific data on file with the clearinghouse.

[71 FR 29835, May 24, 2006, as amended at 72 FR 41939, Aug. 1, 2007]

§ 27.1188 Dispute resolution under the Cost-Sharing Plan.

(a) Disputes arising out of the cost-sharing plan, such as disputes over the amount of reimbursement required, must be brought, in the first instance, to the clearinghouse for resolution. To the extent that disputes cannot be resolved by the clearinghouse, parties are encouraged to use expedited Alternative Dispute Resolution (ADR) procedures, such as binding arbitration, mediation, or other ADR techniques.

(b) *Evidentiary requirement.* Parties of interest contesting the clearinghouse's determination of specific cost-sharing obligations must provide evidentiary support to demonstrate that their calculation is reasonable and made in good faith. Specifically, these parties are expected to exercise due diligence to obtain the information necessary to prepare an independent estimate of the relocation costs in question and to file the independent estimate and supporting documentation with the clearinghouse.

§ 27.1190 Termination of cost-sharing obligations.

The plan for cost-sharing in connection with BRS relocation will sunset for all AWS entities fifteen years after the relocation sunset period for BRS relocation commences, *i.e.*, fifteen years after the first AWS licenses are issued in any part of the 2150–2162 MHz band. AWS entrants that trigger a cost-sharing obligation prior to the sunset date must satisfy their payment obligation in full.

Subpart M—Broadband Radio Service and Educational Broadband Service

SOURCE: 69 FR 72034, Dec. 10, 2004, unless otherwise noted.

§ 27.1200 Change to BRS and EBS.

(a) As of January 10, 2005, licensees assigned to the Multipoint Distribution Service (MDS) and the Multichannel Multipoint Distribution Service (MMDS) shall be reassigned to the Broadband Radio Service (BRS) and licensees in the Instructional Television Fixed Service (ITFS) shall be reassigned to the Educational Broadband Service (EBS).

§ 27.1201 EBS eligibility.

(a) A license for an Educational Broadband Service station will be issued only to an accredited institution or to a governmental organization engaged in the formal education of enrolled students or to a nonprofit organization whose purposes are educational and include providing educational and instructional television material to such accredited institutions and governmental organizations, and which is otherwise qualified under the statutory provisions of the Communications Act of 1934, as amended.

(1) A publicly supported educational institution must be accredited by the appropriate State department of education.

(2) A privately controlled educational institution must be accredited by the appropriate State department of education or the recognized regional and national accrediting organizations.

(3) Those applicant organizations whose eligibility is established by service to accredited institutional or governmental organizations must submit documentation from proposed receive

sites demonstrating that they will receive and use the applicant's educational usage. In place of this documentation, a State educational television (ETV) commission may demonstrate that the public schools it proposes to serve are required to use its proposed educational usage. Documentation from proposed receive sites which are to establish the eligibility of an entity not serving its own enrolled students for credit should be in letter form, written and signed by an administrator or authority who is responsible for the receive site's curriculum planning. No receive site more than 35 miles from the proposed station's central reference point, or outside the applicants' proposed GSA, shall be used to establish basic eligibility. Where broadband or data services are proposed, the letter should indicate that the data services will be used in furtherance of the institution's educational mission and will be provided to enrolled students, faculty and staff in a manner and in a setting conducive to educational usage. Where traditional educational or instructional video services are proposed, the letter should indicate that the applicant's program offerings have been viewed and that such programming will be incorporated in the site's curriculum. Where educational or instructional video services are proposed, the letter should discuss the types of programming and hours per week of formal and informal programming expected to be used and the site's involvement in the planning, scheduling and production of programming. If other levels of authority must be obtained before a firm commitment to utilize the service can be made, the nature and extent of such additional authorization(s) must be provided.

(4) Nonlocal applicants, in addition to submitting letters from proposed receive sites, must demonstrate the establishment of a local program committee in each community where they apply. Letters submitted on behalf of a nonlocal entity must confirm that a member of the receive site's staff will serve on the local program committee and demonstrate a recognition of the composition and power of the committee. The letter should show that the staff member will aid in the selection, scheduling and production of the programming received over the system.

(b) No numerical limit is placed on the number of stations which may be licensed to a single licensee. A single license may be issued for more than one transmitter if they are to be located at a common site and operated by the same licensee. Applicants are expected to accomplish the proposed operation by the use of the smallest number of channels required to provide the needed service.

(c) [Reserved]

(d) This paragraph applies to EBS licensees and applications licensed or filed pursuant to the provisions of §27.1201(c) contained in the edition of 47 CFR parts 20 through 39, revised as of October 1, 2005, or §§74.990 through 74.992 contained in the edition of 47 CFR parts 70 through 79, revised as of October 1, 2004, and that do not meet the eligibility requirements of paragraph (a) of this section. Such licensees may continue to operate pursuant to the terms of their existing licenses, and their licenses may be renewed, assigned, or transferred, so long as the licensee is otherwise in compliance with this chapter. Applications filed pursuant to the provisions of §27.1201(c) contained in the edition of 47 CFR parts 20 through 39, revised as of October 1, 2005 or §§74.990 through 74.992 contained in the edition of 47 CFR parts 70 through 79, revised as of October 1, 2004 may be processed and granted, so long as such applications were filed prior to July 19, 2006. The provisions of §§27.1203(b) through (d) and 27.1214 of this subpart do not apply to licenses governed by this paragraph.

[69 FR 72034, Dec. 10, 2004, as amended at 71 FR 35190, June 19, 2006; 73 FR 26040, May 8, 2008]

§27.1202 Cable/BRS cross-ownership.

(a) Initial or modified authorizations for BRS stations may not be granted to a cable operator if a portion of the BRS station's protected services area is within the portion of the franchise area actually served by the cable operator's cable system and the cable operator will be using the BRS station as a multichannel video programming distributor (as defined in §76.64(d) of this

chapter). No cable operator may acquire such authorization either directly, or indirectly through an affiliate owned, operated, or controlled by or under common control with a cable operator if the cable operator will use the BRS station as a multichannel video programming distributor.

(b) No licensee of a station in this service may lease transmission time or capacity to a cable operator either directly, or indirectly through an affiliate owned, operated, controlled by, or under common control with a cable operator, if a portion of the BRS station's protected services area is within the portion of the franchise area actually served by the cable operator's cable system the cable operator will use the BRS station as a multichannel video programming distributor.

(c) Applications for new stations, station modifications, assignments or transfers of control by cable operators of BRS stations shall include a showing that no portion of the GSA of the BRS station is within the portion of the franchise area actually served by the cable operator's cable system, or of any entity indirectly affiliated, owned, operated, controlled by, or under common control with the cable operator. Alternatively, the cable operator may certify that it will not use the BRS station to distribute multichannel video programming.

(d) In applying the provisions of this section, ownership and other interests in BRS licensees or cable television systems will be attributed to their holders and deemed cognizable pursuant to the following criteria:

(1) Except as otherwise provided herein, partnership and direct ownership interests and any voting stock interest amounting to 5% or more of the outstanding voting stock of a corporate BRS licensee or cable television system will be cognizable;

(2) Investment companies, as defined in 15 U.S.C. 80a–3, insurance companies and banks holding stock through their trust departments in trust accounts will be considered to have a cognizable interest only if they hold 20% or more of the outstanding voting stock of a corporate BRS licensee or cable television system, or if any of the officers or directors of the BRS licensee or cable television system are representatives of the investment company, insurance company or bank concerned. Holdings by a bank or insurance company will be aggregated if the bank or insurance company has any right to determine how the stock will be voted. Holdings by investment companies will be aggregated if under common management.

(3) Attribution of ownership interests in a BRS licensee or cable television system that are held indirectly by any party through one or more intervening corporations will be determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain and application of the relevant attribution benchmark to the resulting product, except that wherever the ownership percentage for any link in the chain exceeds 50%, it shall not be included for purposes of this multiplication. For purposes of paragraph (d)(9) of this section, attribution of ownership interests in a BRS licensee or cable television system that are held indirectly by any party through one or more intervening organizations will be determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain and application of the relevant attribution benchmark to the resulting product, and the ownership percentage for any link in the chain that exceeds 50% shall be included for purposes of this multiplication. For example, except for purposes of paragraph (d)(9) of this section, if A owns 10% of company X, which owns 60% of company Y, which owns 25% of ''Licensee,'' then X's interest in ''Licensee'' would be 25% (the same as Y's interest because X's interest in Y exceeds 50%), and A's interest in ''Licensee'' would be 2.5% (0.1 × 0.25). Under the 5% attribution benchmark, X's interest in ''Licensee'' would be cognizable, while A's interest would not be cognizable. For purposes of paragraph (d)(9) of this section, X's interest in ''Licensee'' would be 15% (0.6 × 0.25) and A's interest in ''Licensee'' would be 1.5% (0.1 × 0.6 × 0.25). Neither interest would be attributed under paragraph (d)(9) of this section.

(4) Voting stock interests held in trust shall be attributed to any person

who holds or shares the power to vote such stock, to any person who has the sole power to sell such stock, and to any person who has the right to revoke the trust at will or to replace the trustee at will. If the trustee has a familial, personal or extra-trust business relationship to the grantor or the beneficiary, the grantor or beneficiary, as appropriate, will be attributed with the stock interests held in trust. An otherwise qualified trust will be ineffective to insulate the grantor or beneficiary from attribution with the trust's assets unless all voting stock interests held by the grantor or beneficiary in the relevant BRS licensee or cable television system are subject to said trust.

(5) Subject to paragraph (d)(9) of this section, holders of non-voting stock shall not be attributed an interest in the issuing entity. Subject to paragraph (d)(9) of this section, holders of debt and instruments such as warrants, convertible debentures, options or other non-voting interests with rights of conversion to voting interests shall not be attributed unless and until conversion is effected.

(6)(i) A limited partnership interest shall be attributed to a limited partner unless that partner is not materially involved, directly or indirectly, in the management or operation of the BRS or cable television activities of the partnership and the licensee or system so certifies. An interest in a Limited Liability Company (''LLC'') or Registered Limited Liability Partnership (''RLLP'') shall be attributed to the interest holder unless that interest holder is not materially involved, directly or indirectly, in the management or operation of the BRS or cable television activities of the partnership and the licensee or system so certifies.

(ii) For a licensee or system that is a limited partnership to make the certification set forth in paragraph (d)(6)(i) of this section, it must verify that the partnership agreement or certificate of limited partnership, with respect to the particular limited partner exempt from attribution, establishes that the exempt limited partner has no material involvement, directly or indirectly, in the management or operation of the BRS or cable television activities of the partnership. For a licensee or system that is an LLC or RLLP to make the certification set forth in paragraph (d)(6)(i) of this section, it must verify that the organizational document, with respect to the particular interest holder exempt from attribution, establishes that the exempt interest holder has no material involvement, directly or indirectly, in the management or operation of the BRS or cable television activities of the LLC or RLLP. Irrespective of the terms of the certificate of limited partnership or partnership agreement, or other organizational document in the case of an LLC or RLLP, however, no such certification shall be made if the individual or entity making the certification has actual knowledge of any material involvement of the limited partners, or other interest holders in the case of an LLC or RLLP, in the management or operation of the BRS or cable television businesses of the partnership or LLC or RLLP.

(iii) In the case of an LLC or RLLP, the licensee or system seeking installation shall certify, in addition, that the relevant state statute authorizing LLCs permits an LLC member to insulate itself as required by our criteria.

(7) Officers and directors of a BRS licensee or cable television system are considered to have a cognizable interest in the entity with which they are so associated. If any such entity engages in businesses in addition to its primary business of BRS or cable television service, it may request the Commission to waive attribution for any officer or director whose duties and responsibilities are wholly unrelated to its primary business. The officers and directors of a parent company of a BRS licensee or cable television system, with an attributable interest in any such subsidiary entity, shall be deemed to have a cognizable interest in the subsidiary unless the duties and responsibilities of the officer or director involved are wholly unrelated to the BRS licensee or cable television system subsidiary, and a statement properly documenting this fact is submitted to the Commission. The officers and directors of a sister corporation of a BRS licensee or cable television system shall not be attributed with ownership of these entities by virtue of such status.

(8) Discrete ownership interests will be aggregated in determining whether or not an interest is cognizable under this section. An individual or entity will be deemed to have a cognizable investment if:

(i) The sum of the interests held by or through ''passive investors'' is equal to or exceeds 20 percent; or

(ii) The sum of the interests other than those held by or through ''passive investors'' is equal to or exceeds 5 percent; or

(iii) The sum of the interests computed under paragraph (d)(8)(i) of this section plus the sum of the interests computed under paragraph (d)(8)(ii) of this section equal to or exceeds 20 percent.

(9) Notwithstanding paragraphs (d)(5) and (d)(6) of this section, the holder of an equity or debt interest or interests in a BRS licensee or cable television system subject to the BRS/cable cross-ownership rule (''interest holder'') shall have that interest attributed if:

(i) The equity (including all stockholdings, whether voting or nonvoting, common or preferred) and debt interest or interests, in the aggregate, exceed 33 percent of the total asset value (all equity plus all debt) of that BRS licensee or cable television system; and

(ii) The interest holder also holds an interest in a BRS licensee or cable television system that is attributable under this section (other than this paragraph) and which operates in any portion of the franchise area served by that cable operator's cable system.

(10) The term ''area served by a cable system'' means any area actually passed by the cable operator's cable system and which can be connected for a standard connection fee.

(11) As used in this section ''cable operator'' shall have the same definition as in § 76.5 of this chapter.

(e) The Commission will entertain requests to waive the restrictions in paragraph (a) of this section where necessary to ensure that all significant portions of the franchise area are able to obtain multichannel video service.

(f) The provisions of paragraphs (a) through (e) of this section will not apply to one BRS channel used to provide locally-produced programming to cable headends. Locally-produced programming is programming produced in or near the cable operator's franchise area and not broadcast on a television station available within that franchise area. A cable operator will be permitted one BRS channel for this purpose, and no more than one BRS channel may be used by a cable television company or its affiliate or lessor pursuant to this paragraph. The licensee for a cable operator providing local programming pursuant to a lease must include in a notice filed with the Wireless Telecommunications Bureau a cover letter explicitly identifying itself or its lessees as a local cable operator and stating that the lease was executed to facilitate the provision of local programming. The first application or the first lease notification in an area filed with the Commission will be entitled to the exemption. The limitations on one BRS channel per party and per area include any cable/BRS operations or cable/EBS operations. The cable operator must demonstrate in its BRS application that the proposed local programming will be provided within one year from the date its application is granted. Local programming service pursuant to a lease must be provided within one year of the date of the lease or one year of grant of the licensee's application for the leased channel, whichever is later. If a BRS license for these purposes is granted and the programming is subsequently discontinued, the license will be automatically forfeited the day after local programming service is discontinued.

(g) Applications filed by cable television companies, or affiliates, for BRS channels prior to February 8, 1990, will not be subject to the prohibitions of this section. Applications filed on February 8, 1990, or thereafter will be returned. Lease arrangements between cable and BRS entities for which a lease or a firm agreement was signed prior to February 8, 1990, will also not be subject to the prohibitions of this section. Leases between cable television companies, or affiliates, and BRS station licensees, conditional licensees, or applicants executed on February 8, 1990, or thereafter, are invalid.

(1) Applications filed by cable operators, or affiliates, for BRS channels prior to February 8, 1990, will not be

subject to the prohibitions of this section. Except as provided in paragraph (g)(2)of this section, applications filed on February 8, 1990, or thereafter will be returned. Lease arrangements between cable and BRS entities for which a lease or a firm agreement was signed prior to February 8, 1990, will also not be subject to the prohibitions of this section. Except as provided in paragraph (g)(2) of this section, leases between cable operators, or affiliates, and BRS/EBS station licensees, conditional licensees, or applicants executed on or before February 8, 1990, or thereafter are invalid.

(2) Applications filed by cable operators, or affiliates for BRS channels after February 8, 1990, and prior to October 5, 1992, will not be subject to the prohibition of this section, if, pursuant to the then existing overbuild or rural exceptions, the applications were allowed under the then existing cable/BRS cross-ownership prohibitions. Lease arrangements between cable operators and BRS entities for which a lease or firm agreement was signed after February 8, 1990, and prior to October 5, 1992, will not be subject to the prohibitions of this section, if, pursuant to the then existing rural and overbuild exceptions, the lease arrangements were allowed.

(3) The limitations on cable television ownership in this section do not apply to any cable operator in any franchise area in which a cable operator is subject to effective competition as determined under section 623(l) of the Communications Act.

[69 FR 72034, Dec. 10, 2004, as amended at 71 FR 35190, June 19, 2006]

§ 27.1203 EBS programming requirements.

(a) Except as provided in paragraphs (b), (c), and (d) of this section, BRS and EBS licensees are authorized to provide fixed or mobile service, except aeronautical mobile service, subject to the technical requirements of subparts C and M of this part.

(b) Educational Broadband Service stations are intended primarily through video, data, or voice transmissions to further the educational mission of accredited public and private schools, colleges and universities providing a formal educational and cultural development to enrolled students. Authorized educational broadband channels must be used to further the educational mission of accredited schools offering formal educational courses to enrolled students.

(c) In furtherance of the educational mission of accredited schools, Educational Broadband Service stations may be used for:

(1) In-service training and instruction in special skills and safety programs, extension of professional training, informing persons and groups engaged in professional and technical activities of current developments in their particular fields, and other similar endeavors;

(2) Transmission of material directly related to the administrative activities of the licensee, such as the holding of conferences with personnel, distribution of reports and assignments, exchange of data and statistics, and other similar uses.

(d) Stations, including high-power EBS signal booster stations, may be licensed in the EBS as originating or relay stations to interconnect educational broadband fixed stations in adjacent areas, to deliver instructional and cultural material to, and obtain such material from, commercial and noncommercial educational television broadcast stations for use on the educational broadband system, and to deliver instructional and cultural material to, and obtain such material from, nearby terminals or connection points of closed circuit educational television systems employing wired distribution systems or radio facilities authorized under other parts of this chapter, or to deliver instructional and cultural material to any cable television system serving a receiving site or sites which would be eligible for direct reception of EBS signals under the provisions of § 27.1201.

[69 FR 72034, Dec. 10, 2004, as amended at 71 FR 35190, June 19, 2006]

§ 27.1206 Geographic Service Area.

(a) The Geographic Service Area (GSA) is either:

(1) The area for incumbent site-based licensees that is bounded by a circle having a 35 mile radius and centered at

the station's reference coordinates, which was the previous PSA entitled to incumbent licensees prior to January 10, 2005, and is bounded by the chord(s) drawn between intersection points of the licensee's previous 35 mile PSA and those of respective adjacent market, co-channel licensees; or:

(2) The BTA that is licensed to the respective BRS BTA authorization holder subject to the exclusion of overlapping, co-channel incumbent GSAs as described in paragraph (a)(1) of this section.

(b) If the license for an incumbent BRS station cancels or is forfeited, the GSA area of the incumbent station shall dissolve and the right to operate in that area automatically reverts to the GSA licensee that held the corresponding BTA.

§ 27.1207 BTA license authorization.

(a) Winning bidders must file an application (FCC Form 601) for an initial authorization.

(b) Initial authorizations for BRS granted after January 1, 2008, shall be blanket licenses for all BRS frequencies identified in §27.5(i)(2) and based on the geographic areas identified in §27.1208. Blanket licenses cover all mobile and response stations.

(1) A station would be required to be individually licensed if

(i) International agreements require coordination;

(ii) Submission of an Environmental Assessment is required under §1.1307 of this chapter;

(iii) The station would affect the radio quiet zones under §1.924 of this chapter.

(2) Any antenna structure that requires notification to the Federal Aviation Administration (FAA) must be registered with the Commission prior to construction under §17.4 of this chapter.

[69 FR 72034, Dec. 10, 2004, as amended at 73 FR 26040, May 8, 2008]

§ 27.1208 BTA service areas.

Except for incumbent BRS licenses, BRS service areas are Basic Trading Areas (BTAs) or additional service areas similar to BTAs adopted by the Commission. BTAs are based on the Rand McNally 1992 Commercial Atlas & Marketing Guide, 123rd Edition, at pages 38–39. The following are additional BRS service areas in places where Rand McNally has not defined BTAs: American Samoa; Guam; Gulf of Mexico Zone A; Gulf of Mexico Zone B; Gulf of Mexico Zone C; Northern Mariana Islands; Mayaguez/Aguadilla-Ponce, Puerto Rico; San Juan, Puerto Rico; and the United States Virgin Islands. The boundaries of Gulf of Mexico Zone A are from an area twelve nautical miles from the shoreline at mean high tide on the north and east, to the limit of the Outer Continental Shelf to the south, and to longitude 91°00′ to the west. The boundaries of Gulf of Mexico Zone B are from an area twelve nautical miles from the shoreline at mean high tide on the north, to the limit of the Outer Continental Shelf to the south, to longitude 91°00′ to the east, and to longitude 94°00′ to the west. The boundaries of Gulf of Mexico Zone C are from an area twelve nautical miles from the shoreline at mean high tide on the north and west, to longitude 94°00′ to the east, and to a line 281 kilometers from the reference point at Linares, N.L., Mexico on the southwest. The Mayaguez/Aguadilla-Ponce, PR, service area consists of the following municipios: Adjuntas, Aguada, Aguadilla, Anasco, Arroyo, Cabo Rojo, Coamo, Guanica, Guayama, Guayanilla, Hormigueros, Isabela, Jayuya, Juana Diaz, Lajas, Las Marias, Maricao, Maunabo, Mayaguez, Moca, Patillas, Penuelas, Ponce, Quebradillas, Rincón, Sabana Grande, Salinas, San German, Santa Isabel, Villalba and Yauco. The San Juan service area consists of all other municipios in Puerto Rico.

[69 FR 72034, Dec. 10, 2004, as amended at 73 FR 26040, May 8, 2008]

§ 27.1209 Conversion of incumbent EBS and BRS stations to geographic area licensing.

(a) Any EBS or BRS station licensed by the Commission, other than BTA authorizations and facilities authorized pursuant to BTA authorizations, shall be considered an incumbent station.

(b) As of January 10, 2005, all incumbent EBS and BRS licenses shall be converted to a geographic area license.

Pursuant to that geographic area license, such incumbent licensees may modify their systems provided the modified system complies with the applicable rules. The blanket license covers all fixed stations anywhere within the authorized service area, except as follows:

(1) A station would be required to be individually licensed if

(i) International agreements require coordination;

(ii) Submission of an Environmental Assessment is required under §1.1307 of this chapter;

(iii) The station would affect the radio quiet zones under §1.924 of this chapter.

(2) Any antenna structure that requires notification to the Federal Aviation Administration (FAA) must be registered with the Commission prior to construction under §17.4 of this chapter.

(c) The frequencies associated with incumbent authorizations that have been cancelled automatically or otherwise been recovered by the Commission will automatically revert to the applicable BTA licensee.

§ 27.1210 Remote control operation.

Licensed BRS/EBS stations may be operated by remote control without further authority.

§ 27.1211 Unattended operation.

Unattended operation of licensed BRS/EBS stations is permitted without further authority. An unattended relay station may be employed to receive and retransmit signals of another station provided that the transmitter is equipped with circuits which permit it to radiate only when the signal intended to be retransmitted is present at the receiver input terminals.

§ 27.1212 License term.

(a) BRS/EBS licenses shall be issued for a period of 10 years beginning with the date of grant.

(b) An initial BTA authorization shall be issued for a period of ten years from the date the Commission declared bidding closed in the MDS auction.

§ 27.1213 Designated entity provisions for BRS in Commission auctions commencing prior to January 1, 2004.

(a) *Eligibility for small business provisions.* For purposes of Commission auctions commencing prior to January 1, 2004 for BRS licenses, a small business is an entity that together with its affiliates has average annual gross revenues that are not more than $40 million for the preceding three calendar years.

(b) *Designated entities.* As specified in this section, designated entities that are winning bidders in Commission auctions commencing prior to January 1, 2004 for BTA service areas are eligible for special incentives in the auction process. See 47 CFR 1.2110.

(c) *Installment payments.* Small businesses and small business consortia may elect to pay the full amount of their winning bids in Commission auctions commencing prior to January 1, 2004 for BTA service areas in installments over a ten (10) year period running from the date that their BTA authorizations are issued.

(1) Upon issuance of a BTA authorization to a winning bidder in a Commission auction commencing prior to January 1, 2004 that is eligible for installment payments, the Commission will notify such eligible BTA authorization holder of the terms of its installment payment plan. For BRS, such installment payment plans will:

(i) Impose interest based on the rate of ten (10) year U.S. Treasury obligations at the time of issuance of the BTA authorization, plus two and one half (2.5) percent;

(ii) Allow installment payments for a ten (10) year period running from the date that the BTA authorization is issued;

(iii) Begin with interest-only payments for the first two (2) years; and

(iv) Amortize principal and interest over the remaining years of the ten (10) year period running from the date that the BTA authorization is issued.

(2) *Conditions and obligations.* See §1.2110(g)(4) of this chapter.

(3) *Unjust enrichment.* If an eligible BTA authorization holder that utilizes installment financing under this subsection seeks to partition, pursuant to applicable rules, a portion of its BTA

containing one-third or more of the population of the area within its control in the licensed BTA to an entity not meeting the eligibility standards for installment payments, the holder must make full payment of the remaining unpaid principal and any unpaid interest accrued through the date of partition as a condition of approval.

(d) *Reduced upfront payments.* For purposes of Commission auctions commencing prior to January 1, 2004 for BRS licenses, a prospective bidder that qualifies as a small business, or as a small business consortia, is eligible for a twenty-five (25) percent reduction in the amount of the upfront payment otherwise required. To be eligible to bid on a particular BTA, a small business will be required to submit an upfront payment equal to seventy-five (75) percent of the upfront payment amount specified for that BTA in the public notice listing the upfront payment amounts corresponding to each BTA service area being auctioned.

(e) *Bidding credits.* For purposes of Commission auctions commencing prior to January 1, 2004 for BRS licenses, a winning bidder that qualifies as a small business, or as a small business consortia, may use a bidding credit of fifteen (15) percent to lower the cost of its winning bid on any of the BTA authorizations awarded in the Commission BRS auctions commencing prior to January 1, 2004.

(f) Short-form application certification; Long-form application or statement of intention disclosure. A BRS applicant in a Commission auction commencing prior to January 1, 2004 claiming designated entity status shall certify on its short-form application that it is eligible for the incentives claimed. A designated entity that is a winning bidder for a BTA service area(s) shall, in addition to information otherwise required, file an exhibit to either its initial long-form application for a BRS station license, or to its statement of intention with regard to the BTA, which discloses the gross revenues for each of the past three years of the winning bidder and its affiliates. This exhibit shall describe how the winning bidder claiming status as a designated entity satisfies the designated entity eligibility requirements, and must list and summarize all agreements that affect designated entity status, such as partnership agreements, shareholder agreements, management agreements and other agreements, including oral agreements, which establish that the designated entity will have both de facto and de jure control of the entity. See 47 CFR 1.2110(i).

(g) *Records maintenance.* All holders of BTA authorizations acquired in a Commission auction commencing prior to January 1, 2004 that claim designated entity status shall maintain, at their principal place of business or with their designated agent, an updated documentary file of ownership and revenue information necessary to establish their status. Holders of BTA authorizations or their successors in interest shall maintain such files for a ten (10) year period running from the date that their BTA authorizations are issued. The files must be made available to the Commission upon request.

[69 FR 72034, Dec. 10, 2004, as amended at 71 FR 35190, June 19, 2006]

§ 27.1214 EBS spectrum leasing arrangements and grandfathered leases.

(a) A licensee in the EBS that is solely utilizing analog transmissions may enter into a spectrum leasing arrangement to transmit material other than the educational programming defined in § 27.1203(b) and (c) subject to the following conditions:

(1) Before entering into a spectrum leasing arrangement involving material other than educational programming on any one channel, the licensee must provide at least 20 hours per week of EBS educational programming (as defined in § 27.1203(b) and (c)) on that channel, except as provided in paragraphs (a)(2) and (a)(3) of this section. An additional 20 hours per week per channel must be strictly reserved for EBS use and not used for non-EBS purposes, or reserved for recapture by the EBS licensee for its EBS educational usage, subject to one year's advance, written notification by the EBS licensee to its lessee and accounting for all recapture already exercised, with no economic or operational detriment to the licensee. These hours of recapture

are not restricted as to time of day or day of the week, but may be established by negotiations between the EBS licensee and the lessee. The 20 hours per channel per week EBS educational usage requirement and the recapture and/or reservation requirement of an additional 20 hours per channel per week shall apply spectrally over the licensee's whole actual service area.

(2) For the first two years of operation, an EBS entity may enter into a spectrum leasing arrangement involving material other than educational programming if it provides EBS educational usage for at least 12 hours per channel per week, provided that the entity does not employ channel loading technology.

(3) The licensee may shift its requisite EBS educational usage onto fewer than its authorized number of channels, via channel mapping or channel loading technology, so that it can enter into a spectrum leasing arrangement involving full-time channel capacity on its EBS station and/or associated EBS booster stations, subject to the condition that it provide a total average of at least 20 hours per channel per week of EBS educational usage on its authorized channels. The use of channel mapping or channel loading consistent with the Rules shall not be considered adversely to the EBS licensee in seeking a license renewal. The licensee also retains the unabridgeable right to recapture, subject to six months' advance written notification by the EBS licensee to the spectrum lessee, an average of an additional 20 hours per channel per week, accounting for all recapture already exercised. Regardless of whether the licensee has educational receive sites within its GSA, the licensee may lease booster stations in the entire GSA, provided that the licensee maintains the unabridgeable right to ready recapture at least 40 hours per channel per week for EBS educational usage. The licensee may agree to the transmission of this recapture time on channels not authorized to it, but which are included in the wireless system of which it is a part. A licensee under this paragraph which enters into a spectrum leasing arrangement on any one of its channels to an operator may ''channel shift'' pursuant to and under the conditions of paragraph (d)(2) of this section.

(b) A licensee utilizing digital transmissions on any of its licensed channels may enter into a spectrum leasing arrangement to transmit material other than the educational programming defined in §27.1203(b) and (c), subject to the following conditions:

(1) The licensee must reserve a minimum of 5% of the capacity of its channels for educational uses consistent with §27.1203 paragraphs (b) and (c), and may not enter into a spectrum leasing arrangement involving this reserved capacity. In addition, before leasing excess capacity, the licensee must provide at least 20 hours per licensed channel per week of EBS educational usage. This 5% reservation and this 20 hours per licensed channel per week EBS educational usage requirement shall apply spectrally over the licensee's whole actual service area. However, regardless of whether the licensee has an educational receive site within its GSA served by a booster, the licensee may lease excess capacity without making at least 20 hours per licensed channel per week of EBS educational usage, provided that the licensee maintains the unabridgeable right to recapture on one months' advance notice such capacity as it requires over and above the 5% reservation to make at least 20 hours per channel per week of EBS educational usage.

(2) The licensee may shift its requisite EBS educational usage onto fewer than its authorized number of channels, via channel mapping or channel loading technology, and may shift its requisite EBS educational usage onto channels not authorized to it, but which are included in the wireless system of which it is a part (''channel shifting''), so that it can enter into a spectrum leasing arrangement involving full-time channel capacity on its EBS station, associated EBS booster stations, and/or EBS response stations and associated response station hubs, subject to the condition that it provide a total average of at least 20 hours per licensed channel per week of EBS educational usage. The use of channel

mapping, channel loading, and/or channel shifting consistent with the Rules shall not be considered adversely to the EBS licensee in seeking a license renewal. In addition, an EBS entity receiving interference protection will continue to receive such protection if it elects to swap channels with another EBS or BRS station.

(c) All spectrum leasing arrangements involving EBS spectrum must afford the EBS licensee an opportunity to purchase or to lease the dedicated or common EBS equipment used for educational purposes, or comparable equipment in the event that the spectrum leasing arrangement is terminated.

(d) All leases of current EBS spectrum entered into prior to January 10, 2005 and in compliance with leasing rules formerly contained in part 74 of this chapter may continue in force and effect, notwithstanding any inconsistency between such leases and the rules applicable to spectrum leasing arrangements set forth in this chapter. Such leases entered into pursuant to the former part 74 rules of this chapter may be renewed and assigned in accordance with the terms of such lease. All spectrum leasing arrangements leases entered into after January 10, 2005, pursuant to the rules set forth in part 1 and part 27 of this chapter, must comply with the rules in those parts.

(e) The maximum permissible term of an EBS spectrum leasing arrangement entered into on or after July 19, 2006 (including the initial term and all renewal terms that commence automatically or at the sole option of the lessee) shall be 30 years. In furtherance of the educational purposes for which EBS spectrum is primarily allocated, any spectrum leasing arrangement in excess of 15 years that is entered into on or after July 19, 2006 must include terms which provide the EBS licensee on the 15th year and every 5 years thereafter, with an opportunity to review its educational use requirements in light of changes in educational needs, technology, and other relevant factors and to obtain access to such additional services, capacity, support, and/or equipment as the parties shall agree upon in the spectrum leasing arrangement to advance the EBS licensee's educational mission.

[69 FR 72034, Dec. 10, 2004, as amended at 71 FR 35190, June 19, 2006; 73 FR 26041, May 8, 2008]

§ 27.1215 BRS grandfathered leases.

(a) All leases of current BRS spectrum entered into prior to January 10, 2005 and in compliance with rules formerly contained in part 21 of this chapter may continue in force and effect, notwithstanding any inconsistency between such leases and the rules applicable to spectrum leasing arrangements set forth in this chapter. Such leases entered into pursuant to the former part 21 of this chapter may be renewed and assigned in accordance with the terms of such lease. All spectrum leasing arrangements leases entered into after January 10, 2005, pursuant to the rules set forth in part 1 and part 27 of this chapter must comply with the rules in those parts.

§ 27.1216 Grandfathered E and F group EBS licenses.

(a) Except as noted in paragraph (b) of this section, grandfathered EBS licensees authorized to operate E and F group co-channel licenses are granted a geographic service area (GSA) on July 19, 2006. The GSA is the area bounded by a circle having a 35 mile radius and centered at the station's reference coordinates, and is bounded by the chord(s) drawn between intersection points of that circle and those of respective adjacent market, co-channel licensees.

(b) If there is more than 50 percent overlap between the calculated GSA of a grandfathered EBS license and the protected service area of a co-channel BRS license, the licensees shall not be immediately granted a geographic service area. Instead, the grandfathered EBS license and the co-channel BRS licensee must negotiate in good faith to reach a solution that accommodates the communication needs of both licensees. If the co-channel licensees reach a mutually agreeable solution on or before October 17, 2006, then the GSA of each co-channel license shall be as determined pursuant to the agreement of the parties. If a mutually agreeable solution between

co-channel licensees is not reached on or before October 17, 2006, then each co-channel licensee shall receive a GSA determined pursuant to paragraph (a) of this section and § 27.1206(a).

[71 FR 35191, June 16, 2006]

§ 27.1217 Competitive bidding procedures for the Broadband Radio Service.

Mutually exclusive initial applications for BRS licenses in the 2500–2690 MHz band are subject to competitive bidding. The general competitive bidding procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this subpart.

[73 FR 26041, May 8, 2008]

§ 27.1218 Designated entities.

(a) *Eligibility for small business provisions.* (1) A small business is an entity that, together with all attributed parties, has average gross revenues that are not more than $40 million for the preceding three years.

(2) A very small business is an entity that, together with all attributed parties, has average gross revenues that are not more than $15 million for the preceding three years.

(3) An entrepreneur is an entity that, together with all attributed parties, has average gross revenues that are not more than $3 million for the preceding three years.

(b) *Bidding credits.* (1) A winning bidder that qualifies as a small business, as defined in this section, or a consortium of small businesses, may use a bidding credit of 15 percent, as specified in § 1.2110(f)(2)(iii) of this chapter, to lower the cost of its winning bid on any of the licenses in this subpart.

(2) A winning bidder that qualifies as a very small business, as defined in this section, or a consortium of very small businesses, may use a bidding credit of 25 percent, as specified in § 1.2110(f)(2)(ii) of this chapter, to lower the cost of its winning bid on any of the licenses in this subpart.

(3) A winning bidder that qualifies as an entrepreneur, as defined in this section, or a consortium of entrepreneurs, may use a bidding credit of 15 percent, as specified in § 1.2110(f)(2)(i) of this chapter, to lower the cost of its winning bid on any of the licenses in this subpart.

[73 FR 26041, May 8, 2008]

TECHNICAL STANDARDS

§ 27.1220 Transmission standards.

The width of a channel in the LBS and UBS is 5.5 MHz, with the exception of BRS channels 1 and 2 which are 6.0 MHz. The width of all channels in the MBS is 6 MHz. However, the licensee may subchannelize its authorized bandwidth, provided that digital modulation is employed and the aggregate power does not exceed the authorized power for the channel. The licensee may also, jointly with other licensees, transmit utilizing bandwidth in excess of its authorized bandwidth, provided that digital modulation is employed, all power spectral density requirements set forth in this part are met and the out-of-band emissions restrictions set forth in § 27.53 are met at the edges of the channels employed.

§ 27.1221 Interference protection.

(a) Interference protection will be afforded to BRS and EBS on a station-by-station basis based on the heights of the stations in the LBS and UBS and also on height benchmarking, although the heights of antennas utilized are not restricted.

(b) *Height benchmarking.* Height benchmarking is defined for pairs of base stations, one in each of two proximate geographic service areas (GSAs). The height benchmark, which is defined in meters (hb_m) for a particular base station relative to a base station in another GSA, is equal to the distance, in kilometers, from the base station along a radial to the nearest point on the GSA boundary of the other base station squared (D_{km}^2) and then divided by 17. That is, $hb\ (_m) = D_{km}^2/17$. A base station antenna will be considered to be within its applicable height benchmark relative to another base station if the height in meters of its centerline of radiation above average elevation (HAAE) calculated along the straight line between the two base stations in accordance with § 24.53(b) and (c) of this chapter does not exceed the height benchmark (hb_m). A base station antenna will be considered to exceed its

applicable height benchmark relative to another base station if the HAAE of its centerline of radiation calculated along the straight line between the two base stations in accordance with §24.53(b) and (c) of this chapter exceeds the height benchmark (hb_m).

(c) *Protection for receiving antennas not exceeding the height benchmark.* Absent agreement between the two licensees to the contrary, if a transmitting antenna of one BRS/EBS licensee's base station exceeds its applicable height benchmark and such licensee is notified by another BRS/EBS licensee that it is generating an undesired signal level in excess of −107 dBm/5.5 megahertz at the receiver of a co-channel base station that is within its applicable height benchmark, then the licensee of the base station that exceeds its applicable height benchmark shall either limit the undesired signal at the receiver of the protected base station to −107dBm/5.5 megahertz or less or reduce the height of its transmission antenna to no more than the height benchmark. If the interfering base station has been modified to increase the EIRP transmitted in the direction of the protected base station, it shall be deemed to have commenced operations on the date of such modification. Such corrective action shall be completed no later than:

(i) 24 hours after receiving such notification, if the base station that exceeds its height benchmark commenced operations after the station that is within its applicable height benchmark; or

(ii) 90 days after receiving such notification, if the base station that exceeds its height commenced operations prior to the station that is within its applicable height benchmark. For purposes of this section, if the interfering base station has been modified to increase the EIRP transmitted in the direction of the victim base station, it shall be deemed to have commenced operations on the date of such modification.

(d) *No Protection from a transmitting antenna not exceeding the height benchmark.* The licensee of a base station transmitting antenna less than or equal to its applicable height benchmark shall not be required pursuant to paragraph (c) of this section to limit that antennas undesired signal level to −107dBm/5.5 megahertz or less at the receiver of any co-channel base station.

(e) *No protection for a receiving-antenna exceeding the height benchmark.* The licensee of a base station receive antenna that exceeds its applicable height benchmark shall not be entitled pursuant to paragraph (c) of this section to insist that any co-channel base station limit its undesired signal level to −107dBm/5.5 megahertz or less at the receiver.

(f) *Information exchange.* A BRS/EBS licensee shall provide the geographic coordinates, the height above ground level of the center of radiation for each transmit and receive antenna, and the date transmissions commenced for each of the base stations in its GSA within 30 days of receipt of a request from a co-channel BRS/EBS licensee with an operational base station located in a proximate GSA. Information shared pursuant to this section shall not be disclosed to other parties except as required to ensure compliance with this section.

[69 FR 72034, Dec. 10, 2004, as amended at 70 FR 1190, Jan. 6, 2005; 71 FR 35191, June 19, 2006; 73 FR 26041, May 8, 2008]

§ 27.1222 Operations in the 2568–2572 and 2614–2618 bands.

All operations in the 2568–2572 and 2614–2618 MHz bands shall be secondary to adjacent-channel operations. Stations operating in the 2568–2572 and 2614–2618 MHz must not cause interference to licensees in operation in the LBS, MBS, and UBS and must accept any interference from any station operating in the LBS, MBS, and UBS in compliance with the rules established in this subpart. Stations operating in the 2568–2572 and 2614–2618 bands may cause interference to stations in operation in the LBS, MBS, and UBS if the affected licensees consent to such interference.

POLICIES GOVERNING THE TRANSITION OF THE 2500–2690 MHZ BAND FOR BRS AND EBS

§ 27.1230 Conversion of the 2500–2690 MHz band.

BRS and EBS licensees in the 2500–2690 MHz band on the pre-transition A-I Channels will be transitioned from the frequencies assigned to them under § 27.5(i)(1) to the frequencies assigned to them under § 27.5(i)(2). The transition, which will be undertaken by one or more proponent(s), will occur in the following five phases: initiating the transition process (see § 27.1231), planning the transition (see § 27.1232), reimbursing transition costs (see §§ 27.1233 and 27.1237–1239), terminating existing operations in transitioned markets that do not comport with § 27.5(i)(2) (see § 27.1234), and filing the post-transition notification (see § 27.1235). Licensees may also self-transition (see § 27.1236).

[71 FR 35191, June 19, 2006]

§ 27.1231 Initiating the transition.

(a) *Transition areas.* Unless paragraph (b) of this section applies, the transition will occur by Basic Trading Area (BTA). BTAs are based on the Rand McNally 1992 Commercial Atlas & Marketing Guide, 123rd Edition, at pages 38–39, that identifies 487 BTAs based on the 50 States; it also includes the following additional BTA-like areas: American Samoa; Guam; Northern Mariana Islands; Mayaguez/Aguadilla-Ponce, Puerto Rico; San Juan, Puerto Rico; and the United States Virgin Islands, for a total of 493 BTAs. The Mayaguez/Aguadilla-Ponce BTA-like area consists of the following municipios: Adjuntas, Aguada, Aguadilla, Anasco, Arroyo, Cabo Rojo, Coamo, Guanica, Guayama, Guayanilla, Hormigueros, Isabela, Jayuya, Juana Diaz, Lajas, Las Marias, Maricao, Maunabo, Mayaguez, Moca, Patillas, Penuelas, Ponce, Quebradillas, Rincon, Sabana Grande, Salinas, San German, Santa Isabel, Villalba, and Yauco. The San Juan BTA-like area consists of all other municipios in Puerto Rico. The BTA associated with the Gulf of Mexico will not be transitioned.

(b) *Overlapping GSAs.* When a Geographic Service Area (GSA) overlaps two or more BTAs:

(1) The proponents of the adjacent BTAs may agree on how to transition a GSA that overlaps their respective BTAs.

(2) If an agreement has not been reached between or among the proponents of the adjacent BTAs:

(i) Each proponent must transition all of the facilities associated with the GSA that are inside the GSA and inside the proponent's BTA if all of the adjacent BTAs are transitioning; or

(ii) The proponent of the BTA that is transitioning must transition all of the facilities associated with the GSA that are within the GSA but outside the BTA, if the adjacent BTA is not transitioning.

(c)(1) *Proponent(s).* The proponent or co-proponent must:

(i) Be a BRS or EBS licensee or BRS or EBS lessee;

(ii) Send a Pre-Transition Data Request (see paragraph (d) of this section) and a Transition Notice (see paragraph (e) of this section) to every BRS and EBS licensee in the BTA, using the contact information in the Commission's Universal Licensing System; and

(iii) Be first to file an Initiation Plan (see paragraph (f) of this section) with the Secretary of the Commission.

(2) Before filing an Initiation Plan, BRS or EBS licensees or BRS or EBS lessees may agree to be co-proponents. After the Initiation Plan is filed the proponent may accept a co-proponent at its sole discretion.

(d) *Pre-Transition Data Request.* The Pre-Transition Data Request must include the potential proponent's full name, postal mailing address, contact person, e-mail address, and phone and fax numbers.

(1) BRS and EBS licensees that receive a Pre-Transition Data Request must provide the following information to the potential proponent within 45 days of receiving the Pre-Transition Data Request:

(i) The BRS or EBS licensee's full name, postal mailing address, contact person, e-mail address, and phone and fax number.

(ii) The location (by street address and by geographic coordinates) of

every constructed EBS receive site that, as of the date of receipt of the Pre-Transition Data Request, is entitled to a replacement downconverter (see § 27.1233(a)). The response must:

(A) Specify whether the downconverting antenna is mounted on a structure attached to the building or on a free-standing structure;

(B) Specify the approximate height above ground level of the downconverting antenna; and

(C) Specify, if known, the adjacent channel D/U ratio that can be tolerated by any receiver(s) at the receive site.

(iii) The location (street address and geographic coordinates) of the main station or booster serving each EBS receive site entitled to protection, including:

(A) The make and model of the antenna for that main station or booster, along with the radiation pattern if it is not included within the Commission's database;

(B) The ground elevation, above mean sea level (AMSL), of the building or antenna supporting structure on which the main station or booster transmission antenna is installed;

(C) The height above ground level (AGL) of the center of radiation of the transmission antenna;

(D) The orientation of the main lobe of the transmission antenna;

(E) Any mechanical beamtilt or electrical beamtilt not reflected in the radiation pattern provided or included within the Commission's database;

(F) The bandwidth of each channel or subchannel, the emission type for each channel or subchannel, and the EIRP measured in the main lobe for each channel or subchannel; and

(G) The make and model of the receive antenna installed at that site, along with the radiation pattern if it is not included within the Commission's database.

(iv) The number and identification of EBS video programming or data transmission tracks the EBS licensee is entitled to receive in the MBS and whether the EBS licensee will accept fewer tracks in the MBS (see § 27.1233(b)).

(v) Whether it will seek or has sought a waiver from the Commission as a Multichannel Video Programming Distributor (MVPD).

(2) BRS and EBS licensees that do not respond to the Pre-Transition Data Request within 45 days of its receipt may not object to the Transition Plan.

(e) *The Transition Notice.* The potential proponent(s) must send a Transition Notice to all BRS and EBS licensees in the BTA(s) being transitioned. The potential proponent(s) must include the following information in the Transition Notice:

(1) The potential proponent(s)'s full name; postal mailing address, contact person, e-mail address, and phone and fax numbers;

(2) The identification of the BRS and EBS licensees that will be transitioned;

(3) Copies of the most recent response to the Pre-Transition Data Request for each participant in the process; and

(4) A certification that the potential proponent(s) has the funds available to pay the reasonably expected costs of the transition based on the information in the Pre-Transition Data Request.

(f) *Initiation Plan.* To initiate a transition, a potential proponent(s) must submit an Initiation Plan to the Commission at the Office of the Secretary in Washington, DC on or before January 21, 2009.

(1) An Initiation Plan must contain the following information:

(i) A list of the BTA(s) that the proponent(s) is transitioning;

(ii) A list by call sign of all of the BRS and EBS licensees in the BTA(s) that are being transitioned;

(iii) A ''best estimate'' of when the transition will be completed;

(iv) A statement indicating that an agreement has been concluded with the proponent(s) of the adjoining or adjacent BTA(s) when a licensee or licensees in an adjacent or adjoining BTA must be transitioned to avoid interference to licensees in the BTA being transitioned, or in lieu of an agreement, the proponent(s) may provide an alternative means of transitioning the licensees in an adjacent or adjoining BTA;

(v) A statement indicating that an agreement has been concluded with another proponent(s) on how a BTA will be transitioned when there are two or more proponents seeking to transition the same BTA and they agree to be co-

proponents before the Initiation Plan is filed, and a statement that identifies the specific portion of the BTA each proponent will be responsible for transitioning; and

(vi) A certification that the proponent or joint proponents have the funds available to pay the reasonable expected costs of the transition based on the information contained in the Pre-Transition Data Request (see paragraph (d) of this section).

(2) A proponent, at its own discretion, may withdraw from transitioning a BTA by notifying the Commission and all affected BRS and EBS licensees in the BTA that it is withdrawing the Initiation Plan.

(3) A proponent may amend an Initiation Plan after it has been filed with the Commission to correct minor or inadvertent errors.

(g) *MVPD waiver requests.* MVPD licensees that seek to opt-out of the transition must seek a waiver within 60 days after the proponent files the Initiation Plan or on or before April 30, 2007, whichever occurs first.

[71 FR 35191, June 19, 2006, as amended at 73 FR 26041, May 8, 2008]

§ 27.1232 Planning the transition.

(a) *The Transition Planning Period.* The Transition Planning Period is a 90-day period that commences on the day after the proponent(s) files the Initiation Plan with the Commission.

(b) *The Transition plan.* The proponent(s) must provide to each BRS and EBS licensee within a BTA, a Transition Plan no later than 30 days prior to the conclusion of the Transition Planning Period.

(1) The Transition Plan must:

(i) Identify the call signs of the stations that are transitioning;

(ii) Identify the specific channels that each licensee will receive following the transition;

(iii) Identify the receive sites at which replacement downconverters will be installed (see § 27.1233(a));

(iv) Identify the video programming and data transmission tracks that will be migrated to the MBS and provide for the MBS channels to be authorized to operate with transmission parameters that are substantially similar to those of the licensee's operation prior to transition (see § 27.1233(b));

(v) Identify the technical configuration of the MBS facilities;

(vi) Identify the approximate time line for effectuating the transition, which, unless dispute resolution procedures are used, may not exceed 18 months from the conclusion of the Transition Planning Period;

(vii) Provide for the establishment of an escrow or other appropriate mechanism for ensuring completion of the transition in accordance with the Transition Plan.

(2) The Transition Plan may provide for interruptions of EBS transmissions, so long as those interruptions are limited to a period of less than seven days at any reception site. The proponent(s) must coordinate with each EBS licensee to minimize the extent of any disruption.

(3) The Transition Plan may provide for the shifting of an EBS licensee's program to alternative channels. Such shifting may not be considered an interruption, if the EBS licensee's receive sites are equipped to receive and internally distribute the channel to which the programming is shifted.

(4) The Transition Plan may provide for the installation of an appropriate filter on an MBS transmitter if the proponent(s) determines that the installation of a filter will mitigate interference from transmissions in the MBS to operations outside the MBS.

(c) *Counterproposals.* No later than 10 days before the conclusion of the Transition Planning Period, affected BRS and EBS licensees may submit a counterproposal to the proponent(s) if they believe that the Transition Plan is unreasonable. The proponent(s) may:

(1) Accept the counterproposal, modify the Transition Plan accordingly, and send the modified Transition Plan to all EBS and BRS licensees in the BTA;

(2) Invoke dispute resolution procedures for a determination of whether the Transition Plan is reasonable and take no action until a determination of reasonableness is made; or

(3) Invoke dispute resolution procedures for a determination of whether the Transition Plan is reasonable, but

may implement the transition immediately.

(d) *Safe harbors.* An offer by a proponent(s) shall be reasonable if it meets one of the following safe harbors:

(1) *Safe harbor No. 1.* This safe harbor applies when the default high-power channel assigned to each channel group is authorized to operate after the transition with the same transmission parameters (coordinates, antenna pattern, height of center radiation, EIRP) as the downstream facilities before the transition. If the proponent(s) does not propose a change in the geographic coordinates of the facilities (other than as necessary to conform the actual location with the Commission's Antenna Survey Branch database), the proponent may also propose the following to the extent consistent with this subpart:

(i) An increase in the height of the center of radiation of the transmission antenna or a decrease in such height of no more than 8 meters (provided that such change does not result in an increase in antenna support structure lease costs to the EBS licensee and the consent of the owner of the antenna support structure is obtained).

(ii) A change in the EIRP of the transmission system of up to 1.5 dB in any direction.

(iii) Digitization, precision frequency offset, or other upgrades to the EBS transmission or reception systems that allow the proponent(s) to invoke more advantageous interference protection requirements applicable to upgraded systems.

(2) *Safe harbor No. 2.* This safe harbor applies when an EBS licensee has channel-shifted its single video programming or data transmission track to spectrum licensed to another licensee. Under § 27.5(i)(2), that track must be on the high-power channel licensed to the EBS licensee upon completion of the transition. For example, before the transition, an A Group licensee might have shifted its EBS video programming to channel C1. If one of the pre-transition A Group channels is licensed with technical parameters substantially similar to those of pre-transition channel C1, the Transition Plan may provide for high-power channel A4 to be licensed with the same technical parameters as the pre-transition channel C1. However, if the pre-transition A Group channels are licensed to operate with technical parameters materially different from those of pre-transition channel C1, the proponent(s) may:

(i) Arrange a channel swap with the licensee of the C Group so that the A Group licensee will receive high-power channel C4 (which will automatically be licensed with the same transmission parameters as the pre-transition channel C1) in exchange for channel A4.

(ii) Arrange for high-power channel A4 to operate with transmission parameters substantially similar to those of the pre-transition channel C1 (*see* paragraph (d)(1) of this section).

(3) *Safe harbor No. 3.* This safe harbor applies when a four-channel group is shared among multiple licensees in a given geographic area. Absent an agreement otherwise, a proponent may:

(i) Secure a 6 MHz MBS channel for each licensee in exchange for the non-MBS channels assigned to the group. Following the channel swap(s) necessary to secure those additional MBS channels, the Transition Plan can provide for the licensing of the remaining channels in the LBS, UBS, and Guard Bands on a pro rata basis (with channel(s) in each segment being disaggregated when and if necessary to provide each with its pro rata share of the spectrum in each segment);

(ii) Provide for pro rata segmentation of the default MBS channel for the group, provided that the proponent commits to provide each of the licensees with the technology necessary for its EBS video programming or data transmissions to be digitized, transmitted and received utilizing the provided bandwidth. The non-MBS channels would be divided among the sharing licensees on a pro rata basis (with channel(s) in each segment being disaggregated when and if necessary to provide each with its pro rata share of the spectrum in each segment); or

(iii) Assign the default MBS channel assigned to the channel group to one of the licensees, if that licensee is the only one that elects to migrate video programming or data transmission tracks to the MBS. The remaining spectrum assigned to the group may be

allocated among the licensees on a pro rata basis, with the 6 MHz in the MBS counting against that licensee's portion. To the extent necessary, the non-MBS spectrum can be disaggregated when and if necessary to provide each with its pro rata share of the spectrum in each segment. If the proponent chooses to effectuate a channel swap to provide more than one channel in the MBS, the remaining channels assigned to the group (after considering that one or more LBS/UBS channels and associated Transition Band channels will have been swapped away to provide the additional MBS channel) can be allocated among the licensees on a pro rata basis (with channel(s) in each segment being disaggregated when and if necessary to provide each with its pro rata share of the spectrum in each segment).

(4) *Safe harbor No. 4.* This safe harbor applies when an EBS licensee uses one or more of its channels for studio-to-transmitter links. The proponent may provide for one of the following options:

(i) The use of the LBS and/or UBS band for the point-to-point transmission of the EBS video or data (through superchannelization of the licensee's contiguous LBS or UBS channels), provided the proponent commits to retune the existing point-to-point equipment to operate on those channels or to replace the existing equipment with new equipment tuned to operate on those channels and the proposal complies with the LBS/UBS technical and interference protection rules;

(ii) The migration of the EBS programming to the MBS by retuning the existing point-to-point equipment to operate in the MBS or replacing it with equipment tuned to operate in the MBS; or

(iii) The replacement of the point-to-point link with point-to-point equipment licensed to the EBS licensee in alternative spectrum, so long as the replacement facilities meet the definition of ''comparable facilities'' set out in § 101.75(b) of this chapter.

[69 FR 72034, Dec. 10, 2004, as amended at 71 FR 35192, June 19, 2006]

§ 27.1233 Reimbursement costs of transitioning.

(a) *Replacement downconverters.* The proponent(s) must install at every eligible EBS receive site a downconverter designed to minimize the reception of signals from outside the MBS.

(1) An EBS receive site is eligible to be replaced if:

(i) A reception system was installed at that site on or before the date the EBS licensee receives its Pre-Transition Data Request (see § 27.1231(d));

(ii) The reception system was installed by or at the direction of the EBS licensee;

(iii) The reception system receives EBS programming under § 27.1203(b) and (c) or is located at a cable television system headend and the cable system relays educational or instructional programming for an EBS licensee; and

(iv) It is within the licensee's 35-mile radius GSA.

(2) Replacement downconverters must meet the following minimum technical requirements:

(i) The downconverter's input frequency range (the ''in-band frequencies'') must be 2572 MHz to 2614 MHz and output frequency range must be 294 MHz to 336 MHz;

(ii) The downconversion process must not invert frequencies;

(iii) The nominal gain of the downconverter must be 32 dB, or greater;

(iv) The downconverter must include filtering prior to the first amplifier that attenuates frequencies below 2500 MHz and above 2705 MHz by at least 25 dB;

(v) The downconverter must have an out-of-band input 3rd order intercept point (input IP3) of at least + 9 dBm, where out-of-band is defined as all frequencies below 2566 MHz and all frequencies above 2620 MHz;

(vi) The downconverter must have a typical noise figure of no greater than 3.5 dB and a worst case noise figure of no greater than 4.5 dB across all in-band frequencies and across its entire intended operating temperature range;

(vii) The downconverter must not introduce a delta group delay of more than 20 nanoseconds for digital operations or 100 nanoseconds for analog

operations over any individual six megahertz MBS channel.

(b) *Migration of Video Programming and Data Transmission Track.* (1) The proponent(s) must provide, at its cost, to each EBS licensee that intends to continue downstream high-power, high-site educational video programming or data transmission services, with one programming track on the MBS channels for each EBS video or data transmission track the licensee is transmitting on a simultaneous basis before the transition.

(i) To be eligible for migration, a program track must contain EBS programming that complies with § 27.1203 (b) and (c).

(ii) The proponent(s) must pay only the costs of migrating programming tracks being transmitted on December 31, 2002 or within six months prior thereto.

(2) The proponent(s) must migrate each eligible programming track to spectrum in the MBS that will be licensed to the affected licensee at the conclusion of the transition.

(3) After the transition, the desired-to-undesired signal level ratio at each of the receive sites securing a replacement downconverter must satisfy the following criteria:

(i) *Cochannel D/U Ratio.* (A) When the post-transition desired signal is transmitted using analog modulation, the actual cochannel D/U ratio measured at the output of the reception antenna must be at least the lesser of 45 dB or the actual pre-transmission D/U ratio less 1.5 dB.

(B) When the post-transition desired signal will be transmitted using digital modulation, the actual cochannel D/U ratio measured at the output of the reception antenna must be at least the lesser of 32 dB or the pre-transition D/U ratio less 1.5 dB.

(C) Where in implementing the Transition Plan, the proponent(s) deploys precise frequency offset in an analog system, the minimum cochannel D/U ratio is reduced to 38 dB, provided that the transmitters have or are upgraded pursuant to the Transition Plan to have the appropriate ''plus,'' ''zero,'' or ''minus'' 10,010 Hertz precision frequency offset with a ±3 Hertz (or better) stability.

(ii) *Adjacent Channel D/U Ratio.* The actual adjacent channel D/U must equal or exceed the lesser of 0 dB or the actual pre-transmission D/U ratio. However, in the event that the receive site uses receivers or is upgraded by the proponent(s) as part of the Transition Plan to use receivers that can tolerate negative adjacent channel D/U ratios, the actual adjacent channel D/U ratio at such receive site must equal or exceed −10 dB. Provided that the receive site receiver is not upgraded and cannot tolerate −10 dB, the adjacent channel D/U ratio would be 0dB.

[69 FR 72034, Dec. 10, 2004, as amended at 71 FR 35193, June 19, 2006]

§ 27.1234 Terminating existing operations in transitioned markets.

Licensees may discontinue operations during the transition.

§ 27.1235 Post-transition notification.

The proponent(s) must certify to the Commission at the Office of the Secretary, Washington, DC, that the Transition Plan has been fully implemented.

(a) The notification must provide the identification of the licensees that have transitioned to the band plan in § 27.5(i)(2) and the specific frequencies on which each licensee is operating.

(b) For each station in the MBS, the notification must provide the following information:

(1) The station coordinates,

(2) The make and model of each antenna,

(3) The horizontal and vertical pattern of the antenna;

(4) EIRP of the main lobe;

(5) Orientation;

(6) Height of antenna center of radiation;

(7) Transmitter output power;

(8) All line and combiner losses.

(c) The proponent(s) must provide copies of the post-transition notice to all parties of the transition.

(d) A BRS or EBS licensee must file any objection to the post-transition notification within 30 days from the date the post-transition notification is placed on Public Notice.

[69 FR 72034, Dec. 10, 2004, as amended at 71 FR 35193, June 19, 2006]

§ 27.1236 Self-transitions.

(a) If an Initiation Plan is not filed on or before January 21, 2009 for a BTA, BRS and EBS licensees in that BTA may self-transition by relocating to their default channel locations specified in § 27.5(i)(2) and complying with §§ 27.50(h), 27.53, 27.55 and 27.1221.

(b) To self-transition, a BRS or EBS licensee must:

(1) Notify the Secretary of the Commission on or before April 21, 2009 that it will self-transition (see paragraph (a) of this section);

(2) Send a Self-Transition Notification (see paragraph (c) of this section) to other BRS and EBS licensees in the BTA where the self-transitioning licensee's GSA geographic center point is located that it is self-transitioning;

(3) Notify other licensees whose GSAs overlap with the self-transitioning licensee that it is self-transitioning.

(4) Address interference concerns with other BRS and EBS licensees in the BTA that are also self-transitioning;

(5) File a modification application with the Commission, and

(6) Complete the self-transition on or before October 20, 2010.

(c) *Self-Transition Notification*. The Self-Transition Notification must include the EBS licensee's full name, postal mailing address, contact person, e-mail address, and phone and fax numbers. A self-transitioning EBS licensee must provide the following information to all BRS and EBS licensees located in the BTA where the self-transitioning licensees GSA geographic center point is located:

(1) The location (by street address and by geographic coordinates) of every constructed EBS receive site that, as of the date the Self-Transition Notification is sent, is entitled to a replacement downconverter (see § 27.1233(a)). The response must:

(i) Specify whether the downconverting antenna is mounted on a structure attached to the building or on a free-standing structure;

(ii) Specify the approximate height above ground level of the downconverting antenna; and

(iii) Specify, if known, the adjacent channel D/U ratio that can be tolerated by any receiver(s) at the receive site.

(2) The location (street address and geographic coordinates) of the main station or booster serving each EBS receive site entitled to protection, including:

(i) The make and model of the antenna for that main station or booster, along with the radiation pattern if it is not included within the Commission's database;

(ii) The ground elevation, above mean sea level (AMSL), of the building or antenna supporting structure on which the main station or booster transmission antenna is installed;

(iii) The height above ground level (AGL) of the center of radiation of the transmission antenna;

(iv) The orientation of the main lobe of the transmission antenna;

(v) Any mechanical beamtilt or electrical beamtilt not reflected in the radiation pattern provided or included within the Commission's database;

(vi) The bandwidth of each channel or subchannel, the emission type for each channel or subchannel, and the EIRP measured in the main lobe for each channel or subchannel; and

(vii) The make and model of the receive antenna installed at that site, along with the radiation pattern if it is not included within the Commission's database.

(3) The number and identification of EBS video programming or data transmission tracks the EBS licensee is entitled to receive in the MBS (see § 27.1233(b)).

[71 FR 35193, June 19, 2006, as amended at 73 FR 26042, May 8, 2008]

§ 27.1237 Pro rata allocation of transition costs.

(a) *Self-transitions*. EBS licensees that self-transition may seek reimbursement for their costs to replace eligible downconverters (see § 27.1233(a)) and to migrate video programming and data transmission tracks (see § 27.1233(b)) from BRS licensees and lessees, EBS lessees, and commercial EBS licensees in the BTA where the center point of the EBS licensee's GSA is located. In addition, BRS licensees and lessees, EBS lessees, and commercial EBS licensees in the LBS or UBS must reimburse the self-transitioning EBS licensee a pro rata share of the eligible

costs of transitioning EBS licensees, based on the formula in paragraph (c) of this section. Eligible costs are listed in § 27.1238.

(b) *Proponent-driven transitions.* BRS licensees and lessees, entities that lease EBS spectrum for a commercial purpose, and commercial EBS licensees must pay their own transition costs. In addition, except for MVPD operators that opt-out of the transition, BRS licensees and lessees, EBS lessees, and commercial EBS licensees in the LBS or UBS must reimburse the proponent a pro rata share of the eligible costs of transitioning EBS licensees, based on the formula in paragraph (c) of this section. Eligible costs are listed in § 27.1238.

(c) *Formula.* The pro rata share shall be based on the following formula:

$$R = \frac{L \times LP}{T \times TP}$$

(1) R equals the pro rata share;

(2) L equals the amount of spectrum used by a BRS licensee or lessee or commercial EBS licensee or lessee to provide a commercial service, either directly or through a lease agreement with an EBS or BRS licensee;

(3) T equals the total amount of spectrum licensed or leased for commercial purposes in the BTA;

(4) LP equals the population of the geographic service area or BTA served by the BRS licensee or lessee or commercial EBS licensee or lessee based on the data in the 2000 United States Census; and

(5) TP equals the population of the BTA based on the data in the 2000 United States Census.

[71 FR 35193, June 19, 2006]

§ 27.1238 Eligible costs.

(a) The costs listed in paragraphs (b) through (f) of this section are eligible costs.

(b) *Pre-transition costs:*

(1) Engineering/Consulting

(i) Evaluation of equipment;

(ii) RX site identification;

(iii) EBS Programming plan covering the BTA;

(iv) Market Analysis (MHz per POP Study);

(v) RF study (interference analysis); and

(vi) Transition Plan creation and support;

(2) Project management (may be sourced external);

(3) Filing fees;

(4) Legal fees;

(5) Site acquisition fees-contractor; and

(6) Arbitrator fee;

(c) *Transmission facility—analog conversion costs:*

(1) Transmitter upgrading or retuning;

(2) Combiner re-tuning or new;

(3) Power divider/circulator adjacent channel combiner hardware;

(4) STL/fiber relocation;

(5) Miscellaneous material costs (including cabling and connectors);

(6) Contract labor:

(i) Tower;

(ii) Building modifications;

(iii) Electrical/HVAC; and

(iv) Mechanical

(7) Engineering:

(i) Structural; and

(ii) Pathway Interference Analysis.

(8) Equipment disposal/shipping

(9) Program Management (third party or internal costs to manage the BTA conversion); and

(10) Travel and Per Diem Cost.

(d) *Transmission facility-digital conversion costs:*

(1) New transmitter or retuning;

(2) Digital compression equipment-TX site (including encoders, controller, and software);

(3) Combiners-new or retune;

(4) Power divider/circulator adjacent channel combiner hardware;

(5) Cabinets, cabling, feedline and connectors;

(6) STL—fiber digital upgrade;

(7) Installation cost due to adding additional broadcast antenna (4 or more digital channels required);

(8) Contract labor:

(i) Tower;

(ii) Building modifications;

(iii) Electrical/HVAC; and

(iv) Mechanical.

(9) Proof of performance testing (may be contracted);

(10) Engineering:

(i) Structural; and
(ii) Path engineering analysis.
(11) Equipment disposal/shipping;
(12) Training;
(13) Program management (third party or internal costs to manage BTA conversion);
(14) Travel and per diem costs.
(e) *Qualified receive-sites only-modifications (analog and digital):*
(1) Digital set top boxes;
(2) Downconverters (with filtering)/antennas (replacement downconverters);
(3) Contract labor:
(i) Antenna change/DC install (antenna change may be necessary); and
(ii) Electrical; and mechanical
(4) Project management (third party or internal costs to manage the BTA conversion);
(5) Proof of performance testing (may be contracted);
(6) Mini headend (cost effective distribution method):
(i) Modulators, combiners;
(ii) Equipment racks; and
(iii) Amplifiers
(7) Cable, connectors; and
(8) Training.
(f) *Miscellaneous transition fees.* (1) Filing fees;
(2) Arbitrator fee; and
(3) Legal fees.

[71 FR 35193, June 19, 2006]

§ 27.1239 Reimbursement obligation.

(a) A proponent may request reimbursement from BRS licensees and lessees, EBS lessees, and commercial EBS licensees in a BTA after the Transition Notification has been filed with the Secretary of the Commission and the proponent has accumulated the documentation to substantiate the full and accurate cost of the transition. A self-transitioning licensee may request reimbursement from BRS licensees and lessees, EBS lessees, and commercial EBS licensees in a BTA where its GSA geographic center point is located after it has completed the self-transition and has filed a modification application with the Commission and has accumulated the documentation to substantiate the full and accurate cost of the transition.

(b) If a license is assigned, transferred, partitioned, or disaggregated, all parties to the assignment, transfer, disaggregation, or partition are jointly and severally liable for paying the reimbursement obligation until that obligation is paid.

[71 FR 35193, June 19, 2006]

Relocation Procedures for the 2150–2160/62 MHz Band

Source: Sections 27.1250 through 27.1255 appear at 71 FR 29840, May 24, 2006, unless otherwise noted.

§ 27.1250 Transition of the 2150–2160/62 MHz band from the Broadband Radio Service to the Advanced Wireless Service.

The 2150–2160/62 MHz band has been allocated for use by the Advanced Wireless Service (AWS). The rules in this section provide for a transition period during which AWS licensees may relocate existing Broadband Radio Service (BRS) licensees using these frequencies to their assigned frequencies in the 2496–2690 MHz band or other media.

(a) AWS licensees and BRS licensees shall engage in mandatory negotiations for the purpose of agreeing to terms under which the BRS licensees would:

(1) Relocate their operations to other frequency bands or other media; or alternatively

(2) Accept a sharing arrangement with the AWS licensee that may result in an otherwise impermissible level of interference to the BRS operations.

(b) If no agreement is reached during the mandatory negotiation period, an AWS licensee may initiate involuntary relocation procedures. Under involuntary relocation, the incumbent is required to relocate, provided that the AWS licensee meets the conditions of § 27.1252.

(c) Relocation of BRS licensees by AWS licensees will be subject to a three-year mandatory negotiation period. BRS licensees may suspend the running of the three-year negotiation period for up to one year if the BRS licensee cannot be relocated to comparable facilities at the time the AWS licensee seeks entry into the band.

§ 27.1251 Mandatory Negotiations.

(a) Once mandatory negotiations have begun, a BRS licensee may not refuse to negotiate and all parties are required to negotiate in good faith. Good faith requires each party to provide information to the other that is reasonably necessary to facilitate the relocation process. The BRS licensee is required to cooperate with an AWS licensee's request to provide access to the facilities to be relocated, other than the BRS customer location, so that an independent third party can examine the BRS system and prepare an appraisal of the costs to relocate the incumbent. In evaluating claims that a party has not negotiated in good faith, the FCC will consider, *inter alia*, the following factors:

(1) Whether the AWS licensee has made a bona fide offer to relocate the BRS licensee to comparable facilities in accordance with § 27.1252(b);

(2) If the BRS licensee has demanded a premium, the type of premium requested (*e.g.*, whether the premium is directly related to relocation, such as analog-to-digital conversions, versus other types of premiums), and whether the value of the premium as compared to the cost of providing comparable facilities is disproportionate (*i.e.*, whether there is a lack of proportion or relation between the two);

(3) What steps the parties have taken to determine the actual cost of relocation to comparable facilities;

(4) Whether either party has withheld information requested by the other party that is necessary to estimate relocation costs or to facilitate the relocation process.

(b) Any party alleging a violation of our good faith requirement must attach an independent estimate of the relocation costs in question to any documentation filed with the Commission in support of its claim. An independent cost estimate must include a specification for the comparable facility and a statement of the costs associated with providing that facility to the incumbent licensee.

(c) Mandatory negotiations will commence for each BRS licensee when the AWS licensee informs the BRS licensee in writing of its desire to negotiate. Mandatory negotiations will be conducted with the goal of providing the BRS licensee with comparable facilities, defined as facilities possessing the following characteristics:

(1) *Throughput.* Communications throughput is the amount of information transferred within a system in a given amount of time. System is defined as a base station and all end user units served by that base station. If analog facilities are being replaced with analog, comparable facilities may provide a comparable number of channels. If digital facilities are being replaced with digital, comparable facilities provide equivalent data loading bits per second (bps).

(2) *Reliability.* System reliability is the degree to which information is transferred accurately within a system. Comparable facilities provide reliability equal to the overall reliability of the BRS system. For digital systems, reliability is measured by the percent of time the bit error rate (BER) exceeds a desired value, and for analog or digital video transmission, it is measured by whether the end-to-end transmission delay is within the required delay bound. If an analog system is replaced with a digital system, only the resulting frequency response, harmonic distortion, signal-to-noise ratio and its reliability will be considered in determining comparable reliability.

(3) *Operating Costs.* Operating costs are the cost to operate and maintain the BRS system. AWS licensees would compensate BRS licensees for any increased recurring costs associated with the replacement facilities (*e.g.*, additional rental payments, and increased utility fees) for five years after relocation. AWS licensees could satisfy this obligation by making a lump-sum payment based on present value using current interest rates. Additionally, the maintenance costs to the BRS licensee would be equivalent to the replaced system in order for the replacement system to be comparable.

(d) AWS licensees are responsible for the relocation costs of end user units served by the BRS base station that is being relocated. If a lessee is operating under a BRS license, the BRS licensee may rely on the throughput, reliability, and operating costs of facilities

in use by a lessee in negotiating comparable facilities and may include the lessee in negotiations.

§ 27.1252 Involuntary Relocation Procedures.

(a) If no agreement is reached during the mandatory negotiation period, an AWS licensee may initiate involuntary relocation procedures under the Commission's rules. AWS licensees are obligated to pay to relocate BRS systems to which the AWS system poses an interference problem. Under involuntary relocation, the BRS licensee is required to relocate, provided that the AWS licensee:

(1) Guarantees payment of relocation costs, including all engineering, equipment, site and FCC fees, as well as any legitimate and prudent transaction expenses incurred by the BRS licensee that are directly attributable to an involuntary relocation, subject to a cap of two percent of the ''hard'' costs involved. Hard costs are defined as the actual costs associated with providing a replacement system, such as equipment and engineering expenses. There is no cap on the actual costs of relocation. AWS licensees are not required to pay BRS licensees for internal resources devoted to the relocation process. AWS licensees are not required to pay for transaction costs incurred by BRS licensees during the mandatory period once the involuntary period is initiated, or for fees that cannot be legitimately tied to the provision of comparable facilities; and

(2) Completes all activities necessary for implementing the replacement facilities, including engineering and cost analysis of the relocation procedure and, if radio facilities are used, identifying and obtaining, on the incumbents' behalf, new microwave frequencies and frequency coordination.

(b) *Comparable facilities.* The replacement system provided to an incumbent during an involuntary relocation must be at least equivalent to the existing BRS system with respect to the following three factors:

(1) *Throughput.* Communications throughput is the amount of information transferred within a system in a given amount of time. System is defined as a base station and all end user units served by that base station. If analog facilities are being replaced with analog, the AWS licensee is required to provide the BRS licensee with a comparable number of channels. If digital facilities are being replaced with digital, the AWS licensee must provide the BRS licensee with equivalent data loading bits per second (bps). AWS licensees must provide BRS licensees with enough throughput to satisfy the BRS licensee's system use at the time of relocation, not match the total capacity of the BRS system.

(2) *Reliability.* System reliability is the degree to which information is transferred accurately within a system. AWS licensees must provide BRS licensees with reliability equal to the overall reliability of their system. For digital data systems, reliability is measured by the percent of time the bit error rate (BER) exceeds a desired value, and for analog or digital video transmissions, it is measured by whether the end-to-end transmission delay is within the required delay bound.

(3) *Operating costs.* Operating costs are the cost to operate and maintain the BRS system. AWS licensees must compensate BRS licensees for any increased recurring costs associated with the replacement facilities (*e.g.*, additional rental payments, increased utility fees) for five years after relocation. AWS licensees may satisfy this obligation by making a lump-sum payment based on present value using current interest rates. Additionally, the maintenance costs to the BRS licensee must be equivalent to the replaced system in order for the replacement system to be considered comparable.

(c) AWS licensees are responsible for the relocation costs of end user units served by the BRS base station that is being relocated. If a lessee is operating under a BRS license, the AWS licensee shall on the throughput, reliability, and operating costs of facilities in use by a lessee at the time of relocation in determining comparable facilities for involuntary relocation purposes.

(d) *Twelve-month trial period.* If, within one year after the relocation to new facilities, the BRS licensee demonstrates that the new facilities are

not comparable to the former facilities, the AWS licensee must remedy the defects or pay to relocate the BRS licensee to one of the following: Its former or equivalent 2 GHz channels, another comparable frequency band, a land-line system, or any other facility that satisfies the requirements specified in paragraph (b) of this section. This trial period commences on the date that the BRS licensee begins full operation of the replacement system. If the BRS licensee has retained its 2 GHz authorization during the trial period, it must return the license to the Commission at the end of the twelve months.

§ 27.1253 Sunset Provisions.

(a) BRS licensees will maintain primary status in the 2150–2160/62 MHz band unless and until an AWS licensee requires use of the spectrum. AWS licensees are not required to pay relocation costs after the relocation rules sunset (*i.e.* fifteen years from the date the first AWS license is issued in the band). Once the relocation rules sunset, an AWS licensee may require the incumbent to cease operations, provided that the AWS licensee intends to turn on a system within interference range of the incumbent, as determined by § 27.1255. AWS licensee notification to the affected BRS licensee must be in writing and must provide the incumbent with no less than six months to vacate the spectrum. After the six-month notice period has expired, the BRS licensee must turn its license back into the Commission, unless the parties have entered into an agreement which allows the BRS licensee to continue to operate on a mutually agreed upon basis.

(b) If the parties cannot agree on a schedule or an alternative arrangement, requests for extension will be accepted and reviewed on a case-by-case basis. The Commission will grant such extensions only if the incumbent can demonstrate that:

(1) It cannot relocate within the six-month period (*e.g.*, because no alternative spectrum or other reasonable option is available); and

(2) The public interest would be harmed if the incumbent is forced to terminate operations.

§ 27.1254 Eligibility.

(a) BRS licensees with primary status in the 2150–2162 MHz band as of June 23, 2006, will be eligible for relocation insofar as they have facilities that are constructed and in use as of this date.

(b) *Future licensing and modifications.* After June 23, 2006, all major modifications to existing BRS systems in use in the 2150–2160/62 MHz band will be authorized on a secondary basis to AWS systems, unless the incumbent affirmatively justifies primary status and the incumbent BRS licensee establishes that the modification would not add to the relocation costs of AWS licensees. Major modifications include the following:

(1) Additions of new transmit sites or base stations made after June 23, 2006;

(2) Changes to existing facilities made after June 23, 2006, that would increase the size or coverage of the service area, or interference potential, and that would also increase the throughput of an existing system (*e.g.*, sector splits in the antenna system). Modifications to fully utilize the existing throughput of existing facilities (*e.g.*, to add customers) will not be considered major modifications even if such changes increase the size or coverage of the service area, or interference potential.

§ 27.1255 Relocation Criteria for Broadband Radio Service Licensees in the 2150–2160/62 MHz band.

(a) An AWS licensee in the 2150–2160/62 MHz band, prior to initiating operations from any base or fixed station that is co-channel to the 2150–2160/62 MHz band, must relocate any incumbent BRS system that is within the line of sight of the AWS licensee's base or fixed station. For purposes of this section, a determination of whether an AWS facility is within the line of sight of a BRS system will be made as follows:

(1) For a BRS system using the 2150–2160/62 MHz band exclusively to provide one-way transmissions to subscribers, the AWS licensee will determine whether there is an unobstructed signal path (line of sight) to the incumbent licensee's geographic service area (GSA), based on the following criteria:

use of 9.1 meters (30 feet) for the receiving antenna height, use of the actual transmitting antenna height and terrain elevation, and assumption of 4/3 Earth radius propagation conditions. Terrain elevation data must be obtained from the U.S. Geological Survey (USGS) 3-second database. All coordinates used in carrying out the required analysis shall be based upon use of NAD–83.

(2) For all other BRS systems using the 2150–2160/62 MHz band, the AWS licensee will determine whether there is an unobstructed signal path (line of sight) to the incumbent licensee's receive station hub using the method prescribed in ''Methods for Predicting Interference from Response Station Transmitters and to Response Station Hubs and for Supplying Data on Response Station Systems. MM Docket 97–217,'' in Amendment of Parts 1, 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions, MM Docket No. 97–217, *Report and Order on Further Reconsideration and Further Notice of Proposed Rulemaking,* 15 FCC Rcd 14566 at 14610, Appendix D.

(b) Any AWS licensee in the 2110–2180 MHz band that causes actual and demonstrable interference to a BRS licensee in the 2150–2160/62 MHz band must take steps to eliminate the harmful interference, up to and including relocation of the BRS licensee, regardless of whether it would be required to do so under paragraph (a), of this section.

Subpart N—600 MHz Band

SOURCE: 79 FR 48539, Aug. 15, 2014, unless otherwise noted.

§ 27.1300 600 MHz band subject to competitive bidding.

As required by section 6403(c) of the Spectrum Act, applications for 600 MHz band initial licenses are subject to competitive bidding. The general competitive bidding procedures set forth in 47 CFR part 1, subpart Q will apply unless otherwise provided in this subpart.

§ 27.1301 Designated entities in the 600 MHz band.

Eligibility for small business provisions:

(a) *Small business.* (1) A small business is an entity that, together with its affiliates, its controlling interests, the affiliates of its controlling interests, and the entities with which it has an attributable material relationship, has average gross revenues not exceeding $40 million for the preceding three (3) years.

(2) A very small business is an entity that, together with its affiliates, its controlling interests, the affiliates of its controlling interests, and the entities with which it has an attributable material relationship, has average gross revenues not exceeding $15 million for the preceding three (3) years.

(b) *Bidding credits.* A winning bidder that qualifies as a small business as defined in this section or a consortium of small businesses may use the bidding credit specified in §1.2110(f)(2)(iii) of this chapter. A winning bidder that qualifies as a very small business as defined in this section or a consortium of very small businesses may use the bidding credit specified in §1.2110(f)(2)(ii) of this chapter.

EFFECTIVE DATE NOTE: At 80 FR 56817, Sept. 18, 2015, §27.1301 was revised, effective Nov. 17, 2015. For the convenience of the user, the revised text is set forth as follows:

§ 27.1301 Designated entities in the 600 MHz band.

(a) *Small business.* (1) A small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling interests, has average gross revenues not exceeding $55 million for the preceding three (3) years.

(2) A very small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling interests, has average gross revenues not exceeding $20 million for the preceding three (3) years.

(b) *Eligible rural service provider.* For purposes of this section, an eligible rural service provider is an entity that meets the criteria specified in §1.2110(f)(4) of this chapter.

(c) *Bidding credits.* (1) A winning bidder that qualifies as a small business as defined in this section or a consortium of small businesses may use the bidding credit specified in §1.2110(f)(2)(i)(C) of this chapter. A winning bidder that qualifies as a very small

business as defined in this section or a consortium of very small businesses may use the bidding credit specified in §1.2110(f)(2)(i)(B) of this chapter.

(2) An entity that qualifies as eligible rural service provider or a consortium of rural service providers may use the bidding credit specified in §1.2110(f)(4) of this chapter.

PART 32—UNIFORM SYSTEM OF ACCOUNTS FOR TELECOMMUNICATIONS COMPANIES

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AUTHORITY: 47 U.S.C. 154(i), 154(j) and 220 as amended, unless otherwise noted.

SOURCE: 51 FR 43499, Dec. 2, 1986, unless otherwise noted.

Subpart A—Preface

§ 32.1 Background.

The revised Uniform System of Accounts (USOA) is a historical financial accounting system which reports the results of operational and financial events in a manner which enables both management and regulators to assess these results within a specified accounting period. The USOA also provides the financial community and others with financial performance results. In order for an accounting system to fulfill these purposes, it must exhibit consistency and stability in financial reporting (including the results published for regulatory purposes). Accordingly, the USOA has been designed to reflect stable, recurring financial data based to the extent regulatory considerations permit upon the consistency of the well established body of accounting theories and principles commonly referred to as generally accepted accounting principles.

§ 32.2 Basis of the accounts.

(a) The financial accounts of a company are used to record, in monetary terms, the basic transactions which occur. Certain natural groupings of these transactions are called (in different contexts) transaction cycles, business processes, functions or activities. The concept, however, is the same in each case; i.e., the natural groupings represent what happens within the company on a consistent and continuing basis. This repetitive nature of the natural groupings, over long periods of time, lends an element of stability to the financial account structure.

(b) Within the telecommunications industry companies, certain recurring functions (natural groupings) do take place in the course of providing products and services to customers. These accounts reflect, to the extent feasible, those functions. For example, the primary bases of the accounts containing the investment in telecommunications plant are the functions *performed by* the assets. In addition, because of the anticipated effects of future innovations, the telecommunications plant accounts are intended to permit technological distinctions. Similarly, the primary bases of plant operations, customer operations and corporate operations expense accounts are the functions *performed by* individuals. The revenue accounts, on the other hand, reflect a market perspective of natural groupings based primarily upon the products and services *purchased by* customers.

(c) In the course of developing the bases for this account structure, several other alternatives were explored. It was, for example, determined that, because of the variety and continual changing of various cost allocation mechanisms, the financial accounts of a company should not reflect an *a priori* allocation of revenues, investments or expenses to products or services, jurisdictions or organizational structures. (Note also § 32.14 (c) and (d) of subpart B.) It was also determined that costs (in the case of assets) should not be recorded based solely upon physical attributes such as location, description or size.

(d) Care has been taken in this account structure to avoid confusing a function with an organizational responsibility, particularly as it relates to the expense accounts. Whereas in the past, specific organizations may have performed specific functions, the future environment with its increasing mechanization and other changes will result in entirely new or restructured organizations. Thus, any relationships drawn between organizations and accounts would become increasingly meaningless with the passage of time.

(e) These accounts, then, are intended to reflect a functional and technological view of the telecommunications industry. This view will provide a stable and consistent foundation for the recording of financial data.

(f) The financial data contained in the accounts, together with the detailed information contained in the underlying financial and other subsidiary records required by this Commission, will provide the information necessary to support separations, cost of service and management reporting requirements. The basic account structure has been designed to remain stable as reporting requirements change.

§ 32.3 Authority.

This Uniform System of Accounts has been prepared under the following authority: Section 4 of the Communications Act of 1934, as amended, 47 U.S.C. section 154 (1984); sections 219, 220 of the Communications Act of 1934, as amended, 47 U.S.C. sections 219, 220, (1984).

§ 32.4 Communications Act.

Attention is directed to the following extract from section 220 of the Communications Act of 1934, 47 U.S.C. 220 (1984):

> (e) Any person who shall willfully make any false entry in the accounts of any book of accounts or in any record or memoranda kept by any such carrier, or who shall willfully destroy, mutilate, alter, or by any other means or device falsify any such account, record, or memoranda, or who shall willfully neglect or fail to make full, true, and correct entries in such accounts, records, or memoranda of all facts and transactions appertaining to the business of the carrier, shall be deemed guilty of a misdemeanor, and shall be subject, upon conviction, to a fine of not less than $1,000 nor more than $5,000 or imprisonment for a term of not less than one year nor more than three years, or both such fine and imprisonment: Provided, that the Commission may in its discretion issue orders specifying such operating, accounting or financial papers, records, books, blanks, or documents which may, after a reasonable time, be destroyed, and prescribing the length of time such books, papers, or documents shall be preserved.

For regulations governing the periods for which records are to be retained, see part 42, Preservation of Records of Communications Common Carriers, of this chapter which relates to preservation of records.

Subpart B—General Instructions

§ 32.11 Classification of companies.

(a) For purposes of this section, the term ''company'' or ''companies'' means incumbent local exchange carrier(s) as defined in section 251(h) of the Communications Act, and any other carriers that the Commission designates by Order. Incumbent local exchange carriers' successor or assign companies, as defined in section 251(h)(1)(B)(ii) of the Communications Act, that are found to be non-dominant by the Commission, will not be subject to this Uniform System of Accounts.

(b) For accounting purposes, companies are divided into classes as follows:

(1) *Class A.* Companies having annual revenues from regulated telecommunications operations that are equal to or above the indexed revenue threshold.

(2) *Class B.* Companies having annual revenues from regulated telecommunications operations that are less than the indexed revenue threshold.

(c) Class A companies, except mid-sized incumbent local exchange carriers, as defined by § 32.9000, shall keep all the accounts of this system of accounts which are applicable to their affairs and are designated as Class A accounts. Class A companies, which include mid-sized incumbent local exchange carriers, shall keep Basic Property Records in compliance with the requirements of § 32.2000(e) and (f).

(d) Class B companies and mid-sized incumbent local exchange carriers, as defined by § 32.9000, shall keep all accounts of this system of accounts which are applicable to their affairs and are designated as Class B accounts. Mid-sized incumbent local exchange carriers shall also maintain subsidiary record categories necessary to provide the pole attachment data currently provided in the Class A accounts. Class B companies shall keep Continuing Property Records in compliance with the requirements of §§ 32.2000(e)(7)(i)(A) and 32.2000(f).

(e) Class B companies and mid-sized incumbent local exchange carriers, as

defined by § 32.9000 of this part, that desire more detailed accounting may adopt the accounts prescribed for Class A companies upon the submission of a written notification to the Commission.

(f) The classification of a company shall be determined at the start of the calendar year following the first time its annual operating revenue from regulated telecommunications operations equals, exceeds, or falls below the indexed revenue threshold.

[67 FR 5679, Feb. 6, 2002, as amended at 69 FR 53648, Sept. 2, 2004]

§ 32.12 Records.

(a) The company's financial records shall be kept in accordance with generally accepted accounting principles to the extent permitted by this system of accounts.

(b) The company's financial records shall be kept with sufficient particularity to show fully the facts pertaining to all entries in these accounts. The detail records shall be filed in such manner as to be readily accessible for examination by representatives of this Commission.

(c) The Commission shall require a company to maintain financial and other subsidiary records in such a manner that specific information, of a type not warranting disclosure as an account or subaccount, will be readily available. When this occurs, or where the full information is not otherwise recorded in the general books, the subsidiary records shall be maintained in sufficient detail to facilitate the reporting of the required specific information. The subsidiary records, in which the full details are shown, shall be sufficiently referenced to permit ready identification and examination by representatives of this Commission.

§ 32.13 Accounts—general.

(a) As a general rule, all accounts kept by reporting companies shall conform in numbers and titles to those prescribed herein. However, reporting companies may use different numbers for internal purposes when separate accounts (or subaccounts) maintained are consistent with the title and content of accounts and subaccounts prescribed in this system.

(1) A company may subdivide any of the accounts prescribed. The titles of all such subaccounts shall refer by number or title to the controlling account.

(2) A company may establish temporary or experimental accounts without prior notice to the Commission.

(b) Exercise of the preceding options shall be allowed only if the integrity of the prescribed accounts is not impaired.

(c) As of the date a company becomes subject to the system of accounts, the company is authorized to make any such subdivisions, reclassifications or consolidations of existing balances as are necessary to meet the requirements of this system of accounts.

(d) Nothing contained in this part shall prohibit or excuse any company, receiver, or operating trustee of any carrier from subdividing the accounts hereby prescribed for the purpose of:

(1) Complying with the requirements of the state commission(s) having jurisdiction; or

(2) Securing the information required in the prescribed reports to such commission(s).

(e) Where the use of subsidiary records is considered necessary in order to secure the information required in reports to any state commission, the company shall incorporate the following controls into their accounting system with respect to such subsidiary records:

(1) Subsidiary records shall be reconciled to the company's general ledger or books of original entry, as appropriate.

(2) The company shall adequately document the accounting procedures related to subsidiary records.

(3) The subsidiary records shall be maintained at an adequate level of detail to satisfy state regulators.

[51 FR 43499, Dec. 2, 1986, as amended at 65 FR 16334, Mar. 28, 2000; 67 FR 5679, Feb. 6, 2002]

§ 32.14 Regulated accounts.

(a) In the context of this part, the regulated accounts shall be interpreted to include the investments, revenues and expenses associated with those

telecommunications products and services to which the tariff filing requirements contained in Title II of the Communications Act of 1934, as amended, are applied, except as may be otherwise provided by the Commission. Regulated telecommunications products and services are thereby fully subject to the accounting requirements as specified in Title II of the Communications Act of 1934, as amended, and as detailed in subparts A through F of this part of the Commission's Rules and Regulations.

(b) In addition to those amounts considered to be regulated by the provisions of paragraph (a) of this section, those telecommunications products and services to which the tariff filing requirements of the several state jurisdictions are applied shall be accounted for as regulated, except where such treatment is proscribed or otherwise excluded from the requirements pertaining to regulated telecommunications products and services by this Commission.

(c) In the application of detailed accounting requirements contained in this part, when a regulated activity involves the common or joint use of assets and resources in the provision of regulated and nonregulated products and services, companies shall account for these activities within the accounts prescribed in this system for telephone company operations. Assets and expenses shall be subdivided in subsidiary records among amounts solely assignable to nonregulated activities, amounts solely assignable to regulated activities, and amounts related to assets used and expenses incurred jointly or in common, which will be allocated between regulated and nonregulated activities. Companies shall submit reports identifying regulated and nonregulated amounts in the manner and at the times prescribed by this Commission. Nonregulated revenue items not qualifying for incidental treatment, as provided in §32.4999(l), shall be recorded in Account 5280, Nonregulated operating revenue.

(d) Other income items which are incidental to the provision of regulated products and services shall be accounted for as regulated activities.

(e) All costs and revenues related to the offering of regulated products and services which result from arrangements for joint participation or apportionment between two or more telephone companies (e.g., joint operating agreements, settlement agreements, cost-pooling agreements) shall be recorded within the detailed accounts. Under joint operating agreements, the creditor will initially charge the entire expenses to the appropriate primary accounts. The proportion of such expenses borne by the debtor shall be credited by the creditor and charged by the debtor to the account initially charged. Any allowances for return on property used will be accounted for as provided in Account 5200, Miscellaneous revenue.

(f) All items of nonregulated revenue, investment and expense that are not properly includible in the detailed, regulated accounts prescribed in subparts A through F of this part, as determined by paragraphs (a) through (e) of this section shall be accounted for and included in reports to this Commission as specified in §32.23 of this subpart.

[51 FR 43499, Dec. 2, 1986, as amended at 52 FR 6560, Mar. 4, 1987; 53 FR 49321, Dec. 7, 1988; 67 FR 5679, Feb. 6, 2002]

§32.15 [Reserved]

§32.16 Changes in accounting standards.

(a) The company's records and accounts shall be adjusted to apply new accounting standards prescribed by the Financial Accounting Standards Board or successor authoritative accounting standard-setting groups, in a manner consistent with generally accepted accounting principles. The change in an accounting standard will automatically take effect 90 days after the company informs this Commission of its intention to follow the new standard, unless the Commission notifies the company to the contrary. Any change adopted shall be disclosed in annual reports required by §43.21(f) of this chapter in the year of adoption.

(b) The changes in accounting standards which this Commission approves will not necessarily be binding on the

ratemaking practices of the various state commissions.

[51 FR 43499, Dec. 2, 1986, as amended at 64 FR 50007, Sept. 15, 1999; 67 FR 5679, Feb. 6, 2002]

§ 32.17 Interpretation of accounts.

To the end that uniform accounting shall be maintained within the prescribed system, questions involving significant matters which are not clearly provided for shall be submitted to the Chief, Wireline Competition Bureau, for explanation, interpretation, or resolution. Questions and answers thereto with respect to this system of accounts will be maintained by the Wireline Competition Bureau.

[67 FR 13225, Mar. 21, 2002]

§ 32.18 Waivers.

A waiver from any provision of this system of accounts shall be made by the Federal Communications Commission upon its own initiative or upon the submission of written request therefor from any telecommunications company, or group of telecommunications companies, provided that such a waiver is in the public interest and each request for waiver expressly demonstrates that: existing peculiarities or unusual circumstances warrant a departure from a prescribed procedure or technique; a specifically defined alternative procedure or technique will result in a substantially equivalent or more accurate portrayal of operating results or financial condition, consistent with the principles embodied in the provisions of this system of accounts; and the application of such alternative procedure will maintain or improve uniformity in substantive results as among telecommunications companies.

§ 32.19 Address for reports and correspondence.

Reports, statements, and correspondence submitted to the Federal Communications Commission in accordance with or relating to instructions and requirements contained herein shall be addressed to the Wireless Competition Bureau, Federal Communications Commission, Washington, DC 20554.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 13225, Mar. 21, 2002]

§ 32.20 Numbering convention.

(a) The number ''32'' (appearing to the left of the first decimal point) indicates the part number.

(b) The numbers immediately following to the right of the decimal point indicate, respectively, the section or account. *All Part 32 Account numbers contain 4 digits to-the-right-of the decimal point.*

(c) Cross references to accounts are made by citing the account numbers to the right of the decimal point; e.g., Account 2232 rather than the corresponding complete part 32 reference number 32.2232.

§ 32.21 Sequence of accounts.

The order in which the accounts are presented in this system of accounts is not to be considered as necessarily indicative of the order in which they will be scheduled at all times in reports to this Commission.

§ 32.22 Comprehensive interperiod tax allocation.

(a) Companies shall apply interperiod tax allocation (tax normalization) to all book/tax temporary differences which would be considered material for published financial report purposes. Furthermore, companies shall also apply interperiod tax allocation if any item or group of similar items when aggregated would yield debit or credit entries which exceed or would exceed 5 percent of the gross deferred income tax expense debits or credits during any calendar year over the life of the temporary difference. The tax effects of book/tax temporary differences shall be normalized and the deferrals shall be included in the following accounts:

4100, Net Current Deferred Operating Income Taxes;

4110, Net Current Deferred Nonoperating Income Taxes;

4340, Net Noncurrent Deferred Operating Income Taxes;

4350, Net Noncurrent Deferred Nonoperating Income Taxes.

In lieu of the accounting prescribed herein, any company shall treat the increase or reduction in current income taxes payable resulting from the use of flow through accounting in prior years as an increase or reduction in current tax expense.

(b) Supporting documentation shall be maintained so as to separately identify the amount of deferred taxes which arise from the use of an accelerated method of depreciation.

(c) Subsidiary records shall be used to reduce the deferred tax assets contained in the accounts specified in paragraph (a) of this section when it is likely that some portion or all of the deferred tax asset will not be realized. The amount recorded in the subsidiary record should be sufficient to reduce the deferred tax asset to the amount that is likely to be realized.

(d) The records supporting the activity in the deferred income tax accounts shall be maintained in sufficient detail to identify the nature of the specific temporary differences giving rise to both the debits and credits to the individual accounts.

(e) Any company that uses accelerated depreciation (or recognizes taxable income or losses upon the retirement of property) for income tax purposes shall normalize the tax differentials occasioned thereby as indicated in paragraphs (e)(1) and (e)(2) of this section.

(1) With respect to the retirement of property the book/tax difference between (i) the recognition of proceeds as income and the accrual for salvage value and (ii) the book and tax capital recovery, shall be normalized.

(2) Records shall be maintained so as to show the deferred tax amounts by vintage year separately for each class or subclass of eligible depreciable telephone plant for which an accelerated method of depreciation has been used for income tax purposes. When property is transferred to nonregulated activities, the associated deferred income taxes and unamortized investment tax credits shall also be identified and transferred to the appropriate nonregulated accounts.

(f) The tax differentials to be normalized as specified in this section shall also encompass the additional effect of state and local income tax changes on Federal income taxes produced by the provision for deferred state and local income taxes for book/tax temporary differences related to such income taxes.

(g) Companies that receive the tax benefits from the filing of a consolidated income tax return by the parent company, (pursuant to closing agreements with the Internal Revenue Service, effective January 1, 1966) representing the deferred income taxes from the elimination of intercompany profits for income tax purposes on sales of regulated equipment, may credit such deferred taxes directly to the plant account which contains such intercompany profit rather than crediting such deferred taxes to the applicable accounts in paragraph (a) of this section. If the deferred income taxes are recorded as a reduction of the appropriate plant accounts, such reduction shall be treated as reducing the original cost of the plant and accounted for as such.

[51 FR 43499, Dec. 2, 1986, as amended at 59 FR 9418, Feb. 28, 1994]

§ 32.23 Nonregulated activities.

(a) This section describes the accounting treatment of activities classified for accounting purposes as ''nonregulated.'' Preemptively deregulated activities and activities (other than incidental activities) never subject to regulation will be classified for accounting purposes as ''nonregulated.'' Activities that qualify for incidental treatment under the policies of this Commission will be classified for accounting purposes as regulated activities. Activities that have been deregulated by a state will be classified for accounting purposes as regulated activities. Activities that have been deregulated at the interstate level, but not preemptively deregulated, will be classified for accounting purposes as regulated activities until such time as this Commission decides otherwise. The treatment of nonregulated activities shall differ depending on the extent of the common or joint use of assets and resources in the provision of both regulated and nonregulated products and services.

(b) When a nonregulated activity does not involve the joint or common use of assets and resources in the provision of both regulated and nonregulated products and services, carriers shall account for these activities on a separate set of books consistent with instructions set forth in §§ 32.1406 and 32.7990. Transfers of assets, and sales of products and services between the regulated activity and a nonregulated activity for which a separate set of books is maintained, shall be accounted for in accordance with the rules presented in § 32.27, Transactions with Affiliates. In the separate set of books, carriers may establish whatever detail they deem appropriate beyond what is necessary to provide this Commission with the information required in §§ 32.1406 and 32.7990.

(c) When a nonregulated activity does involve the joint or common use of assets and resources in the provision of regulated and nonregulated products and services, carriers shall account for these activities within accounts prescribed in this system for telephone company operations. Assets and expenses shall be subdivided in subsidiary records among amounts solely assignable to nonregulated activities, amounts solely assignable to regulated activities, and amounts related to assets and expenses incurred jointly or in common, which will be allocated between regulated and nonregulated activities. Carriers shall submit reports identifying regulated and nonregulated amounts in the manner and at the times prescribed by this Commission. Nonregulated revenue items not qualifying for incidental treatment as provided in § 32.4999(l) of this part, shall be recorded in separate subsidiary record categories of Account 5280, Nonregulated operating revenue. Amounts assigned or allocated to regulated products or services shall be subject to part 36 of this chapter.

[52 FR 6560, Mar. 4, 1987, as amended at 53 FR 49322, Dec. 7, 1988; 59 FR 46930, Sept. 13, 1994; 64 FR 50007, Sept. 15, 1999]

§ 32.24 Compensated absences.

(a) Companies shall record a liability and charge the appropriate expense accounts for compensated absences (vacations, sick leave, etc.) in the year in which these benefits are earned by employees.

(b) With respect to the liability that exists for compensated absences which is not yet recorded on the books as of the effective date of this part, the liability shall be recorded in Account 4130. Other current liabilities, with a corresponding entry to Account 1438, Deferred maintenance, retirements and other deferred charges. This deferred charge shall be amortized on a straight-line basis over a period of ten years.

(c) Records shall be maintained so as to show that no more than ten percent of the deferred charge is being amortized each year.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5679, Feb. 6, 2002]

§ 32.25 Unusual items and contingent liabilities.

Extraordinary items, prior period adjustments, and contingent liabilities may be recorded in the company's books of account without prior Commission approval.

[65 FR 16334, Mar. 28, 2000]

§ 32.26 Materiality.

Companies shall follow this system of accounts in recording all financial and statistical data irrespective of an individual item's materiality under GAAP, unless a waiver has been granted under the provisions of § 32.18 of this subpart to do otherwise.

§ 32.27 Transactions with affiliates.

(a) Unless otherwise approved by the Chief, Wireline Competition Bureau, transactions with affiliates involving asset transfers into or out of the regulated accounts shall be recorded by the carrier in its regulated accounts as provided in paragraphs (b) through (f) of this section.

(b) Assets sold or transferred between a carrier and its affiliate pursuant to a tariff, including a tariff filed with a state commission, shall be recorded in the appropriate revenue accounts at the tariffed rate. Non-tariffed assets sold or transferred between a carrier and its affiliate that qualify for prevailing price valuation, as defined in paragraph (d) of this section, shall be

recorded at the prevailing price. For all other assets sold by or transferred from a carrier to its affiliate, the assets shall be recorded at no less than the higher of fair market value and net book cost. For all other assets sold by or transferred to a carrier from its affiliate, the assets shall be recorded at no more than the lower of fair market value and net book cost.

(1) *Floor*. When assets are sold by or transferred from a carrier to an affiliate, the higher of fair market value and net book cost establishes a floor, below which the transaction cannot be recorded. Carriers may record the transaction at an amount equal to or greater than the floor, so long as that action complies with the Communications Act of 1934, as amended, Commission rules and orders, and is not otherwise anti-competitive.

(2) *Ceiling*. When assets are purchased from or transferred from an affiliate to a carrier, the lower of fair market value and net book cost establishes a ceiling, above which the transaction cannot be recorded. Carriers may record the transaction at an amount equal to or less than the ceiling, so long as that action complies with the Communications Act of 1934, as amended, Commission rules and orders, and is not otherwise anti-competitive.

(3) *Threshold*. For purposes of this section carriers are required to make a good faith determination of fair market value for an asset when the total aggregate annual value of the asset(s) reaches or exceeds $500,000, per affiliate. When a carrier reaches or exceeds the $500,000 threshold for a particular asset for the first time, the carrier must perform the market valuation and value the transaction on a going-forward basis in accordance with the affiliate transactions rules on a going-forward basis. When the total aggregate annual value of the asset(s) does not reach or exceed $500,000, the asset(s) shall be recorded at net book cost.

(c) Services provided between a carrier and its affiliate pursuant to a tariff, including a tariff filed with a state commission, shall be recorded in the appropriate revenue accounts at the tariffed rate. Non-tariffed services provided between a carrier and its affiliate pursuant to publicly-filed agreements submitted to a state commission pursuant to section 252(e) of the Communications Act of 1934 or statements of generally available terms pursuant to section 252(f) shall be recorded using the charges appearing in such publicly-filed agreements or statements. Non-tariffed services provided between a carrier and its affiliate that qualify for prevailing price valuation, as defined in paragraph (d) of this section, shall be recorded at the prevailing price. For all other services sold by or transferred from a carrier to its affiliate, the services shall be recorded at no less than the higher of fair market value and fully distributed cost. For all other services sold by or transferred to a carrier from its affiliate, the services shall be recorded at no more than the lower of fair market value and fully distributed cost.

(1) *Floor*. When services are sold by or transferred from a carrier to an affiliate, the higher of fair market value and fully distributed cost establishes a floor, below which the transaction cannot be recorded. Carriers may record the transaction at an amount equal to or greater than the floor, so long as that action complies with the Communications Act of 1934, as amended, Commission rules and orders, and is not otherwise anti-competitive.

(2) *Ceiling*. When services are purchased from or transferred from an affiliate to a carrier, the lower of fair market value and fully distributed cost establishes a ceiling, above which the transaction cannot be recorded. Carriers may record the transaction at an amount equal to or less than the ceiling, so long as that action complies with the Communications Act of 1934, as amended, Commission rules and orders, and is not otherwise anti-competitive.

(3) *Threshold*. For purposes of this section, carriers are required to make a good faith determination of fair market value for a service when the total aggregate annual value of that service reaches or exceeds $500,000, per affiliate. When a carrier reaches or exceeds the $500,000 threshold for a particular service for the first time, the carrier must perform the market valuation

and value the transaction in accordance with the affiliate transactions rules on a going-forward basis. All services received by a carrier from its affiliate(s) that exist solely to provide services to members of the carrier's corporate family shall be recorded at fully distributed cost.

(d) In order to qualify for prevailing price valuation in paragraphs (b) and (c) of this section, sales of a particular asset or service to third parties must encompass greater than 25 percent of the total quantity of such product or service sold by an entity. Carriers shall apply this 25 percent threshold on an asset-by-asset and service-by-service basis, rather than on a product-line or service-line basis. In the case of transactions for assets and services subject to section 272, a BOC may record such transactions at prevailing price regardless of whether the 25 percent threshold has been satisfied.

(e) Income taxes shall be allocated among the regulated activities of the carrier, its nonregulated divisions, and members of an affiliated group. Under circumstances in which income taxes are determined on a consolidated basis by the carrier and other members of the affiliated group, the income tax expense to be recorded by the carrier shall be the same as would result if determined for the carrier separately for all time periods, except that the tax effect of carry-back and carry-forward operating losses, investment tax credits, or other tax credits generated by operations of the carrier shall be recorded by the carrier during the period in which applied in settlement of the taxes otherwise attributable to any member, or combination of members, of the affiliated group.

(f) Companies that employ average schedules in lieu of actual costs are exempt from the provisions of this section. For other organizations, the principles set forth in this section shall apply equally to corporations, proprietorships, partnerships and other forms of business organizations.

[67 FR 5679, Feb. 6, 2002, as amended at 69 FR 53648, Sept. 2, 2004]

Subpart C—Instructions for Balance Sheet Accounts

§ 32.101 Structure of the balance sheet accounts.

The Balance Sheet accounts shall be maintained as follows:

(a) Account 1120, Cash and equivalents, through Account 1500, Other jurisdictional assets—net, shall include assets other than regulated-fixed assets.

(b) Account 2001, Telecommunications plant in service, through Account 2007, Goodwill, shall include the regulated-fixed assets.

(c) Account 3100, Accumulated depreciation through Account 3410, Accumulated amortization—capitalized leases, shall include the asset reserves except that reserves related to certain asset accounts will be included in the asset account. (See §§ 32.2005, 32.2682 and 32.2690.)

(d) Account 4000, Current accounts and notes payable, through Account 4550, Retained earnings, shall include all liabilities and stockholders equity.

[67 FR 5680, Feb. 6, 2002]

§ 32.102 Nonregulated investments.

Nonregulated investments shall include the investment in nonregulated activities that are conducted through the same legal entity as the telephone company operations, but do not involve the joint or common use of assets or resources in the provision of both regulated and nonregulated products and services. See §§ 32.14 and 32.23.

[52 FR 6561, Mar. 4, 1987]

§ 32.103 Balance sheet accounts for other than regulated-fixed assets to be maintained.

Balance sheet accounts to be maintained by Class A and Class B telephone companies for other than regulated-fixed assets are indicated as follows:

BALANCE SHEET ACCOUNTS

Account title	Class A account	Class B account
Current assets		
Cash and equivalents	1120	1120
Receivables	1170	1170
Allowance for doubtful accounts	1171	1171

BALANCE SHEET ACCOUNTS—Continued

Account title	Class A account	Class B account
Supplies:		
Material and supplies	1220	1220
Prepayments	1280	1280
Other current assets	1350	1350
Noncurrent assets		
Investments:		
Nonregulated investments	1406	1406
Other noncurrent assets	1410	1410
Deferred charges:		
Deferred maintenance, retirements and other deferred charges	1438	1438
Other:		
Other jurisdictional assets-net	1500	1500

[67 FR 5680, Feb. 6, 2002]

§ 32.1120 Cash and equivalents.

(a) This account shall include the amount of current funds available for use on demand in the hands of financial officers and agents, deposited in banks or other financial institutions and also funds in transit for which agents have received credit.

(b) This account shall include the amount of cash on special deposit, other than in sinking and other special funds provided for elsewhere, to pay dividends, interest, and other debts, when such payments are due one year or less from the date of deposit; the amount of cash deposited to insure the performance of contracts to be performed within one year from date of the deposit; and other cash deposits of a special nature not provided for elsewhere. This account shall include the amount of cash deposited with trustees to be held until mortgaged property sold, destroyed, or otherwise disposed of is replaced, and also cash realized from the sale of the company's securities and deposited with trustees to be held until invested in physical property of the company or for disbursement when the purposes for which the securities were sold are accomplished.

(c) Cash on special deposit to be held for more than one year from the date of deposit shall be included in Account 1410, Other noncurrent assets.

(d) This account shall include the amount of cash advanced to officers, agents, employees, and others as petty cash or working funds from which expenditures are to be made and accounted for.

(e) This account shall include the cost of current securities acquired for the purpose of temporarily investing cash, such as time drafts receivable and time loans, bankers' acceptances, United States Treasury certificates, marketable securities, and other similar investments of a temporary character.

(f) Accumulated changes in the net unrealized losses of current marketable equity securities shall be included in the determination of net income in the period in which they occur in Account 7300, Other Nonoperating Income and Expense.

(g) Subsidiary record categories shall be maintained in order that the entity may separately report the amounts of temporary investments that relate to affiliates and nonaffiliates. Such subsidiary record categories shall be reported as required by part 43 of this chapter.

[67 FR 5681, Feb. 6, 2002]

§ 32.1170 Receivables.

(a) This account shall include all amounts due from customers for services rendered or billed and from agents and collectors authorized to make collections from customers. This account shall also include all amounts due from customers or agents for products sold. This account shall be kept in such manner as will enable the company to make the following analysis:

(1) Amounts due from customers who are receiving telecommunications service.

(2) Amounts due from customers who are not receiving service and whose accounts are in process of collection.

(b) Collections in excess of amounts charged to this account may be credited to and carried in this account until applied against charges for services rendered or until refunded.

(c) Cost of demand or time notes, bills and drafts receivable, or other similar evidences (except interest coupons) of money receivable on demand or within a time not exceeding one year from date of issue.

(d) Amount of interest accrued to the date of the balance sheet on bonds, notes, and other commercial paper owned, on loans made, and the amount

of dividends receivable on stocks owned.

(e) This account shall not include dividends or other returns on securities issued or assumed by the company and held by or for it, whether pledged as collateral, or held in its treasury, in special deposits, or in sinking and other funds.

(f) Dividends received and receivable from affiliated companies accounted for on the equity method shall be included in Account 1410, Other noncurrent assets, as a reduction of the carrying value of the investment.

(g) This account shall include all amounts currently due, and not provided for in (a) through (g) of this section such as those for traffic settlements, divisions of revenue, material and supplies, matured rents, and interest receivable under monthly settlements on short-term loans, advances, and open accounts. If any of these items are not to be paid currently, they shall be transferred to Account 1410, Other noncurrent assets.

(h) Subsidiary record categories shall be maintained in order that the entity may separately report the amounts contained herein that relate to affiliates and nonaffiliates. Such subsidiary record categories shall be reported as required by part 43 of this chapter.

[67 FR 5681, Feb. 6, 2002]

§ 32.1171 Allowance for doubtful accounts.

(a) This account shall be credited with amounts charged to Accounts 5300, Uncollectible revenue, and 6790, Provision for uncollectible notes receivable to provide for uncollectible amounts related to accounts receivable and notes receivable included in Account 1170, Receivables. There shall also be credited to this account amounts collected which previously had been written off through charges to this account and credits to Account 1170. There shall be charged to this account any amounts covered thereby which have been found to be impracticable of collection.

(b) If no such allowance is maintained, uncollectible amounts shall be charged directly to Account 5300, Uncollectible revenue or directly to Account 6790, Provision for uncollectible notes receivable, as appropriate.

(c) Subsidiary record categories shall be maintained in order that the entity may separately report the amounts contained herein that relate to affiliates and nonaffiliates. Such subsidiary record categories shall be reported as required by part 43 of this chapter.

[67 FR 5682, Feb. 6, 2002]

§ 32.1191 Accounts receivable allowance—other.

(a) This account shall be credited with amounts charged to Account 5302, Uncollectible Revenue—Other to provide for uncollectible amounts included in Account 1190, Other Accounts Receivable. There shall also be credited to this account amounts collected which previously had been written off through charges to this account and credits to Account 1190. There shall be charged to this account any amounts covered thereby which have been found to be impracticable of collection.

(b) If no such allowance is maintained, uncollectible amounts shall be charged directly to Account 5302, Uncollectible Revenue—Other.

(c) Subsidiary record categories shall be maintained in order that the entity may separately report the amounts contained herein that relate to affiliates and nonaffiliates. Such subsidiary record categories shall be reported as required by part 43 of this Commission's Rules and Regulations.

§ 32.1220 Inventories.

(a) This account shall include the cost of materials and supplies held in stock and inventories of goods held for resale or lease. The investment in inventories shall be maintained in the following subaccounts:

1220.1 Material and supplies
1220.2 Property held for sale or lease

(b) These subaccounts shall not include items which are related to a nonregulated activity unless that activity involves joint or common use of assets and resources in the provision of regulated and nonregulated products and services.

(c) 1220.1 Material and supplies. This subaccount shall include cost of material and supplies held in stock including plant supplies, motor vehicles supplies, tools, fuel, other supplies and material and articles of the company in process of manufacture for supply stock. (Note also §32.2000(c)(2)(iii) of this subpart.)

(d) Transportation charges and sales and use taxes, so far as practicable, shall be included as a part of the cost of the particular material to which they relate. Transportation and sales and use taxes which are not included as part of the cost of particular material shall be equitably apportioned among the detail accounts to which material is charged.

(e) So far as practicable, cash and other discount on material shall be deducted in determining cost of the particular material to which they relate or credited to the account to which the material is charged. When such deduction is not practicable, discounts shall be equitably apportioned among the detail accounts to which material is charged.

(f) Material recovered in connection with construction, maintenance or retirement of property shall be charged to this account as follows:

(1) Reusable items that, when installed or in service, were retirement units shall be included in this account at the original cost, estimated if not known. (Note also §32.2000(d)(3) of this subpart.)

(2) Reusable minor items that, when installed or in service, were not retirement units shall be included in this account at current prices new.

(3) The cost of repairing reusable material shall be charged to the appropriate account in the Plant Specific Operations Expense accounts.

(4) Scrap and nonusable material included in this account shall be carried at the estimated amount which will be received therefor. The difference between the amounts realized for scrap and nonusable material sold and the amounts at which it is carried in this account, so far as practicable, shall be adjusted in the accounts credited when the material was taken up in this account.

(g) Interest paid on material bills, the payments of which are delayed, shall be charged to Account 7500, Interest and related items.

(h) Inventories of material and supplies shall be taken periodically or frequently enough for reporting purposes, as appropriate, in accordance with generally accepted accounting principles. The adjustments to this account shall be charged or credited to Account 6512, Provisioning expense.

(i) 1220.2 Property held for sale or lease. This subaccount shall include the cost of all items purchased for resale or lease. The cost shall include applicable transportation charges, sales and use taxes, and cash and other purchase discounts. Inventory shortage and overage shall be charged and credited, respectively, to Account 5280, Nonregulated operating revenue.

[52 FR 39534, Oct. 22, 1987, as amended at 53 FR 49322, Dec. 7, 1988; 67 FR 5682, Feb. 6, 2002]

§32.1280 Prepayments.

This account shall include:

(a) The amounts of rents paid in advance of the period in which they are chargeable to income, except amounts chargeable to telecommunications plant under construction and minor amounts which may be charged directly to the final accounts. As the term expires for which the rents are paid, this account shall be credited monthly and the appropriate account charged.

(b) The balance of all taxes, other than amounts chargeable to telecommunication plant under construction and minor amounts which may be charged to the final accounts, paid in advance and which are chargeable to income within one year. As the term expires for which the taxes are paid, this account shall be credited monthly and the appropriate account charged.

(c) The amount of insurance premiums paid in advance of the period in which they are chargeable to income, except premiums chargeable to telecommunications plant under construction and minor amounts which may be charged directly to the final accounts. As the term expires for which the premiums are paid, this account shall be credited monthly and the appropriate account charged.

(d) The cost of preparing, printing, binding, and delivering directories and the cost of soliciting advertisements for directories, except minor amounts which may be charged directly to Account 6622, Number services. These prepaid directory expenses shall be cleared to Account 6622 by monthly charges representing that portion of the expenses applicable to each month.

(e) Other prepayments not included in paragraphs (a) through (d) of this section except for minor amounts which may be charged directly to the final accounts. As the term expires for which the payments apply, this account shall be credited monthly and the appropriate account charged.

[67 FR 5682, Feb. 6, 2002, as amended at 69 FR 53648, Sept. 2, 2004]

§ 32.1350 Other current assets.

This account shall include the amount of all current assets which are not includable in Accounts 1120 through 1280.

[67 FR 5682, Feb. 6, 2002]

§ 32.1406 Nonregulated investments.

This account shall include the carrier's investment in nonregulated activities accounted for in a separate set of books as provided in § 32.23(b).

[52 FR 6561, Mar. 4, 1987; 52 FR 39535, Oct. 22, 1987, as amended as 67 FR 5682, Feb. 6, 2002]

§ 32.1410 Other noncurrent assets.

(a) This account shall include the acquisition cost of the company's investment in equity or other securities issued or assumed by affiliated companies, including securities held in special funds (sinking funds). The carrying value of the investment (securities) accounted for on the equity method shall be adjusted to recognize the company's share of the earnings or losses and dividends received or receivable of the affiliated company from the date of acquisition. (Note also Account 1170, Receivables, and Account 7300, Nonoperating income and expense.)

(b) This account shall include the acquisition cost of the Company's investment in securities issued or assumed by nonaffiliated companies and individuals, and also its investment advances to such parties and special deposits of cash for more than one year from date of deposit.

(c) Declines in value of investments, including those accounted for under the cost method, shall be charged to Account 4540, Other capital, if temporary and as a current period loss if permanent. Detail records shall be maintained to reflect unrealized losses for each investment.

(d) This account shall also include advances represented by book accounts only with respect to which it is agreed or intended that they shall be either settled by issuance of capital stock or debt; or shall not be subject to current cost settlement.

(e) Amounts due from affiliated and nonaffiliated companies which are subject to current settlement shall be included in Account 1170, Receivables.

(f) This account shall include the total unamortized balance of debt issuance expense for all classes of outstanding long-term debt. Amounts included in this account shall be amortized monthly and charged to account 7500, Interest and related items.

(g) Debt Issuance expense includes all expenses in connection with the issuance and sale of evidence of debt, such as fees for drafting mortgages and trust deeds; fees and taxes for issuing or recording evidences of debt; costs of engraving and printing bonds, certificates of indebtedness, and other commercial paper; fees paid trustees; specific costs of obtaining governmental authority; fees for legal services; fees and commissions paid underwriters, brokers, and salesmen; fees and expenses of listing on exchanges, and other like costs. A subsidiary record shall be kept of each issue outstanding.

(h) This account shall include the amount of cash and other assets which are held by trustees or by the company's treasurer in a distinct fund, for the purpose of redeeming outstanding obligations. Interest or other income arising from funds carried in this account shall generally be charged to this account. A subsidiary record shall be kept for each sinking fund which shall designate the obligation in support of which the fund was created.

(i) This account shall include the amount of all noncurrent assets which

are not includable in paragraphs (a) through (h) of this section.

(j) A subsidiary record shall be kept identifying separately common stocks, preferred stocks, long-term debt, advances to affiliates, and investment advances. A subsidiary record shall also be kept identifying special deposits of cash for more than one year from the date of deposit. Further, the company's record shall identify the securities pledged as collateral for any of the company's long-term debt or short-term loans or to secure performance of contracts.

(k) Subsidiary record categories shall be maintained in order that the entity may separately report the amounts contained herein that relate to the equity method and the cost method. Such subsidiary record categories shall be reported as required by part 43 of this chapter.

[67 FR 5682, Feb. 6, 2002]

§ 32.1438 Deferred maintenance and retirements.

(a) This account shall include such items as:

(1) The unprovided-for loss in service value of telecommunications plant for extraordinary nonrecurring retirement not considered in depreciation and the cost of extensive replacements of plant normally chargeable to the current period Plant Specific Operations Expense accounts. These charges shall be included in this account only upon direction or approval from this Commission. However, the company's application to this Commission for such approval shall give full particulars concerning the property retired, the extensive replacements, the amount chargeable to operating expenses and the period over which in its judgment the amount of such charges should be distributed.

(2) Unaudited amounts and other debit balances in suspense that cannot be cleared and disposed of until additional information is received; the amount, pending determination of loss, of funds on deposit with banks which have failed; revenue, expense, and income items held in suspense; amounts paid for options pending final disposition.

(3) Cost of preliminary surveys, plans, investigation, etc., made for construction projects under contemplation. If the projects are carried out, the preliminary costs shall be included in the cost of the plant constructed. If the projects are abandoned, the preliminary costs shall be charged to Account 7300, Nonoperating income and expense.

(4) Cost of evaluations, inventories, and appraisals taken in connection with the acquisition or sale of property. If the property is subsequently acquired, the preliminary costs shall be accounted for as a part of the cost of acquisition, or if it is sold, such costs shall be deducted from the sale price in accounting for the property sold. If purchases or sales are abandoned, the preliminary costs included herein (including options paid, if any) shall be charged to Account 7300.

(b) Charges provided for in paragraph (a) of this section shall be included in this account only upon direction or approval from this Commission. However, the company's application to this Commission for such approval shall give full particulars concerning the property retired, the extensive replacements, the amount chargeable to operating expenses and the period over which in its judgment the amount of such charges should be distributed.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5683, Feb. 6, 2002]

§ 32.1500 Other jurisdictional assets—net.

This account shall include the cumulative impact on assets of jurisdictional ratemaking practices which vary from those of this Commission. All entries recorded in this account shall be recorded net of any applicable income tax effects and shall be supported by subsidiary records where necessary as provided for in §32.13(e) of subpart B.

§ 32.2000 Instructions for telecommunications plant accounts.

(a) *Purpose of telecommunications plant accounts.* (1) The telecommunications plant accounts (2001 to 2007 inclusive) are designed to show the investment in the company's tangible and intangible telecommunications plant which ordinarily has a service life of more than one year, including such plant whether

used by the company or others in providing telecommunications service.

(2) The telecommunications plant accounts shall not include the cost or other value of telecommunications plant contributed to the company. Contributions in the form of money or its equivalent toward the construction of telecommunications plant shall be credited to the accounts charged with the cost of such construction. Amounts of non-recurring reimbursements based on the cost of plant or equipment furnished in rendering service to a customer shall be credited to the accounts charged with the cost of the plant or equipment. Amounts received for construction which are ultimately to be repaid wholly or in part, shall be credited to Account 4300, Other long-term liabilities and deferred credits; when final determination has been made as to the amount to be returned, any unrefunded amounts shall be credited to the accounts charged with the cost of such construction. Amounts received for the construction of plant, the ownership of which rests with or will revert to others, shall be credited to the accounts charged with the cost of such construction. (Note also Account 7100, Other operating income and expense.)

(3) When telecommunications plant ordinarily having a service life of more than one year is installed for temporary use in providing telecommunications service, it shall be accounted for in the same manner as plant having a service life of more than one year. This includes temporary installations of plant (such as poles, wire and cable) installed to maintain service during the progress of highway reconstruction or during interruptions due to storms or other casualties, equipment used for the training of operators, equipment used to provide intercepting positions in central offices to handle traffic for a short period following extensive system changes and similar installations of property used to provide telecommunications service.

(4) The cost of the individual items of equipment, classifiable to Accounts 2112, Motor vehicles; 2113, Aircraft; 2114, Tools and other work equipment; 2122, Furniture; 2123, Office equipment; 2124, General purpose computers, costing $2,000 or less or having a life of less than one year shall be charged to the applicable expense accounts, except for personal computers falling within Account 2124. Personal computers classifiable to Account 2124, with a total cost for all components of $500 or less, shall be charged to the applicable Plant Specific Operations Expense accounts. The cost of tools and test equipment located in the central office, classifiable to central office asset accounts 2210–2232 costing $2,000 or less or having a life of less than one year shall be charged to the applicable Plant Specific Operations Expense accounts. If the aggregate investment in the items is relatively large at the time of acquisition, such amounts shall be maintained in an applicable material and supplies account until items are used.

(b) *Telecommunications plant acquired.* (1) Property, plant and equipment acquired from an entity, whether or not affiliated with the accounting company, shall be accounted for at original cost, except that property, plant and equipment acquired from a non-affiliated entity shall be accounted for at acquisition cost if the purchase price is less than $100,000 for Class A companies or $25,000 for Class B companies.

(2) The accounting for property, plant and equipment to be recorded at original cost shall be as follows:

(i) The amount of money paid (or current money value of any consideration other than money exchanged) for the property (together with preliminary expenses incurred in connection the acquisition) shall be charged to Account 1438, Deferred maintenance, retirements, and other deferred charges.

(ii) The original cost, estimated if not known, of telecommunications plant, governmental franchises and other similar rights acquired shall be charged to the applicable telecommunications plant accounts, Telecommunications Plant Under Construction, and Property Held For Future Telecommunications Use, as appropriate, and credited to Account 1439. When the actual original cost cannot be determined and estimates are used, the company shall be prepared to furnish the Commission with the particulars of such estimates.

(iii) Accumulated Depreciation and amortization balances related to plant acquired shall be credited to Account 3100, Accumulated depreciation, or Account 3200, Accumulated depreciation—held for future telecommunications use, or Account 3410, Accumulated amortization—capitalized leases and debited to Account 1438. Accumulated amortization balances related to plant acquired which ultimately is recorded in Accounts 2005, Telecommunications plant adjustment, Account 2682, Leasehold improvements, or Account 2690, Intangibles shall be credited to these asset accounts, and debited to Account 1438.

(iv) Any amount remaining in Account 1438, applicable to the plant acquired, shall, upon completion of the entries provided in paragraphs (b)(2)(i) through (b)(2)(iii) of this section, be debited or credited, as applicable, to Account 2007, Goodwill, or to Account 2005, Telecommunications plant adjustment, as appropriate.

(3) A memorandum record shall be kept showing the amount of contributions in aid of construction applicable to the property acquired as shown by the accounts of the previous owner.

(c) *Cost of construction.* (1) Telecommunications plant represents an economic resource which will be used to provide future services, the cost of which will be allocated in a rational and systematic manner to the future periods in which it provides benefits. In accounting for construction costs, the utility shall charge to the telecommunications plant accounts, where applicable, all direct and indirect costs.

(2) Direct and indirect costs shall include, but not be limited to:

(i) ''Labor'' includes the wages and expenses of employees directly engaged in or in direct charge of construction work. It includes expenses directly related to an employee's wages, such as worker's compensation insurance, payroll taxes, benefits and other similar items of expense.

(ii) ''Engineering'' includes the portion of the wages and expenses of engineers, draftsmen, inspectors, and their direct supervision applicable to construction work. It includes expenses directly related to an employee's wages, such as worker's compensation insurance, payroll taxes, benefits and other similar items of expense.

(iii) ''Material and supplies'' includes the purchase price of material used at the point of free delivery plus the costs of inspection, loading and transportation, and an equitable portion of provisioning expense. In determining the cost of material used, proper allowance shall be made for unused material, for material recovered from temporary structures used in performing the work involved, and for discounts allowed and realized in the purchase of material. This item does not include construction material that is stolen or rendered unusable due to vandalism. Such material should be charged to the applicable plant specific operations expense accounts.

(iv) ''Transportation'' includes the cost of transporting employees, material and supplies, tools and other work equipment to and from the physical construction location. It includes amounts paid therefor to other companies or individuals and the cost of using the company's own motor vehicles or other transportation equipment.

(v) ''Contract work'' includes amounts paid for work performed under contract or other agreement by other companies, firms or individuals; engineering and supervision applicable to such work; cost incident to the award of contracts; and the inspection of such work. The cost of construction work performed by affiliated companies and other details relating thereto shall be available from the work in progress and supporting records.

(vi) ''Protection'' includes the cost of protecting the company's property from fire or other casualties and the cost of preventing damages to others or the property of others.

(vii) ''Privileges, Permits, and Rights of way'' includes such costs incurred in obtaining these privileges, permits, or rights of way in connection with construction work, such as for use of private property, streets or highways. The cost of such privileges and permits shall be included in the cost of the

work for which the privileges or permits are obtained, except for costs includable in Account 2111, Land, and Account 2690, Intangibles.

(viii) ''Taxes'' includes taxes properly includable in construction costs before the facilities are completed for service, which taxes are assessed separately from taxes on operating property or under conditions that permit separate identification of the amount chargeable to construction.

(ix) ''Special machine service'' includes the cost of labor expended, materials and supplies consumed and other expenses incurred in the maintenance, operation and use of special and other labor saving machines (other than transportation equipment (such as trenching equipment, cable plows and pole setting trucks. Also included are expenditures for rental, maintenance and operation of such machines owned by others. When a construction job requires the purchase of special machines, the cost thereof, less the appraised or salvage value at the time of release from the job, shall be included in the cost of construction.

(x) Allowance for funds used during construction (''AFUDC'') provides for the cost of financing the construction of telecommunications plant. AFUDC shall be charged to Account 2003, Telecommunications plant under construction, and credited to Account 7300, Nonoperating income and expense. The rate for calculating AFUDC shall be determined as follows: If financing plans associate a specific new borrowing with an asset, the rate on that borrowing may be used for the asset; if no specific new borrowing is associated with an asset or if the average accumulated expenditures for the asset exceed the amounts of specific new borrowing associated with it, the capitalization rate to be applied to such excess shall be the weighted average of the rates applicable to other borrowings of the enterprise. The amount of interest cost capitalized in an accounting period shall not exceed the total amount of interest cost incurred by the company in that period.

(xi) ''Insurance'' includes premiums paid specifically for protection against loss and damage in connection with the construction of telecommunications plant due to fire or other casualty, injury to or death of employees or others, damages to property of others, defalcations of employees and agents and the non-performance of contractual obligations of others.

(xii) ''Construction services'' include the cost of telephone, electricity, power, construction quarters, office space and equipment directly related to the construction project.

(xiii) ''Indirect construction costs'' shall include indirect costs such as general engineering, supervision and support. Such costs, in addition to direct supervision, shall include indirect plant operations and engineering supervision up to, but not including, supervision by executive officers whose pay and expenses are chargeable to Account 6720, General and administrative. The records supporting the entries for indirect construction costs shall be kept so as to show the nature of the expenditures, the individual jobs and accounts charged, and the bases of the distribution. The amounts charged to each plant account for indirect costs shall be readily determinable. The instructions contained herein shall not be interpreted as permitting the addition to plant of amounts to cover indirect costs based on arbitrary allocations.

(xiv) The cost of construction shall not include any amounts classifiable as Corporate Operations Expense.

(d) *Telecommunications plant retired.* (1) Telecommunications plant accounts shall at all times disclose the original cost of all property in service. When any item of property subject to plant retirement accounting is worn out, lost, sold, destroyed, abandoned, surrendered upon lapse of title, becomes permanently unserviceable, is withdrawn or for any other reason is retired from service, the plant accounts applicable to that item shall be credited with the original cost of the plant retired whether replaced or not (except as provided for minor items in paragraph (d)(2)(ii) of this section). Normally, these retirement credits with respect to such plant as entire buildings, entire central offices, all plant abandoned and any large sections of plant withdrawn from service, shall be entered in the accounts for the month

in which use of the property ceased. For any other plant withdrawn from service, the retirement credits shall be entered no later than the next succeeding month. Literal compliance with the provision for timing of entries with respect to property amounting to less than $50,000 retired under any one project is not required if an unreasonable amount of recordkeeping and estimating of quantities, original costs and salvage is necessary. The retirement entry shall refer to the continuing property record, or records supplemental thereto, from which the cost was obtained (note also paragraph (d)(3) of this section). Every company shall establish procedures which will ensure compliance with these requirements.

(2) To avoid undue refinement, depreciable telecommunications plant shall be accounted for as follows:

(i) *Retirement units:* This group includes major items of property, a representative list of which shall be prescribed by this Commission. In lieu of the retirement units prescribed with respect to a particular account, a company may, after obtaining specific approval by this Commission, establish and maintain its own list of retirement units for a portion or all of the plant in any such account. For items included on the retirement units list, the original cost of any such items retired shall be credited to the plant account and charged to Account 3100 Accumulated Depreciation, whether or not replaced. The original cost of retirement units installed in place of property retired shall be charged to the applicable telecommunications plant account.

(ii) Minor items: This group includes any part or element of plant which is not designated as a retirement unit. The original cost of a minor item of property when included in the specific or average cost for a retirement unit or units requires no separate credit to the telecommunications plant account when such a minor item is retired. The cost of replacement shall be charged to the account applicable for the cost of repairs of the property. However, if the replacement effects a substantial betterment (the primary aim of which is to make the property affected more useful, of greater durability, of greater capacity or more economical in operation), the excess cost of such a replacement, over the estimated cost at the then current prices of replacement without betterment of the minor items being retired, shall be charged to the applicable telecommunications plant account.

(3) The cost of property to be retired shall be the amount at which property is included in the telecommunications plant accounts. However, when it is impracticable to determine the cost of each item due to the relatively large number or small cost of such items, the average cost of all the items covered by an appropriate subdivision of the account shall be used in determining the cost to be assigned to such items when retired. The method used in determining average cost must give due regard to the quantity, vintage, size and kind of items, the area in which they were installed and their classification in other respects. Average cost may be applied in retirement of such items as poles, wire, cable, cable terminals, conduit and booths. Any company may use average cost of property installed in a year or band of years as approved by the Commission. It should be understood, however, that the use of average costs shall not relieve the company of the requirement for maintaining its continuing property records to show, where practicable, dates of installation and removal for purposes of mortality studies. (See § 32.2000(f) of this subpart, Standard Practices for Establishing and Maintaining Continuing Property Records.)

(4) The accounting for the retirement of property, plant and equipment shall be as provided above except that amounts in Account 2111, Land, and amounts for works of art recorded in Account 2122, Furniture, shall be treated at disposition as a gain or loss and shall be credited or debited to Account 7100, Other operating income and expense, as applicable. If land or artwork is retained by the company and held for sale, the cost shall be charged to Account 2006, Nonoperating plant.

(5) When the telecommunications plant is sold together with traffic associated therewith, the original cost of the property shall be credited to the

applicable plant accounts and the estimated amounts carried with respect thereto in the accumulated depreciation and amortization accounts shall be charged to such accumulated accounts. The difference, if any, between the net amount of such debit and credit items and the consideration received (less commissions and other expenses of making the sale) for the property shall be included in Account 7300, Nonoperating income and expense. The accounting for depreciable telecommunications plant sold without the traffic associated therewith shall be in accordance with the accounting provided in § 32.3100(c).

(e) *Basic property records.* (1) The basic property records are that portion of the total property accounting system which preserves the following detailed information:

(i) The identity, vintage, location and original cost of units of property;

(ii) Original and ongoing transactional data (plant account activity) in terms of such units; and

(iii) Any other specific financial and cost accounting information not properly warranting separate disclosure as an account or subaccount but which is needed to support regulatory, cost, tax, management and other specific accounting information needs and requirements.

(2) The basic property records must be: (i) Subject to internal accounting controls, (ii) auditable, (iii) equal in the aggregate to the total investment reflected in the financial property control accounts as well as the total of the cost allocations supporting the determination of cost-of-service at any particular point in time, and (iv) maintained throughout the life of the property.

(3) The basic property records shall consist of (i) continuing property records and (ii) records supplemental thereto which together reveal clearly, by accounting area, the detailed and systematically summarized information necessary to meet fully the requirements of paragraphs (e)(1) and (e)(2) of this section.

(4) Companies shall establish and maintain basic property records for each class of property recorded in the several plant accounts which comprise the balance sheet Account 2001, Telecommunications Plant In Service, Account 2002, Property Held for Future Telecommunications Use, and Account 2006, Nonoperating Plant.

(5) The company shall notify the Commission of a plan for the basic property record as follows:

(i) Not later than June 30 of the year following that in which it becomes subject to this system of accounts, the company shall file with the Commission two (2) copies of a complete plan of the method to be used in the compilation of a basic property record with respect to each class of property. The plan shall include a list of proposed accounting areas accompanied by description of the boundaries of each area as defined in accordance with the requirements of § 32.2000(f)(1) (i) and (ii) of this subpart. The plan shall also include a list of property record units proposed for use under each regulated plant account. These property record units shall be selected such that the requirements of § 32.2000(f)(2) (i), (ii) and (iii) of this subpart can be satisfied.

(ii) The company shall submit to the Commission one copy of any major proposed changes in its basic property record plan at least 30 days before the effective date of the proposed changes.

(6) The company shall prepare and maintain the basic property record as follows:

(i) Not later than June 30 of the year following that in which the company becomes subject to this system of accounts, begin the preparation of a basic property record.

(ii) Complete within two years of the prescribed beginning date, basic property records for all property as of the end of the preceding calendar year.

(iii) Promptly process in the basic property records all property changes affecting periods subsequent to initial establishment of the basic property record.

(7) The basic property record components (see paragraph (c) of this section) shall be arranged in conformity with the regulated plant accounts prescribed in this section of accounts as follows:

(i) The continuing property records shall be compiled on the basis of original cost (or other book cost consistent

with this system of accounts). The continuing property records shall be maintained as prescribed in § 32.2000(f)(2)(iii) of this subpart in such manner as will meet the following basic objectives:

(A) Provide for the verification of property record units by physical examination.

(B) Provide for accurate accounting for retirements.

(C) Provide data for use in connection with depreciation studies.

(ii) The records supplemental to the continuing property records shall disclose such service designations, usage measurement criteria, apportionment factors, or other data as may be prescribed by the Commission in this part or other parts of its Rules and Regulations. Such data are subject to the same general controls and standards for auditability and support as are all other elements of the basic property records.

(f) *Standard practices for establishing and maintaining continuing property records*—(1) *Accounting area.* (i) The continuing property record, as related to each primary plant account, shall be established and maintained by subaccounts for each accounting area. An accounting area is the smallest territory of the company for which accounting records of investment are maintained for all plant accounts within the area. Areas already established for administrative, accounting, valuation, or other purposes may be adopted for this purpose when appropriate. In no case shall the boundaries of accounting areas cross either State lines or boundaries prescribed by the Commission.

(ii) In determining the limit of each area, consideration shall be given to the quantities of property, construction conditions, operating districts, county and township lines, taxing district boundaries, city limits, and other political or geographical limits, in order that the area adopted may have maximum adaptability, within the confines of practicability, for both the company's purpose and those of Federal, State, and municipal authorities.

(2) *Property record units.* (i) In each of the established accounting areas, the ''property record units'' which are to be maintained in the continuing property record shall be set forth separately, classified by size and type with the amount of original cost (or other appropriate book cost) associated with such units. When a list of property record units has been accepted by the Commission, they shall become the units referred to in this statement of standard practices. Such units shall apply to only the regulated portion of this system of accounts.

(ii) When it is found necessary to revise this list because of the addition of units used in providing new types of service, or new units resulting from improvements in technology, or because of the grouping or elimination of units which no longer merit separate recognition as property record units, one copy of such changes shall be submitted to the Commission. Upon appropriate showing by the company, the Commission may specifically exempt the company from these filing requirements.

(iii) The continuing property record shall reveal the description, location, date of placement, the essential details of construction, and the original cost (note also § 32.2000(f)(3) of this subpart) of the property record units. The continuing property record and other underlying records of construction costs shall be so maintained that, upon retirement of one or more retirement units or of minor items without replacement when not included in the costs of retirement units, the actual cost or a reasonably accurate estimate of the cost of the plant retired can be determined.

(3) *Methods of determining original cost of property record units.* The original cost of the property record units shall be determined by analyses of the construction costs incurred as shown by completion reports and other data, accumulated in the respective construction work orders or authorizations. Costs shall be allocated to and associated with the property record units to facilitate accounting for retirements. The original cost of property record units shall be determined by unit identification or averaging as described in paragraphs (f)(3) (i) and (ii) of this section.

(i) *Unit identification.* Cost shall be identified and maintained by specific

location for property record units contained within certain regulated plant accounts or account groupings such as Land, Buildings, Central Office Assets, Motor Vehicles, garage work equipment included in Account 2114, Tools and other work equipment, and Furniture. In addition, units involved in any unusual or special type of construction shall be recorded by their specific location costs (note also § 32.2000(f)(3)(ii)(B)).

(ii) *Averaging.* (A) Average costs may be developed for plant consisting of a large number of similar units such as terminal equipment, poles, wire, cable, cable terminals, conduit, furniture, and work equipment. Units of similar size and type within each specified accounting area and regulated plant account may be grouped. Each such average cost shall be set forth in the continuing property record of the units with which it is associated.

(B) The averaging of costs permitted under the provisions of the foregoing paragraph is restricted to plant installed in a particular vintage or band of years incurred within an accounting area. This paragraph does not permit the inclusion of the cost of units involved in any unusual or special type of construction. The units involved in such unusual or special type of construction shall be recorded at cost by location.

(4) *Estimates.* In cases where the actual original cost of property cannot be ascertained, such as pricing an inventory for the initial entry of a continuing property record or the pricing of an acquisition for which a continuing property record has not been maintained, the original cost may be estimated. Any estimated original cost shall be consistent with the accounting practices in effect at the time the property was constructed.

(5) *Identification of property record units.* There shall be shown in the continuing property record or in record supplements thereof, a complete description of the property records units in such detail as to identify such units. The description shall include the identification of the work order under which constructed, the year of installation (unless not determinable per § 32.2000(f)(4) of this subpart, specific location of the property within each accounting area in such manner that it can be readily spot-checked for proof of physical existence, the accounting company's number or designation, and any other description used in connection with the determination of the original cost. Descriptions of units of similar size and type shall follow prescribed groupings.

(6) *Reinstalled units.* When units to which average costs are not applied, i.e., specific and fixed location units, are removed or retired and subsequently reinstalled, the date when the unit was first charged to the appropriate plant account shall, when required for adequate service life studies and reasonably accurate retirement accounting, be shown in addition to the date of reinstallation.

(7) *Age and service life of property.* The continuing property record shall disclose the age of existing property and the supporting records shall disclose the service life of property retired. Exceptions from this requirement for any property record unit shall be submitted to the Commission for approval.

(8) *Reference to sources of information.* There shall be shown by appropriate reference the source of all entries. All drawings, computations, and other detailed records which support quantities and costs or estimated costs shall be retained as a part of or in support of the continuing property record.

(9) *Jointly owned property.* (i) With respect to jointly owned property, there shall be shown in the continuing property record or records supplemental thereto:

(A) The identity of all joint owners.

(B) The percentage owned by the accounting company.

(ii) When regulated plant is constructed under arrangements for joint ownership, the amount received by the constructing company from the other joint owner or owners shall be credited as a reduction of the gross cost of the plant in place.

(iii) When a sale of a part interest in regulated plant is made, the fractional interest sold shall be treated as a retirement and the amount received shall be treated as salvage. The continuing property record or records supplemental thereto shall be so maintained

as to identify separately retirements of this nature from physical retirements of jointly owned plant.

(iv) If jointly owned regulated property is substantial in relation to the total of the same kind of regulated property owned wholly by the company, such jointly owned regulated property shall be appropriately segregated in the continuing property record.

(g) *Depreciation accounting*—(1) *Computation of depreciation rates.* (i) Unless otherwise provided by the Commission, either through prior approval or upon prescription by the Commission, depreciation percentage rates shall be computed in conformity with a group plan of accounting for depreciation and shall be such that the loss in service value of the property, except for losses excluded under the definition of depreciation, may be distributed under the straight-line method during the service life of the property.

(ii) In the event any composite percentage rate becomes no longer applicable, revised composite percentage rates shall be computed in accordance with paragraph (g)(1)(i) of this section.

(iii) The company shall keep such records of property and property retirements as will allow the determination of the service life of property which has been retired, or facilitate the determination of service life indications by mortality, turnover, or other appropriate methods. Such records will also allow the determination of the percentage of salvage value and cost of removal for property retired from each class of depreciable plant.

(2) *Depreciation charges.* (i) A separate annual percentage rate for each depreciation category of telecommunications plant shall be used in computing depreciation charges.

(ii) Companies, upon receiving prior approval from this Commission, or, upon prescription by this Commission, shall apply such depreciation rate, except where provisions of paragraph (g)(2)(iv) of this section apply, as will ratably distribute on a straight line basis the difference between the net book cost of a class or subclass of plant and its estimated net salvage during the known or estimated remaining service life of the plant.

(iii) Charges for currently accruing depreciation shall be made monthly to the appropriate depreciation accounts, and corresponding credits shall be made to the appropriate depreciation reserve accounts. Current monthly charges shall normally be computed by the application of one-twelfth of the annual depreciation rate to the monthly average balance of the associated category of plant. The average monthly balance shall be computed using the balance as of the first and last days of the current month.

(iv) In certain circumstances and upon prior approval of this Commission, monthly charges may be determined in total or in part through the use of other methods whereby selected plant balances or portions thereof are ratably distributed over periods prescribed by this Commission. Such circumstances could include but not be limited to factors such as the existence of reserve deficiencies or surpluses, types of plant that will be completely retired in the near future, and changes in the accounting for plant. Where alternative methods have been used in accordance with this subparagraph, such amounts shall be applied separately or in combination with rates determined in accordance with paragraph (g)(2)(ii) of this section.

(3) *Acquired depreciable plant.* When acquired depreciable plant carried in Account 1438, Deferred maintenance, retirements and other deferred charges, is distributed to the appropriate plant accounts, adjusting entries shall be made covering the depreciation charges applicable to such plant for the period during which it was carried in Account 1438.

(4) Plant Retired for Nonrecurring Factors not Recognized in Depreciation Rates.

(i) A retirement will be considered as nonrecurring (extraordinary) only if the following criteria are met:

(A) The impending retirement was not adequately considered in setting past depreciation rates.

(B) The charging of the retirement against the reserve will unduly deplete that reserve.

(C) The retirement is unusual such that similar retirements are not likely to recur in the future.

(5) Upon direction or approval from this Commission, the company shall credit Account 3100, Accumulated Depreciation, and charge Account 1438, Deferred Maintenance, retirements and other deferred charges, with the unprovided-for loss in service value. Such amounts shall be distributed from Account 1438 to Account 6561, Depreciation expense—Telecommunications plant in service, or Account 6562, Depreciation expense—property held for future telecommunications use, over such period as this Commission may direct or approve.

(h) *Amortization accounting.* (1) Unless otherwise provided by this Commission, either through approval, or upon prescription by this Commission, amortization shall be computed on the straight-line method, i.e., equal annual amounts shall be applied. The cost of each type asset shall be amortized on the basis the estimated life of that asset and shall not be written off in the accounting period in which the asset is acquired. A reasonable estimate of the useful life may be based on the upper or lower limits even though a fixed existence is not determinable. However, the period of amortization shall not exceed forty years.

(2) In the event any estimated useful life becomes no longer applicable, a revised estimated useful life shall be determined in accordance with paragraph (h)(1) of this section.

(3) Amortization charges shall be made monthly to the appropriate amortization expense accounts and corresponding credits shall be made to accounts 2005, 2682, 2690, and 3410, as appropriate. Monthly charges shall be computed by the application of one-twelfth to the annual amortization amount.

(4) The company shall keep such records as will allow the determination of the useful life of the asset.

(i) [Reserved]

(j) Plant Accounts to be Maintained by Class A and Class B telephone companies as indicated:

Account title	Class A account	Class B account
Regulated plant		
Property, plant and equipment:		
Telecommunications plant in service	[1] 2001	[1] 2001
Property held for future telecommunications use	2002	2002
Telecommunications plant under construction-short term	2003	2003
Telecommunications plant adjustment	2005	2005
Nonoperating plant	2006	2006
Goodwill	2007	2007
Telecommunications plant in service (TPIS)		
TPIS—General support assets:		
Land and support assets	.....	2110
Land	2111	
Motor vehicles	2112	
Aircraft	2113	.....
Tools and other work equipment	2114	
Buildings	2121	
Furniture	2122	
Office equipment	2123	
General purpose computers	2124	
TPIS—Central Office assets:		
Central Office—switching	.....	2210
Non-digital switching	2211	
Digital electronic switching	2212	
Operator systems	2220	2220
Central Office—transmission	.....	2230
Radio systems	2231	
Circuit equipment	2232	
TPIS—Information origination/termination assets:		
Information origination termination	.....	2310
Station apparatus	2311	
Customer premises wiring	2321	
Large private branch exchanges	2341	
Public telephone terminal equipment	2351	
Other terminal equipment	2362	
TPIS—Cable and wire facilities assets:		
Cable and wire facilities	.....	2410
Poles	2411	

Account title	Class A account	Class B account
Aerial cable	2421	
Underground cable	2422	
Buried cable	2423	
Submarine and deep sea cable	2424	
Intrabuilding network cable	2426	
Aerial wire	2431	
Conduit systems	2441	
TPIS—Amortizable assets:		
Amortizable tangible assets	.....	2680
Capital leases	2681	
Leasehold improvements	2682	
Intangibles	2690	2690

[1] Balance sheet summary account only.

[51 FR 43499, Dec. 2, 1986, as amended at 52 FR 7580, Mar. 12, 1987; 53 FR 30059, Aug. 10, 1988; 59 FR 46930, Sept. 13, 1994; 60 FR 12138, Mar. 6, 1995; 62 FR 39451, July 23, 1997; 64 FR 50007, Sept. 15, 1999; 67 FR 5683, Feb. 6, 2002; 69 FR 53648, Sept. 2, 2004]

§ 32.2001 Telecommunications plant in service.

This account shall include the original cost of the investment included in Accounts 2110 through 2690.

§ 32.2002 Property held for future telecommunications use.

(a) This account shall include the original cost of property owned and held for no longer than two years under a definite plan for use in telecommunications service. If at the end of two years the property is not in service, the original cost of the property may remain in this account so long as the carrier excludes the original cost and associated depreciation from its ratebase and ratemaking considerations and report those amounts in reports filed with the Commission pursuant to 43.21(e)(1) and 43.21(e)(2) of this chapter.

(b) Subsidiary records shall be maintained to show the character of the amounts carried in this account.

[65 FR 16334, Mar. 28, 2000]

§ 32.2003 Telecommunications plant under construction.

(a) This account shall include the original cost of construction projects (note also § 32.2000(c)) of this part and the cost of software development projects that are not yet ready for their intended use.

(b) There may be charged directly to the appropriate plant accounts the cost of any construction project which is estimated to be completed and ready for service within two months from the date on which the project was begun. There may also be charged directly to the plant accounts the cost of any construction project for which the gross additions to plant are estimated to amount to less than $100,000.

(c) If a construction project has been suspended for six months or more, the cost of the project included in this account may remain in this account so long as the carrier excludes the original cost and associated depreciation from its ratebase and ratemaking considerations and reports those amounts in reports filed with the Commission pursuant to §§ 43.21(e)(1) and 43.21(e)(2) of this chapter. If a project is abandoned, the cost included in this account shall be charged to Account 7300, Nonoperating income and expense.

(d) When any telecommunications plant, the cost of which has been included in this account, is completed ready for service, the cost thereof shall be credited to this account and charged to the appropriate telecommunications plant or other accounts.

[51 FR 43499, Dec. 2, 1986, as amended at 60 FR 12138, Mar. 6, 1995; 64 FR 50007, Sept. 15, 1999; 65 FR 16335, Mar. 28, 2000; 67 FR 5685, Feb. 6, 2002]

§ 32.2005 Telecommunications plant adjustment.

(a) This account shall include amounts determined in accordance with § 32.2000(b) of this subpart representing the difference between (1) the

fair market value of the telecommunications plant acquired, plus preliminary expenses incurred in connection with the acquisition; and (2) the original cost of such plant, governmental franchises and similar rights acquired, less the amounts of reserve requirements for depreciation and amortization of the property acquired. If the actual original cost is not known, the entries in this account shall be based upon an estimate of such costs.

(b) The amounts recorded in this account with respect to each property acquisition (except land and artworks) shall be disposed of, written off, or provision shall be made for the amortization thereof, as follows:

(1) Debit amounts may be charged in whole or in part, or amortized over a reasonable period through charges to Account 7300, Nonoperating income and expense, without further direction or approval by this Commission. When specifically approved by this Commission, or when the provisions of paragraph (b)(3) of this section apply, debit amounts shall be amortized to Account 6565, Amortization expense—other.

(2) Credit amounts shall be disposed of in such manner as this Commission may approve or direct, except for credit amounts referred to in paragraph (b)(4) of this section.

(3) The amortization associated with the costs recorded in the Telecommunications plant adjustment account will be charged or credited, as appropriate, directly to this asset account, leaving a balance representing the unamortized cost.

(4) Within one year from the date of inclusion in this account of a debit or credit amount with respect to a current acquisition, the company may dispose of the total amount from an acquisition of telephone plant by a lump-sum charge or credit, as appropriate, to Account 6565 without further approval of this Commission, provided that such amount does not exceed $100,000 and that the plant was not acquired from an affiliated company.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5685, Feb. 6, 2002; 69 FR 53648, Sept. 2, 2004]

§ 32.2006 Nonoperating plant.

(a) This account shall include the company's investment in regulated property which is not includable in the plant accounts as operating telecommunications plant. It shall include the company's investment in telecommunications property held for sale. (Note also Account 1406, Nonregulated Investments.)

(b) Subsidiary records shall be maintained to show the character of the amounts carried in this account.

§ 32.2007 Goodwill.

(a) This account shall include any portion of the plant purchase price that cannot be assigned to specifically identifiable property acquired and such amount should be identified as ''goodwill''. Such amounts included in this account shall be amortized to Account 7300, Nonoperating income and expense, on a straight line basis over the remaining life of the acquired plant, not to exceed 40 years.

(b) The amounts included in this account shall be maintained to show the nature of each amount.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5686, Feb. 6, 2002]

§ 32.2110 Land and support assets.

This account shall be used by Class B companies to record the original cost of land and support assets of the type and character required of Class A companies in Accounts 2111 through 2124.

§ 32.2111 Land.

(a) This account shall include the original cost of all land held in fee and of easements, and similar rights in land having a term of more than one year used for purposes other than the location of outside plant (see Accounts 2411 through 2441) or externally mounted central office equipment (see Accounts 2211 and 2212). It shall also include special assessments upon land for the construction of public improvements.

(b) When land, together with buildings thereon, is acquired, the original cost shall be fairly apportioned between the land and the buildings and accounted for accordingly. If the plan

of acquisition contemplates the removal of buildings, the total cost of the land and buildings shall be accounted for as the cost of the land, and the salvage value of the buildings when disposed of shall be deducted from the cost of the land so determined.

(c) Annual or more frequent payments for use of land shall be recorded in the rent subsidiary record category for Account 6121, Land and Building Expense.

(d) When land is acquired for which there is not a definite plan for its use in telecommunications service, its costs shall be included in Account 2006, Nonoperating Plant.

(e) When land is acquired in excess of that required for telecommunications purposes, the cost of such excess land shall be included in Account 2006.

(f) Installments of assessments for public improvement, including interest, if any, which are deferred without option to the company shall be included in this account only as they become due and payable. Interest on assessments which are not paid when due shall be included in Account 7500, Interest and related items.

(g) When land is purchased for immediate use in a construction project, its cost shall be included in Account 2003, Telecommunications plant under construction, until such time as the project involved is completed and ready for service.

(h) The original cost of leaseholds, easements, rights of way, and similar rights in land having a term of more than one year and not includable in Account 2111 shall be included in the accounts for outside plant or externally mounted central office equipment in connection with which the rights were acquired.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5686, Feb. 6, 2002]

§ 32.2112 Motor vehicles.

This account shall include the original cost of motor vehicles of the type which are designed and routinely licensed to operate on public streets and highways.

§ 32.2113 Aircraft.

This account shall include the original cost of aircraft and any associated equipment and furnishings installed as an integral part of the aircraft.

§ 32.2114 Tools and other work equipment.

This account shall include the original cost of special purpose vehicles and the original cost of tools and equipment used to maintain special purpose vehicles and items included in Accounts 2112 and 2113. This account shall also include the original cost of power-operated equipment, general purpose tools, and other items of work equipment.

[64 FR 50007, Sept. 15, 1999]

§ 32.2121 Buildings.

(a) This account shall include the original cost of buildings, and the cost of all permanent fixtures, machinery, appurtenances and appliances installed as a part thereof. It shall include costs incident to the construction or purchase of a building and to securing possession and title.

(b) When land, together with the buildings thereon, is acquired, the original cost shall be fairly apportioned between the land and buildings, and the amount applicable to the buildings shall be included in this account. The amount applicable to the land shall be included in Account 2111, Land.

(c) This account shall not include the cost of any telephone equipment or wiring apparatus for generating or controlling electricity for operating the telephone system.

§ 32.2122 Furniture.

This account shall include the original cost of furniture in offices, storerooms, shops, and all other quarters. This account shall also include the cost of objects which possess aesthetic value, are of original or limited edition, and do not have a determinable useful life. The cost of any furniture attached to and constituting a part of a building shall be charged to account 2121, Buildings.

§ 32.2123 Office equipment.

This account shall include the original cost of office equipment in offices, shops and all other quarters. The cost

of any equipment attached to and constituting a part of a building shall be charged to Account 2121, Buildings.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5686, Feb. 6, 2002]

§ 32.2124 General purpose computers.

(a) This account shall include the original cost of computers and peripheral devices which are designed to perform general administrative information processing activities.

(b) Administrative information processing includes but is not limited to activities such as the preparation of financial, statistical, or other business analytical reports; preparation of payroll, customer bills, and cash management reports, and other records and reports not specifically designed for testing, diagnosis, maintenance or control of the telecommunications network facilities.

(c) [Reserved]

(d) This account does not include the cost of computers and their associated peripheral devices associated with switching, network signaling, network operations, or other specific telecommunications plant. Such computers and peripherals shall be classified to the appropriate switching, network signaling, network expense, or other plant account.

[51 FR 43499, Dec. 2, 1986, as amended at 64 FR 50007, Sept. 15, 1999]

§ 32.2210 Central office—switching.

This account shall be used by Class B companies to record the original cost of switching assets of the type and character required of Class A companies in Accounts 2211 through 2212.

[67 FR 5686, Feb. 6, 2002]

§ 32.2211 Non-digital switching.

(a) This account shall include:

(1) Original cost of stored program control analog circuit-switching and associated equipment.

(2) Cost of remote analog electronic circuit switches.

(3) Original cost of non-electronic circuit-switching equipment such as Step-by-Step, Crossbar, and Other Electro-Mechanical Switching.

(b) Switching plant excludes switchboards which perform an operator assistance function and equipment which is an integral part thereof. It does not exclude equipment used solely for the recording of calling telephone numbers in connection with customer dialed charged traffic, dial tandem switchboards and special service switchboards used in conjunction with private line service; such equipment shall be classified to the particular switch that if serves.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5686, Feb. 6, 2002]

§ 32.2212 Digital electronic switching.

(a) This account shall include the original cost of stored program control digital switches and their associated equipment. Included in this account are digital switches which utilize either dedicated or non-dedicated circuits. This account shall also include the cost of remote digital electronic switches. The investment in digital electronic switching equipment shall be maintained in the following subaccounts: 2212.1 Circuit and 2212.2 Packet.

(b) This subaccount 2212.1 Circuit shall include the original cost of digital electronic switching equipment used to provide circuit switching. Circuit switching is a method of routing traffic through a switching center, from local users or from other switching centers, whereby a connection is established between the calling and called stations until the connection is released by the called or calling station.

(c) This subaccount 2212.2 Packet shall include the original cost of digital electronic switching equipment used to provide packet switching. Packet switching is the process of routing and transferring information by means of addressed packets so that a channel is occupied during the transmission of the packet only, and upon completion of the transmission the channel is made available for the transfer of other traffic.

(d) Digital electronic switching equipment used to provide both circuit and packet switching shall be recorded in the subaccounts 2212.1 Circuit and 2212.2 Packet based upon its predominant use.

(e) Switching plant excludes switchboards which perform an operator assistance function and equipment which is an integral part thereof. It does not exclude equipment used solely for the recording of calling telephone numbers in connection with customer dialed charged traffic, dial tandem switchboards and special service switchboards used in conjunction with private line service; such equipment shall be classified to the particular switch that it serves.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5686, Feb. 6, 2002]

§ 32.2220 Operator systems.

(a) This account shall include the original cost of those items of equipment used to assist subscribers in utilizing the network and equipment used in the provision of directory assistance, call intercept, and other operator assisted call completion activities.

(b) This account does not include equipment used solely for the recording of calling telephone numbers in connection with customer dialed charged traffic, dial tandem switchboards and special service switchboards used in conjunction with private line service; such equipment shall be classfied to the particular switch that it serves.

[51 FR 43499, Dec. 2, 1986, as amended at 59 FR 46930, Sept. 13, 1994]

§ 32.2230 Central office—transmission.

This account shall be used by Class B companies to record the original cost of radio systems and circuit equipment of the type and character required of Class A companies in Accounts 2231 and 2232.

§ 32.2231 Radio systems.

(a) This account shall include the original cost of ownership of radio transmitters and receivers. This account shall include the original cost of ownership interest in satellites (including land-side spares), other spare parts, material and supplies. It shall include launch insurance and other satellite launch costs. This account shall also include the original cost of earth stations and spare parts, material or supplies therefor.

(b) This account shall also include the original cost of radio equipment used to provide radio communication channels. Radio equipment is that equipment which is used for the generation, amplification, propagation, reception, modulation, and demodulation of radio waves in free space over which communication channels can be provided. This account shall also include the associated carrier and auxiliary equipment and patch bay equipment which is an integral part of the radio equipment. Such equipment may be located in central office building, terminal room, or repeater stations or may be mounted on towers, masts, or other supports.

[67 FR 5686, Feb. 6, 2002]

§ 32.2232 Circuit equipment.

(a) This account shall include the original cost of equipment which is used to reduce the number of physical pairs otherwise required to serve a given number of subscribers by utilizing carrier systems, concentration stages or combinations of both. It shall include equipment that provides for simultaneous use of a number of interoffice channels on a single transmission path. This account shall also include equipment which is used for the amplification, modulation, regeneration, circuit patching, balancing or control of signals transmitted over interoffice communications transmission channels. This account shall include equipment which utilizes the message path to carry signaling information or which utilizes separate channels between switching offices to transmit signaling information independent of the subscribers' communication paths or transmission channels. This account shall also include the original cost of associated material used in the construction of such plant. Circuit equipment may be located in central offices, in manholes, on poles, in cabinets or huts, or at other company locations. The investment in circuit equipment shall be maintained in the following subaccounts: 2232.1 Electronic and 2232.2 Optical.

(b) This subaccount 2232.1 Electronic shall include the original cost of electronic circuit equipment.

(c) This subaccount 2232.2 Optical shall include the original cost of optical circuit equipment.

(d) Circuit equipment that converts electronic signals to optical signals or optical signals to electronic signals shall be categorized as electronic.

(e) This account excludes carrier and auxiliary equipment and patch bays which are includable in Account 2231.2, Other Radio Facilities. This account also excludes such equipment which is an integral component of a major unit which is classifiable to other accounts.

(f) Subsidiary record categories shall be maintained in order that the company may separately report the amounts contained herein that relate to digital and analog. Such subsidiary record categories shall be reported as required by part 43 of this Commission's Rules and Regulations.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5686, Feb. 6, 2002]

§ 32.2310 Information origination/termination.

This account shall be used by Class B companies to record the original cost of information origination/termination equipment of the type and character required of Class A companies in Accounts 2311 through 2362.

§ 32.2311 Station apparatus.

(a) This account shall include the original cost of station apparatus, including teletypewriter equipment, telephone and miscellaneous equipment, small private branch exchanges and radio equipment (excluding mobile), installed for customer's use. Items included in this account shall remain herein until finally disposed of or until used in such manner as to warrant inclusion in other accounts.

(b) Each company shall prepare a list of station apparatus which shall be used as its list of disposition units for this account, the cost of which when finally disposed of shall be credited to this account and charged to Account 3100, Accumulated Depreciation.

(c) The cost of cross-connection boxes, distributing frames or other distribution points which are installed to terminate intrabuilding network cable shall be charged to Account 2426, Intrabuilding Network Cable.

(d) Operator head sets and transmitters in central offices and at private branch exchanges, and test sets such as those used by wire chiefs, outside plant technicians, and others, shall be included in Account 2114, Tools and other work equipment, Account 2220, Operator systems, or Account 2341, Large Private Branch Exchanges, as appropriate.

(e) Station apparatus for company official use shall be included in Account 2123, Office Equipment.

(f) Periodic asset verification, as prescribed by generally accepted accounting principles, shall be taken of all station apparatus in stock that are included in this account. The number of such station apparatus items as determined by this verification together with the number of all other station apparatus items included in this account, shall be compared with the corresponding number of station apparatus items as shown by the respective control records. The original cost of any unreconciled differences thereby disclosed shall be adjusted through Account 3100, Accumulated Depreciation. Appropriate verifications shall be made at suitable intervals and necessary adjustments between this account and Account 3100 shall be made for all station apparatus included in this account.

(g) Items of station apparatus in stock for which no further use in the ordinary conduct of the business is contemplated, but which as a precautionary measure are held for possible future contingencies instead of being discarded shall be excluded from this account and included in Account 1220, Inventories.

(h) Embedded CPE is that equipment or inventory which was tariffed or otherwise subject to the jurisdictional separations process as of January 1, 1983.

[51 FR 43499, Dec. 2, 1986, as amended at 52 FR 6561, Mar. 4, 1987; 52 FR 39535, Oct. 22, 1987; 59 FR 46930, Sept. 13, 1994; 64 FR 50007, Sept. 15, 1999; 67 FR 5687, Feb. 6, 2002]

§ 32.2341 Large private branch exchanges.

(a) This account shall include the original cost, including the cost of installation, of multiple manual private branch exchanges and of dial system

private branch exchanges of types designed to accommodate 100 or more lines or which can normally be expanded to 100 or more lines, installed for customers' use. This account shall also include the original cost of other large installations of station equipment: (1) Which do not constitute stations, (2) which require special or individualized treatment because of their complexity, special design, or other distinctive characteristics, and (3) for which individual or other specialized cost records are appropriate. (Note also Account 2311, Station Apparatus.)

(b) The cost of intrabuilding network cables including their associated cross-connection boxes, terminals, distributing frames, etc., is chargeable to Account 2426, Intrabuilding Network Cable.

(c) The cost of outside plant, whether or not on private property, used with intrabuilding, network cable shall be charged to the appropriate outside plant accounts.

(d)–(e) [Reserved]

(f) Private branch exchanges for company official use shall be included in Account 2123, Office Equipment.

(g) Embedded CPE is that equipment or inventory which is tariffed or otherwise subject to the jurisdictional separations process as of January 1, 1983. Inventories of large private branch exchanges equipment are included in Account 1220, Inventories.

[51 FR 43499, Dec. 2, 1986, as amended at 52 FR 6562, Mar. 4, 1987; 52 FR 39535, Oct. 22, 1987; 59 FR 46930, Sept. 13, 1994]

§ 32.2351 Public telephone terminal equipment.

(a) This account shall include the original cost of coinless, coin-operated (including public and semi-public), credit card and pay telephone installed for use by the public.

(b) This account shall also include the original cost of operating spares that are required to provide a continuity of service for public telephones. The operating spares shall not exceed six months supply in terms of turnover and be available to installers from locations in reasonable proximity to the location of the installed equipment.

(c) The original cost of installing public telephone equipment shall not include the labor and minor materials costs of installing the public telephone equipment or premises wiring. These costs as well as the cost of replacing a public telephone shall be charged to Account 6351 Public Telephone Terminal Equipment Expense. The labor and minor materials costs of removal of public telephones will also be charged to Account 6351.

[51 FR 43499, Dec. 2, 1986, as amended at 52 FR 29019, Aug. 5, 1987]

§ 32.2362 Other terminal equipment.

(a) This account shall include the original cost of other Non-CPE terminal equipment not specifically provided for elsewhere and items such as specialized communications equipment provided to meet the needs of the disabled, over-voltage protection equipment, multiplexing equipment to deliver multiple channels to customers, etc.

(b) Each company shall prepare a list of other terminal equipment which shall be used as its list of retirement units for this account, the cost of which when finally disposed of shall be credited to this account and charged to Account 3100, Accumulated Depreciation.

§ 32.2410 Cable and wire facilities.

This account shall be used by Class B companies to record the original cost of cable and wire facilities of the type and character required of Class A companies in Accounts 2411 through 2441.

§ 32.2411 Poles.

This account shall include the original cost of poles, crossarms, guys and other material used in the construction of pole lines and shall include the cost of towers when not associated with buildings. This account shall also include the cost of clearing pole line routes and of tree trimming but shall exclude the cost of maintaining previously cleared routes.

§ 32.2421 Aerial cable.

(a) This account shall include the original cost of aerial cable and of drop and block wires served by such cable or aerial wire as well as the cost of other material used in construction of such

plant. Subsidiary record categories, as defined below, are to be maintained for nonmetallic aerial cable and metallic aerial cable.

(1) *Nonmetallic cable.* This subsidiary record category shall include the original cost of optical fiber cable and other associated material used in constructing a physical path for the transmission of telecommunications signals.

(2) *Metallic cable.* This subsidiary record category shall include the original cost of single or paired conductor cable, wire and other associated material used in constructing a physical path for the transmission of telecommunications signals.

(b) The cost of permits and privileges for the construction of cable and wire facilities shall be included in the account chargeable with such construction.

§ 32.2422 Underground cable.

(a) This account shall include the original cost of underground cable installed in conduit and of other material used in the construction of such plant. Subsidiary record categories, as defined below, are to be maintained for nonmetallic underground cable and metallic underground cable.

(1) *Nonmetallic cable.* This subsidiary record category shall include the original cost of optical fiber cable and other associated material used in constructing a physical path for the transmission of telecommunications signals.

(2) *Metallic cable.* This subsidiary record category shall include the original cost of single or paired conductor cable, wire and other associated material used in constructing a physical path for the transmission of telecommunications signals.

(b) The cost of pumping water out of manholes and of cleaning manholes and ducts in connection with construction work and the cost of permits and privileges for the construction of cable and wire facilities shall be included in the account chargeable with such construction.

(c) The cost of drop and block wires served by underground cable shall be included in Account 2423, Buried Cable.

(d) The cost of cables leading from the main distributing frame or equivalent to central office equipment shall be included in the appropriate switching, transmission or other operations asset account.

§ 32.2423 Buried cable.

(a) This account shall include the original cost of buried cable as well as the cost of other material used in the construction of such plant. This account shall also include the cost of trenching for and burying cable run in conduit not classifiable to Account 2441, Conduit Systems. Subsidiary record categories, as defined below, are to be maintained for nonmetallic buried cable and metallic buried cable.

(1) *Nonmetallic cable.* This subsidiary record category shall include the original cost of optical fiber cable and other associated material used in constructing a physical path for the transmission of telecommunications signals.

(2) *Metallic cable.* This subsidiary record category shall include the original cost of single or paired conductor cable, wire and other associated material used in constructing a physical path for the transmission of telecommunications signals.

(b) The cost of pumping water out of manholes and of cleaning manholes and ducts in connection with construction work and the cost of permits and privileges for the construction of cable and wire facilities shall be included in the account chargeable with such construction.

§ 32.2424 Submarine & deep sea cable.

(a) This account shall include the original cost of submarine cable and deep sea cable and other material used in the construction of such plant. Subsidiary record categories, as defined below, are to be maintained for nonmetallic submarine and deep sea cable and metallic submarine and deep sea cable.

(1) *Nonmetallic cable.* This subsidiary record category shall include the original cost of optical fiber cable and other associated material used in constructing a physical path for the transmission of telecommunications signals.

(2) *Metallic cable.* This subsidiary record category shall include the original cost of single or paired conductor cable, wire and other associated material used in constructing a physical

path for the transmission of telecommunications signals.

(b) The cost of permits and privileges for the construction of cable and wire facilities shall be included in the account chargeable with such construction.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5687, Feb. 6, 2002]

§ 32.2426 Intrabuilding network cable.

(a) This account shall include the original cost of cables and wires located on the company's side of the demarcation point or standard network interface inside subscribers' buildings or between buildings on one customer's same premises. Intrabuilding network cables are used to distribute network access facilities to equipment rooms, cross-connection or other distribution points at which connection is made with customer premises wiring. Subsidiary record categories, as defined below, are to be maintained for nonmetallic intrabuilding network cable and metallic intrabuilding network cable.

(1) *Nonmetallic cable.* This subsidiary record category shall include the original cost of optical fiber cable and other associated material used in constructing a physical path for the transmission of telecommunications signals.

(2) *Metallic cable.* This subsidiary record category shall include the original cost of single or paired conductor cable, wire and other associated material used in constructing a physical path for the transmission of telecommunications signals.

(b) The cost of pumping water out of manholes and of cleaning manholes and ducts in connection with construction work and the cost of permits and privileges for the construction of cable and wire facilities shall be included in the account chargeable with such construction.

(c) Intrabuilding network cable does not include the cost of cables or wires which are classifiable as network terminating wire, nor the cables or wires from the demarcation point or standard network interface to subscribers' stations.

§ 32.2431 Aerial wire.

(a) This account shall include the original cost of bare line wire and other material used in the construction of such plant.

(b) The cost of permits and privileges for the construction of cable and wire facilities shall be included in the account chargeable with such construction.

(c) The cost of drop and block wires served by aerial wire shall be included in Account 2421, Aerial Cable.

§ 32.2441 Conduit systems.

(a) This account shall include the original cost of conduit, whether underground, in tunnels or on bridges, which is reusable in place. It shall also include the cost of opening trenches and of any repaving necessary in the construction of conduit plant.

(b) The cost of pumping water out of manholes and of cleaning manholes and ducts in connection with construction work and the cost of permits and privileges for the construction of cable and wire facilities shall be included in the account chargeable with such construction.

(c) The cost of protective covering for buried cable shall be charged to Account 2423, Buried Cable, as appropriate, unless such protective covering is reusable in place. The amounts thus charged shall be included in the nonmetallic buried cable or metallic buried cable subsidiary record category, as appropriate.

(d) The cost of pipes or other protective covering for underground drop and block wires shall be included in Account 2421, Aerial Cable, or Account 2423, Buried Cable, as appropriate. The amounts thus charged shall be included in the nonmetallic or metallic subsidiary record category, as appropriate.

§ 32.2680 Amortizable tangible assets.

This account shall be used by Class B carriers to record amounts for property acquired under capital leases and the original cost of leasehold improvements of the type of character required of Class A companies in Accounts 2681 and 2682.

§ 32.2681 Capital leases.

(a) This account shall include all property acquired under a capital lease. A lease qualifies as a capital lease when one or more of the following criteria is met:

(1) By the end of the lease term, ownership of the leased property is transferred to the leasee.

(2) The lease contains a bargain purchase option.

(3) The lease term is substantially (75% or more) equal to the estimated useful life of the leased property. However, if the beginning of the lease term falls within the last 25% of the total estimated economic life of the leased property, including earlier years of use, this criterion shall not be used for purposes of classifying the lease.

(4) At the inception of the lease, the present value of the minimum lease payments, excluding that portion of the payments representing executory costs to be paid by the lessor, including any profit thereon, equals or exceeds 90% or more of the fair value of the leased property. However, if the beginning of the lease term falls within the last 25% of the total estimated economic life of the leased property, including earlier years of use, this criterion shall not be used for purposes of classifying the lease.

(b) All other leases are operating leases.

(c) The amounts recorded in this account at the inception of a capital lease shall be equal to the original cost, if known, or to the present value not to exceed fair value, at the beginning of the lease term, of minimum lease payments during the lease term, excluding that portion of the payments representing executory costs to be paid by the lessor, together with any profit thereon.

§ 32.2682 Leasehold improvements.

(a) This account shall include the original cost of leasehold improvements made to telecommunications plant held under a capital or operating lease, which are subject to amortization treatment. This account shall also include those improvements which will revert to the lessor.

(b) Improvements to leased telecommunications plant which are of a relatively minor cost or short life or for which the period of the lease is one year or less shall be charged to the account chargeable with the cost of repairs to such plant.

(c) Amounts contained in this account shall be amortized over the term of the related lease. For Class A companies, except mid-sized incumbent local exchange carriers, the amortization associated with the costs recorded in the Leasehold improvement account will be credited directly to this asset account, leaving a balance representing the unamortized cost.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5687, Feb. 6, 2002; 69 FR 53649, Sept. 2, 2004]

§ 32.2690 Intangibles.

(a) This account shall include the cost of organizing and incorporating the company, the original cost of government franchises, the original cost of patent rights, and other intangible property having a life of more than one year and used in connection with the company's telecommunications operations.

(b) Class A companies, except mid-sized incumbent local exchange carriers, shall maintain subsidiary records for general purpose computer software and for network software. Subsidiary records for this account shall also include a description of each class of all other tangible property.

(c) The cost of other intangible assets, not including software, having a life of one year or less shall be charged directly to Account 6564, Amortization expense—intangible. Such intangibles acquired at small cost may also be charged to Account 6564, irrespective of their term of life. The cost of software having a life of one year or less shall be charged directly to the applicable expense account with which the software is associated.

(d) The amortization associated with the costs recorded in the Intangibles account will be credited directly to this asset account, leaving a balance representing the unamortized cost.

(e) This account shall not include any discounts on securities issued, nor shall it include costs incident to negotiating loans, selling bonds or other

evidences of debt, or expenses in connection with the authorization, issuance, sale or resale of capital stock.

(f) When charges are made to this account for expenses incurred in mergers, consolidations, or reorganizations, amounts previously included in this account on the books of the various companies concerned shall not be carried over.

(g) Franchise taxes payable annually or more frequently shall be charged to Account 7240, Operating other taxes.

(h) This account shall not include the cost of plant, material and supplies, or equipment furnished to municipalities or other governmental authorities when given other than as initial consideration for franchises or similar rights. (Note also Account 6720, General & administrative).

(i) This account shall not include the original cost of easements, rights of way, and similar rights in land having a term of more than one year. Such amounts shall be recorded in Account 2111, Land, or in the appropriate outside plant account (see Accounts 2411 through 2441), or in the appropriate central office account (see Accounts 2211 through 2232).

[67 FR 5687, Feb. 6, 2002, as amended at 69 FR 53649, Sept. 2, 2004]

§ 32.3000 Instructions for balance sheet accounts—Depreciation and amortization.

(a) Depreciation and Amortization Subsidiary Records:

(1) Subsidiary record categories shall be maintained for each class of depreciable telecommunications plant in Account 3100 for which there is a prescribed depreciation rate. (See also § 32.2000(g)(1)(iii) of this subpart.)

(2) Subsidiary records shall be maintained for Accounts 2005, 2682, 2690, and 3410 in accordance with § 32.2000(h)(4).

(b) Depreciation and Amortization Accounts to be Maintained by Class A and Class B telephone companies, as indicated.

Account title	Class A account	Class B account
Depreciation and amortization:		
Accumulated depreciation	3100	3100
Accumulated depreciation—Held for future telecommunications use	3200	3200
Accumulated depreciation—Nonoperating	3300	3300
Accumulated depreciation—Tangible	.....	3400
Accumulated depreciation—Capitalized leases	3410	

[51 FR 43499, Dec. 2, 1986, as amended at 59 FR 46930, Sept. 13, 1994; 67 FR 5687, Feb. 6, 2002; 69 FR 53649, Sept. 2, 2004]

§ 32.3100 Accumulated depreciation.

(a) This account shall include the accumulated depreciation associated with the investment contained in Account 2001, Telecommunications Plant in Service.

(b) This account shall be credited with depreciation amounts concurrently charged to Account 6561, Depreciation expense—telecommunications plant in service. (Note also Account 3300, Accumulated depreciation—nonoperating.)

(c) At the time of retirement of depreciable operating telecommunications plant, this account shall be charged with the original cost of the property retired plus the cost of removal and credited with the salvage value and any insurance proceeds recovered.

(d) This account shall be credited with amounts charged to Account 1438, Deferred maintenance, retirements, and other deferred charges, as provided in § 32.2000(g)(4) of this subpart. This account shall be credited with amounts charged to Account 6561 with respect to other than relatively minor losses in service values suffered through terminations of service when charges for such terminations are made to recover the losses.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5687, Feb. 6, 2002; 69 FR 53649, Sept. 2, 2004]

§ 32.3200 Accumulated depreciation—held for future telecommunications use.

(a) This account shall include the accumulated depreciation associated with the investment contained in Account 2002, Property Held for Future Telecommunications Use.

(b) This account shall be credited with amounts concurrently charged to Account 6562, Depreciation expense—property held for future telecommunications use.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5688, Feb. 6, 2002; 69 FR 53649, Sept. 2, 2004]

§ 32.3300 Accumulated depreciation—nonoperating.

(a) This account shall include the accumulated amortization and depreciation associated with the investment contained in Account 2006, Nonoperating Plant.

(b) This account shall be credited with amortization and depreciation amounts concurrently charged to Account 7300, Nonoperating income and expense.

(c) When nonoperating plant not previously used in telecommunications service is disposed of, this account shall be charged with the amount previously credited hereto with respect to such property and the book cost of the property so retired less the amount chargeable to this account and less the value of the salvage recovered or the proceeds from the sale of the property shall be included in Account 7300, Nonoperating income and expense. In case the property had been used in telecommunications service previous to its inclusion in Account 2006, Nonoperating Plant, the amount accrued for depreciation thereon after its retirement from telecommunications service shall be charged to this account and credited to Account 3100, Accumulated depreciation, and the accounting for its retirement from Account 2006 shall be in accordance with that applicable to telecommunications plant retired.

[51 FR 43499, Dec. 2, 1986, as amended at 59 FR 46930, Sept. 13, 1994; 67 FR 5688, Feb. 6, 2002]

§ 32.3400 Accumulated amortization—tangible.

(a) This account shall be used by Class B companies and shall include:

(1) the accumulated amortization associated with the investment contained in Account 2681, Capital leases.

(2) the accumulated amortization associated with the investment contained in Account 2682, Leasehold improvements.

(b) This account shall be credited with amounts for the amortization of capital leases and leasehold improvements concurrently charged to Account 6563, Amortization expense—tangible. (Note also Account 3300, Accumulated depreciation—nonoperating.)

(c) When any item carried in Account 2681 or Account 2682 is sold, is relinquished, or is otherwise retired from service, this account shall be charged with the cost of the retired item. Remaining amounts associated with the item shall be debited to Account 7100, Other operating income and expenses, or Account 7300, Nonoperating income and expense, as appropriate.

[69 FR 53649, Sept. 2, 2004]

§ 32.3410 Accumulated amortization—capitalized leases.

(a) This account shall include the accumulated amortization associated with the investment contained in Account 2681, Capital Leases.

(b) This account shall be credited with amounts for the amortization of capital leases concurrently charged to Account 6563, Amortization expense—tangible. (Note also Account 3300, Accumulated depreciation—nonoperating.)

(c) When any item carried in Account 2681 is sold, is relinquished, or is otherwise retired from service, this account shall be charged with the cost of the retired item. Remaining amounts associated with the item shall be debited to Account 7100, Other operating income and expenses, or Account 7300, Nonoperating income and expense, as appropriate.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5688, Feb. 6, 2002; 69 FR 53649, Sept. 2, 2004]

§ 32.3999 Instructions for balance sheet accounts—liabilities and stockholders' equity.

LIABILITIES AND STOCKHOLDERS' EQUITY ACCOUNTS TO BE MAINTAINED BY CLASS A AND CLASS B TELEPHONE COMPANIES

Account title	Class A account	Class B account
Current liabilities:		
Current accounts and notes payable	4000	4000
Customer's Deposits	4040	4040
Income taxes—accrued	4070	4070
Other taxes—accrued	4080	4080
Net Current Deferred Nonoperating Income Taxes	4100	4100
Net Current Deferred Nonoperating Income Taxes	4110	4110
Other current liabilities	4130	4130
Long-term debt:		
Long Term debt and Funded debt	4200	4200
Other liabilities and deferred credits:		
Other liabilities and deferred credits	4300	4300
Unamortized operating investment tax credits—net	4320	4320
Unamortized nonoperating investment tax credits—net	4330	4330
Net noncurrent deferred operating income taxes	4340	4340
Net deferred tax liability adjustments	4341	4341
Net noncurrent deferred nonoperating income taxes	4350	4350
Deferred tax regulatory adjustments—net	4361	4361
Other jurisdictional liabilities and deferred credits—net	4370	4370
Stockholder's equity:		
Capital stock	4510	4510
Additional paid-in capital	4520	4520
Treasury stock	4530	4530
Other capital	4540	4540
Retained earnings	4550	4550

[67 FR 5688, Feb. 6, 2002]

§ 32.4000 Current accounts and notes payable.

(a) This account shall include:

(1) All amounts currently due to others for recurring trade obligations, and not provided for in other accounts, such as those for traffic settlements, material and supplies, repairs to telecommunications plant, matured rents, and interest payable under monthly settlements on short-term loans, advances, and open accounts. It shall also include amounts of taxes payable that have been withheld from employees' salaries.

(2) Accounts payable arising from sharing of revenues.

(3) The face amount of notes, drafts, and other evidences of indebtedness issued or assumed by the company (except interest coupons) which are payable on demand or not more than one year or less from date of issue.

(b) If any part of an obligation, otherwise includable in this account matures more than one year from date of issue, it shall be included in Account 4200, Long term debt and funded debt, or other appropriate account.

(c) The records supporting the entries to this account shall be kept so that the company can furnish complete details as to each note, when it is issued, the consideration received, and when it is payable.

(d) Subsidiary record categories shall be maintained for this account in order that the company may separately report the amounts contained herein that relate to nonaffiliates and affiliates. Such subsidiary record categories shall be reported as required by part 43 of this chapter.

[67 FR 5688, Feb. 6, 2002]

§ 32.4040 Customers' deposits.

(a) This account shall include the amount of cash deposited with the company by customers as security for the payment for telecommunications service.

(b) Advance payments made by prospective customers prior to the establishment of service shall be credited to Account 4130, Other current liabilities.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5689, Feb. 6, 2002]

§ 32.4070 Income taxes—accrued.

(a) This account shall be credited or charged and the following accounts shall be charged or credited with the offsetting amount of current year income taxes (Federal, state and local) accrued during the period or adjustments to prior accruals: 7220 Operating Federal Income Taxes, 7230 Operating State and Local Income Taxes, 7400 Nonoperating Taxes, 7600 Extraordinary Items.

(b) If significant, current year income taxes paid in advance shall be reclassified to Account 1280, Prepayments.

[67 FR 5689, Feb. 6, 2002]

§ 32.4080 Other taxes—accrued.

(a) This account shall be credited or charged and Account 7240, Operating Other Taxes, or 7400, Nonoperating Taxes, or, for payroll related costs, the appropriate expense accounts shall be charged or credited for all taxes, other than Federal, State and local income taxes, accrued or adjusted for previous accruals during the period. Among the taxes includable in this account are property, gross receipts, franchise, capital stock, social security and unemployment taxes.

(b) Taxes paid in advance of the period in which they are chargeable to income shall be included in the prepaid taxes Account 1280, Prepayments, or 1410, Other Noncurrent Assets, as appropriate.

[67 FR 5689, Feb. 6, 2002]

§ 32.4100 Net current deferred operating income taxes.

(a) This account shall include the balance of income tax expense related to current items from regulated operations which have been deferred to later periods as a result of the normalized method of accounting for tax differentials authorized by this Commission and not provided for elsewhere.

(b) As regulated assets or liabilities which generated the deferred income tax are reclassified from long-term or noncurrent status to current, the appropriate deferred income tax shall be reclassified from Account 4340, Net Noncurrent Deferred Operating Income Taxes, to this account.

(c) This account shall be debited or credited with the amount being debited or credited to Account 7250, Provision For Deferred Operating Income Taxes—Net, in accordance with that account's description and § 32.22 of subpart B.

(d) The classification of deferred income taxes as current or noncurrent shall follow the classification of the asset or liability that gave rise to the deferred income tax. If there is no related asset or liability, classification shall be based on the expected turnaround of the temporary differences.

(e) Subsidiary record categories shall be maintained in order that the company may separately report the amounts contained herein that are property related and those that are nonproperty related. Such subsidiary record categories shall be reported as required by part 43 of this Commission's Rules and Regulations.

[51 FR 43499, Dec. 2, 1986, as amended at 59 FR 9419, Feb. 28, 1994]

§ 32.4110 Net current deferred nonoperating income taxes.

(a) This account shall include the balance of income tax expense resulting from comprehensive interpreted tax allocation which has been deferred to later periods.

(b) As other assets or liabilities which generated the deferred income tax are reclassified from long-term or noncurrent status to current, the appropriate deferred income tax shall be reclassified from Account 4350, Net Noncurrent Deferred Nonoperating Income Taxes, to this account.

(c) This account shall be debited or credited with the amount being credited or debited to Account 7400, Nonoperating taxes, in accordance with that account's description and § 32.22.

(d) This account shall also include the balance of the income taxes (Federal, state and local) related to current extraordinary items which have been deferred to later periods resulting from

comprehensive interperiod tax allocation.

(e) As the extraordinary item which generated the deferred income tax becomes current, the appropriate deferred income tax shall be reclassified from Account 4350, Net Noncurrent Deferred Nonoperating Income Taxes, to this account.

(f) This account shall be debited or credited with the amount being credited and debited to Account 7600, Extraordinary Items.

(g) The classification of deferred income taxes as current or noncurrent shall follow the classification of the asset or liability that gave rise to deferred income tax. If there is no related asset or liability, classification shall be based on the expected turnaround of the temporary differences.

(h) Subsidiary record categories shall be maintained in order that the company may separately report the amounts contained herein that are property related and those that are nonproperty related. Such subsidiary record categories shall be reported as required by part 43 of this Commission's Rules and Regulations.

[51 FR 43499, Dec. 2, 1986, as amended at 59 FR 9419, Feb. 28, 1994; 67 FR 5689, Feb. 6, 2002]

§ 32.4130 Other current liabilities.

This account shall include:

(a) The amount of advance billing creditable to revenue accounts in future months; also advance payments made by prospective customers prior to the establishment of service. Amounts included in this account shall be credited to the appropriate revenue accounts in the months in which the service is rendered or cleared from this account as refunds are made.

(b) The amount (including any obligations for premiums) of long-term debt matured and unpaid without any specific agreement for extension of maturity, including unpresented bonds drawn for redemption through the operation of sinking and redemption fund agreements.

(c) The current portion of obligations applicable to property obtained under capital leases.

(d) The amount of wages, compensated absences, interest on indebtedness of the company, dividends on capital stock, and rents accrued to the date for which the balance sheet is made, but not payable until after that date. Accruals shall be maintained so as to show separately the amount and nature of the items accrued to the date of the balance sheet.

(e) Matured rents, dividends, interest payable under monthly settlements on short-term loans, advances, and open accounts shall be included in Account 4000.

(f) All other liabilities of current character which are not included in Account 4000 through 4110.

[67 FR 5689, Feb. 6, 2002]

§ 32.4200 Long term debt and funded debt.

(a) This account shall include:

(1) The total face amount of unmatured debt maturing more than one year from date of issue, issued by the company and not retired, and the total face amount of similar unmatured debt of other companies, the payment of which has been assumed by the company, including funded debt the maturity of which has been extended by specific agreement. This account shall also include such items as mortgage bonds, collateral trust bonds, income bonds, convertible debt, debt securities with detachable warrants and other similar obligations maturing more than one year from date of issue.

(2) The premium associated with all classes of long-term debt. Premium, as applied to securities issued or assumed by the company, means the excess of the current money value received at their sale over the sum of their book or face amount and interest or dividends accrued at the date of the sale.

(3) The discount associated with all classes of long-term debt. Discount, as applied to securities issued or assumed by the company, means the excess of the book or face amount of the securities plus interest or dividends accrued at the date of the sale over the current money value of the consideration received at their sale.

(4) The face amount of debt reacquired prior to maturity that has not been retired. Gain or loss shall be recognized at the time of reacquisition by credits or charges to Account 7300,

Nonoperating income and expense, except that material gains or losses shall be treated as extraordinary. (See Account 7600, Extraordinary items.)

(5) The noncurrent portion of obligations applicable to property obtained under capital leases. Amounts subject to current settlement shall be included in Account 4130, Other current liabilities.

(6) The amount of advance from affiliated companies. Amounts due affiliated companies which are subject to current settlement shall be included in Account 4000.

(7) Investment advances, including those represented by notes.

(8) Long-term debt not provided for elsewhere.

(b) Subsidiary records shall be maintained for each issue. The subsidiary records shall identify the premium or discount attributable to each issue.

(c) Premiums and discounts on long-term debt recorded in this account shall be amortized monthly by the interest method and charged or credited, as appropriate, to Account 7500, Interest and related items.

(d) Debt securities with detachable warrants shall be accounted for in accordance with generally accepted accounting principles.

(e) Securities maturing in one year or less, including securities maturing serially, shall be included in Account 4130, Other current liabilities.

[67 FR 5689, Feb. 6, 2002]

§ 32.4300 Other long-term liabilities and deferred credits.

(a) This account shall include amounts accrued to provide for such items as unfunded pensions (if actuarially determined), death benefits, deferred compensation costs and other long-term liabilities not provided for elsewhere. Subsidiary records shall be maintained to identify the nature of these items.

(b) This account shall include the amount of all deferred credits not provided for elsewhere, such as amounts awaiting adjustment between accounts; and revenue, expense, and income items in suspense.

[67 FR 5690, Feb. 6, 2002]

§ 32.4320 Unamortized operating investment tax credits—net.

(a) This account shall be credited and Account 7210, Operating Investment Tax Credits—Net, should be debited with investment tax credits generated from qualified expenditures related to regulated operations which the company defers rather than recognizes currently in income.

(b) This account shall be debited and Account 7210 credited with a proportionate amount determined in relation to the period of time used for computing book depreciation on the property to which the tax credit relates.

§ 32.4330 Unamortized nonoperating investment tax credits—net.

(a) This account shall be credited and Account 7400, Nonoperating Taxes, shall be debited with investment tax credits generated from qualified expenditures related to other operations which the company has elected to defer rather than recognize currently in income.

(b) This account shall be debited and Account 7400 credited with a proportionate amount determined in relation to the useful book life of the property to which the tax credit relates.

[67 FR 5690, Feb. 6, 2002]

§ 32.4340 Net noncurrent deferred operating income taxes.

(a) This account shall include the balance of income tax expense related to noncurrent items from regulated operations which have been deferred to later periods as a result of comprehensive interperiod tax allocation related to temporary differences that arise from regulated operations.

(b) This account shall be credited or debited, as appropriate, and Account 7250, Provision for Deferred Operating Income Taxes—Net, shall reflect the offset for the tax effect of revenues and expenses from regulated operations which have been included in the determination of taxable income, but which

will not be included in the determination of book income or for the tax effect of revenues and expenses from regulated operations which have been included in the determination of book income prior to the inclusion in the determination of taxable income.

(c) As regulated assets or liabilities which generated the prepaid income tax or deferred income tax are reclassified from long-term or noncurrent status to current status, the appropriate deferred income tax shall be reclassified from this account to Account 4100, Net Current Deferred Operating Income Taxes.

(d) The classification of deferred income taxes as current or noncurrent shall follow the classification of the asset or liability that gave rise to the deferred income tax. If there is no related asset or liability, classification shall be based on the expected turnaround of the temporary difference.

(e) Subsidiary record categories shall be maintained in order that the company may separately report the amounts contained herein that are property related and those that are nonproperty related. Such subsidiary record categories shall be reported as required by part 43 of this Commission's Rules and Regulations.

[51 FR 43499, Dec. 2, 1986, as amended at 59 FR 9419, Feb. 28, 1994]

§ 32.4341 Net deferred tax liability adjustments.

(a) This account shall include the portion of deferred income tax charges and credits pertaining to Account 32.4361, Deferred tax regulatory adjustments—net.

(b) This account shall be used to record adjustments to the accumulated deferred tax liabilities recorded in Accounts 4100 and 4340 for:

(1) Tax effects of temporary differences accounted for under the flow-through method or treated as permanent differences.

(2) Reclassification attributable to changes in tax rates (Federal, state and local). As tax rates increase or decrease, the offsetting debit or credit will be recorded in Account 4361 as required by paragraph (a) of this section.

(3) The tax effects of carryforward net operating losses and carryforward investment tax credits expected to reduce future taxes payable that are reported in published financial statements.

(4) Reversals of the tax effects of carryforward net operating losses and carryforward investment tax credits previously recorded in this account at the time they become recognized as reductions in current taxable income and current taxes payable on tax returns.

(c) This account shall be exempt from the vintage year detail record requirements of § 32.22(e)(2).

[59 FR 9419, Feb. 28, 1994, as amended at 67 FR 5690, Feb. 6, 2002]

§ 32.4350 Net noncurrent deferred nonoperating income taxes.

(a) This account shall include the balance of income tax expense (Federal, state, and local) that has been deferred to later periods as a result of comprehensive interperiod allocation related to nonoperating differences.

(b) This account shall be credited or debited, as appropriate, and Account 7400, Nonoperating Taxes, shall reflect the offset for the tax effect of revenues from other operations and extraordinary items and nonoperating expenses which have been included in the determination of taxable income, but which will not be included in the determination of book income or for the tax effect of nonoperating expenses and extraordinary items and nonoperating income which have been included in the determination of book income prior to the inclusion in the determination of taxable income.

(c) As other assets or liabilities which generated the prepaid income tax or deferred income tax are reclassified from long-term or non-current status to current status, the appropriate deferred income tax shall be reclassified from this account to account 4110, Net Current Deferred Nonoperating Income Taxes.

(d) This account shall also include the balance of the income tax effect (Federal, State and local) related to noncurrent extraordinary items which have been included in the determination of taxable income in a period different from when it is included in the determination of book income, that is, more than one year.

(e) This account shall be charged or credited with the contra amount recorded to Account 7600, Extraordinary items, in accordance with § 32.22.

(f) As the extraordinary item which generated the deferred income tax becomes current, the appropriate deferred income tax shall be reclassified from this account to Account 4110, Net Current Deferred Nonoperating Income Taxes.

(g) The classification of deferred income taxes as current or noncurrent shall follow the classification of the asset or liability that gave rise to the deferred income tax. If there is no related asset or liability, classification shall be based on the expected turnaround of the temporary difference.

(h) Subsidiary record categories shall be maintained in order that the company may separately report the amounts contained herein that are property related and those that are nonproperty related. Such subsidiary record categories shall be reported as required by part 43 of this Commission's Rules and Regulations.

[51 FR 43499, Dec. 2, 1986, as amended at 59 FR 9419, Feb. 28, 1994; 67 FR 5690, Feb. 6, 2002]

§ 32.4361 Deferred tax regulatory adjustments—net.

(a) This account shall include amounts of probable future revenue for the recovery of future increases in taxes payable and amounts of probable future revenue reductions attributable to future decreases in taxes payable. As reductions or reversals occur, amounts recorded in this account shall be reduced or increased, with a contra entry being made to Account 4341, Net deferred tax liability adjustments.

(b) This account shall also be adjusted for the impact of prospective tax rate changes on the deferred tax liability for those temporary differences underlying its existing balance.

[67 FR 5690, Feb. 6, 2002]

§ 32.4370 Other jurisdictional liabilities and deferred credits—net.

This account shall include the cumulative impact on liabilities and deferred credits of the jurisdictional ratemaking practices which vary from those of this Commission. All entries recorded in this account shall be recorded net of any applicable income tax effects and shall be supported by appropriate subsidiary records where necessary as provided for in § 32.13 of subpart B.

§ 32.4510 Capital stock.

(a) This account shall include the par value, stated amount, or in the case of no-par stock, the amount received for capital stock issued and outstanding.

(b) Subsidiary records shall be maintained so as to show separately each class of stock.

(c) This account shall be charged with the book amount of any stock retired.

§ 32.4520 Additional paid-in capital.

(a) This account shall include the difference between the net proceeds (including discount, premium and stock issuance expense) received from the issuance of capital stock and the amount includable in Account 4510, Capital Stock, unless such difference results in a debit balance for that class of stock, in which case the amount shall be charged to Account 4550, Retained Earnings.

(b) This account shall also include gains arising from the retirement and cancellation of capital stock. Losses from the retirement and cancellation of capital stock shall be charged to this account to the extent that there exist credits in this account for the same class of stock; otherwise to Account 4550.

§ 32.4530 Treasury stock.

This account shall include the cost of the company's own capital stock which has been issued and subsequently reacquired but not retired or resold.

§ 32.4540 Other capital.

This account shall include amounts which are credits arising from the donation by stockholders of the company's capital stock, capital recorded upon the reorganization or recapitalization of the company and temporary declines in the value of marketable securities held for investment purposes.

(See also Account 1410, Other noncurrent assets).

[67 FR 5690, Feb. 6, 2002]

§ 32.4550 Retained earnings.

(a) This account shall include the undistributed balance of retained earnings derived from the operations of the company and from all other transactions not includable in the other accounts appropriate for inclusion of stockholders' equity.

(b) Subsidiary records shall be maintained wherein are recorded all entries to retained earnings during the year such that the detail of the entries may be disclosed to the Commission.

Subpart D—Instructions For Revenue Accounts

§ 32.4999 General.

(a) *Purpose of revenue accounts.* The revenue accounts are intended to include the actual cash inflows (or equivalents) that have or will occur as a result of the company's ongoing major or central operations during the period. They will include the revenues which arise from furnishing regulated telecommunications services to others, from directory advertising, rentals of telecommunications assets and from providing other services which are directly associated with the provision of regulated telecommunications services.

(b) *Deductions from revenue.* Corrections of overcharges, authorized refunds of overcollections previously credited to revenue, authorized refunds and adjustments on account of failure in service, and other corrections shall be charged to the revenue account previously credited with the amounts involved.

(c) *Commissions.* Commissions paid to others or employees in place of compensation or salaries for services rendered, such as public telephone commissions, shall be charged to Account 6623, Customer services, and not to the revenue accounts. Other commissions shall be charged to the appropriate expense accounts.

(d) *Revenue recognition.* Credits shall be made to the appropriate revenue accounts when such revenue is actually earned. When the billing cycle encompasses more than one accounting period, adjustments are necessary to properly recognize the revenue applicable to the current accounting period under report. Revenues recorded under the terms of two-tier contracts or other variable payment plans should be deferred, if necessary, and recognized ratably with expenses over the terms of the related contract. Any amounts deferred shall be credited to Account 4300, Other long-term liabilities and deferred credits.

(e) *Contractual arrangements.* Charges and credits resulting from activities associated with the provisions of regulated telecommunications services shall be recorded in a manner consistent with the nature of the underlying contractual arrangements. The charges and credits resulting from expense sharing or apportionment arrangements associated with the provision of regulated telecommunications services shall be recorded in the detailed regulated accounts. Charges and credits resulting from revenue settlement agreements or other revenue pooling arrangements associated with the provision of regulated telecommunications services shall be included in the appropriate revenue accounts. Those charges and credits resulting from contractual revenue pooling and/or sharing agreements shall be recorded in each prescribed revenue account and prescribed subsidiary record categories thereof to the extent that each is separately identifiable in the settlement process. It is not intended that settlement amounts be allocated or generally spread to the individual revenue accounts where they are not separately identifiable in the settlement process. When the settlement amounts are not identifiable by a revenue account they shall be recorded in Account 5060, Other basic area revenue, 5105, Long distance message revenue, or 5200, Miscellaneous revenue, as appropriate.

(f) *Subsidiary records—jurisdictional subdivisions and interconnection.* Subsidiary record categories shall be maintained in order that the company may separately report revenues derived from charges imposed under intrastate,

interstate and international tariff filings. Class A carriers shall also maintain subsidiary record categories in order that the companies may separately report interconnection revenues derived from the following categories: Unbundled network element revenues, Resale revenues, Reciprocal compensation revenues, and Other interconnection revenues. Such subsidiary record categories shall be reported as required by part 43 of this Commission's Rules and Regulations.

(g) *Structure of revenue accounts.* (1) The revenue section of the system of accounts shall be organized by revenue group summary account, account and subsidiary record category (if required).

(2) The revenue section of this system of accounts shall be comprised of six major groups—Local Network Services Revenues, Network Access Services Revenues, Long Distance Network Services Revenues, Miscellaneous Revenues, Nonregulated revenues, and Uncollectible Revenues, which shall be considered as a revenue group for the purposes of the construction of the system.

(3) Accounts shall be maintained as prescribed in this Section subject to the conditions described in section 32.13 of subpart B. In certain instances, subsidiary record categories may be required below the account level by this system of accounts or by Commission order.

(h) *Local Network Services revenues.* Local Network Services revenues (Accounts 5001 through 5060) shall include revenues derived from the provision of service and equipment entirely within the basic service area. That area is defined as the normal boundaries for local calling plus Extended Area Service (EAS) boundaries as they apply to that service. It includes revenues derived from both local private network service and local public network services as well as from customer premises facilities services. Local revenues include associated charges such as one-time service connection or termination charges and secondary features such as call waiting.

(i) *Network Access revenues.* (1) Network Access revenues (Accounts 5081–5083) shall include revenues derived from the provision of exchange access services to an interexchange carrier or to an end user of telecommunications services beyond the exchange carrier's network.

(2) Billing and collections service provided under exchange access tariffs shall be included in the Miscellaneous Revenues Group.

(j) *Long Distance Network Service revenues.* Long Distance Network Service revenues shall include revenues derived from the provision of services beyond the basic service area, whether message or flat-rate and including public network switching as well as private.

(k) *Miscellaneous revenues.* Miscellaneous revenues are those revenues derived from the provision of regulated products and services provided under tariff or contract but not contained elsewhere. They shall also include operating revenue derived from activities performed incident to the company's tariffed telecommunications operations which, though non-tariffed, are included in the regulatory process.

(l) *Nonregulated revenues.* The nonregulated revenue account shall be used for nonregulated operating revenues when a nonregulated activity involves the common or joint use of assets or resources in the provision of regulated and nonregulated products or services as required in § 32.23(c) of this subpart. Revenues from nontariffed activities offered incidental to tariffed services may be accounted for as regulated revenues, provided the activities are outgrowths of regulated operations and the revenues do not exceed, in the aggregate, one percent of total revenues for three consecutive years. Such activities must be listed in the Commission-approved Cost Allocation Manual for any company required to file a Cost Allocation Manual.

(m) *Uncollectible revenues.* Uncollectible revenues shall include amounts originally credited to the revenue accounts which have proved impracticable of collection.

(n) *Revenue accounts to be maintained.*

Account title	Class A account	Class B account
Local network services revenues:		
Basic local service revenue	.....	5000
Basic area revenue	5001	.....
Private line revenue	5040	.....

Account title	Class A account	Class B account
Other basic area revenue ...	5060	.....
Network access service revenues:		
End user revenue	5081	5081
Switched access revenue ...	5082	5082
Special access revenue	5083	5083
Long distance network services revenues:		
Long distance message revenue	5100	5100
Miscellaneous revenues:		
Miscellaneous revenue	5200	5200
Directory revenue	5230	.....
Nonregulated revenues:		
Nonregulated operating revenue	5280	5280
Uncollectible revenues:		
Uncollectible revenue	5300	5300

[51 FR 43499, Dec. 2, 1986, as amended at 53 FR 49322, Dec. 7, 1988; 59 FR 46930, Sept. 13, 1994; 64 FR 50008, Sept. 15, 1999; 67 FR 5690, Feb. 6, 2002; 69 FR 53649, Sept. 2, 2004]

§ 32.5000 Basic local service revenue.

Class B telephone companies shall use this account for revenues of the type and character required of Class A companies in Accounts 5001 through 5060.

[67 FR 5691, Feb. 6, 2002]

§ 32.5001 Basic area revenue.

(a) This account shall include revenue derived from the provision of the following:

(1) Basic area message services such as flat rate services and measured services. Included is revenue derived from non-optional extended area services. Also included is revenue derived from the billed or guaranteed portion of semi-public services.

(2) Optional extended area service.

(3) Cellular mobile telecommunications systems connected to the public switched network placed between mobile units and other stations within the mobile service area.

(4) General radio telecommunications systems connected to the public switched network placed between mobile units and other stations within the mobile service area, as well as revenue from mobile radio paging, mobile dispatching, and signaling services.

(b) Revenue derived from charges for nonpublished number or additional and boldfaced listings in the alphabetical section of the company's telephone directories shall be included in account 5230, Directory revenue.

(c) Revenue from private mobile telephone services which do not have access to the public switched network shall be included in Account 5200, Miscellaneous revenue.

[67 FR 5691, Feb. 6, 2002, as amended at 69 FR 53650, Sept. 2, 2004]

§ 32.5002 Optional extended area revenue.

This account shall include total revenue derived from the provision of optional extended area service.

§ 32.5003 Cellular mobile revenue.

This account shall include message revenue derived from cellular mobile telecommunications systems connected to the public switched network placed between mobile units and other stations within the mobile service area.

§ 32.5040 Private line revenue.

This account shall include revenue derived from local services that involve dedicated circuits, private switching arrangements, and/or predefined transmission paths, whether virtual or physical, which provide communications between specific locations (e.g., point-to-point communications. It includes revenue from subvoice grade, voice grade, audio and video program grade, digital transmission and local private network switching as well as the revenue from administrative and operational support services associated with private network services and facilities, e.g., charges for company-directed testing, expedited installation, and service restoration priority.

§ 32.5060 Other basic area revenue.

This account shall include:

(a) Revenue from the provision of secondary features which are integrated with the telecommunications network such as call forwarding, call waiting and touch-tone line service. Also included is revenue derived from the provision of public announcement and other record message services, directory assistance and other call completion services (excluding operator assisted basic long distance calls), as well as revenue derived from central office

related service connection and termination charges, and other non-premise customer specific charges associated with public network services. This account shall also include local revenue not provided for in other accounts.

(b) Charges and credits resulting from contractual revenue pooling and/or sharing agreements for tariffed local network services only when they are not separately identifiable by local network services revenue accounts in the settlement process. (See also § 32.4999(e)). To the extent that the charges and credits resulting from a settlement process can be identified by Local Network Services Revenue account they shall be recorded in the applicable account.

(c) Revenue derived from tariffed information origination/termination plant. Included is revenue derived from the provision under leasing arrangements of tariffed customer premises equipment (CPE), terminal equipment, station apparatus and large private branch exchanges as well as tariffed nonrecurring charges related solely to station apparatus. Also included are all tariffed charges for customer premises activities and facilities not related solely to station apparatus.

[67 FR 5691, Feb. 6, 2002]

§ 32.5081 End user revenue.

(a) This account shall contain federally and state tariffed monthly flat rate charge assessed upon end users.

(b) Subsidiary record categories shall be maintained in order that the company may separately report amounts related to federal and state tariffed charges.

[67 FR 5692, Feb. 6, 2002]

§ 32.5082 Switched access revenue.

(a) This account shall consist of federally and state tariffed charges assessed to interexchange carriers for access to local exchange facilities.

(b) Subsidiary record categories shall be maintained in order that the company may separately report the amounts contained herein that relate to limited pay telephone, carrier common line, line termination, local switching, intercept, information, common transport and dedicated transport. The subsidiary records shall also separately show the federal and state tariffed charges. Such subsidiary record categories shall be reported as required by part 43 of this chapter.

[67 FR 5692, Feb. 6, 2002]

§ 32.5083 Special access revenue.

(a) This account shall include all federally and state tariffed charges assessed for other than end user or switched access charges referred to in Account 5081, End user revenue, and Account 5082, Switched access revenue.

(b) Subsidiary record categories shall be maintained in order that the company may separately report the amounts contained herein that relate to recurring charges, nonrecurring charges and surcharges. The subsidiary records shall also separately show the federal and state tariffed charges. Such subsidiary record categories shall be reported as required by part 43 of this chapter.

[67 FR 5692, Feb. 6, 2002]

§ 32.5100 Long distance message revenue.

This account shall include revenue derived from message services that terminate beyond the basic service area of the originating wire center and are individually priced. This includes those message services which utilize the public long distance switching network and the basic subscriber access line. It also includes those long distance calls placed from mobile and public telephones, as well as any charges for operator assistance or special billing directly related to the completion of a specific call. This account shall also include revenue derived from individually priced message services offered under calling plans (discounted long distance) which do not utilize dedicated access lines, as well as those priced at the basic long distance rates where a discounted toll charge is on a per message basis. Any revenue derived from monthly or one-time charges for obtaining calling plan services shall be included in this account. This account includes revenue derived from the following services:

(a) Long distance services which permit unidirectional calls to a subscriber

from specified services areas (multipoint-to-point service). These calls require the use of dedicated access lines connecting a subscriber's premises and a designated central office. These dedicated access lines are generally separate from those required for the subscriber to place outward calls. The call is billed to the subscriber even though it is generally initiated by the subscriber's customer or correspondent.

(b) Long distance services which permit the subscriber to place telephone calls from one location to other specified service areas (point-to-multipoint service). These calls are completed without operator assistance and require the use of a dedicated access line. The dedicated access line is generally separate from those required for inward message services and cannot be used to place calls within the basic service area or calls outside the selected service areas. Outward calls are screened and blocked to determine whether the calls are within an authorized service area.

(c) Services extending beyond the basic service area that involve dedicated circuits, private switching arrangements, and/or predefined transmission paths, whether virtual or physical, which provide communications between specific locations (e.g., point-to-point communications). Service connection charges, termination charges, rearrangements and changes, etc., shall be included in this account. Revenue derived from associated administrative and operational support services shall also be included in this account.

(1) Narrow-band analog private network circuits and facilities furnished exclusively for record forms of communications, such as teletypewriter, teletypesetter, telewriter, ticker, Morse, signaling, remote metering, and supervisory services.

(2) Private network circuits and facilities (including multipurpose wideband) which provide voice grade services for the transmission of analog signals. It includes revenue from services such as voice, data and telephoto communication, as well as remote metering, supervisory control, miscellaneous signaling and channels furnished for the purpose of extending customer—provided communications systems. It includes revenue from the provision of facilities between customer premises and a serving office, a carrier distribution point, or an extension distribution channel.

(3) Private network circuits and facilities furnished for audio program transmission purposes, such as radio broadcasting, sound recording (wired music) and loud speaker services. It includes revenue from the provision of facilities for the transmission of analog signals between customer premises and a serving office, a carrier distribution point, or an extension distribution channel furnished in connection with such services. It also includes revenue from facilities furnished to carry the audio portion of a television program if furnished under separate audio rates. If the rate for television program services includes both the picture and sound portion of the transmission, the revenue shall also be included in this account.

(4) Private network circuits and facilities furnished for television program transmission purposes, such as commercial broadcast and educational or private television services. It includes revenue from the provision of facilities for the transmission of analog signals between customer premises and a serving office, a carrier distribution point, or an extension distribution channel furnished in connection with such services. It also includes revenue from both the picture and sound portions of transmission for television program service when provided under a combined rate schedule.

(5) The provision of circuits and facilities for the transmission of digital signals only.

(6) The provision of common user channels and switching capabilities used for the transmission of telecommunication signals between three (3) or more points in the network. Also included is revenue derived from the provision of basic switching and transfer arrangements used to connect private line channels.

(7) Charges and credits resulting from contractual revenue pooling and/or sharing agreements for tariffed long distance public network services and

for tariffed long distance private network services.

[67 FR 5692, Feb. 6, 2002]

§ 32.5200 Miscellaneous revenue.

This account shall include revenue derived from the following sources. For Class B companies, this account shall also include revenue of the type and character required of Class A companies in Account 5230, Directory revenue.

(a) Rental or subrental to others of telecommunications plant furnished apart from telecommunications services rendered by the company (this revenue includes taxes when borne by the lessee). It includes revenue from the rent of such items as space in conduit, pole line space for attachments, and any allowance for return on property used in joint operations and shared facilities agreements. The expense of maintaining and operating the rented property, including depreciation and insurance, shall be included in the appropriate operating expense accounts. Taxes applicable to the rented property shall be included by the owner of the rented property in appropriate tax accounts. When land or buildings are rented on an incidental basis for nontelecommunications use, the rental and expenses are included in Account 7300, Nonoperating income and expense.

(b) Services rendered to other companies under a license agreement, general services contract, or other arrangement providing for the furnishing of general accounting, financial, legal, patent, and other general services associated with the provision of regulated telecommunications services. (See also Account 5230.)

(c) The provision, either under tariff or through contractual arrangements, of special billing information to customers in the form of magnetic tapes, cards or statements. Special billing information provides detail in a format and/or at a level of detail not normally provided in the standard billing rendered for the regulated telephone services utilized by the customer.

(d) The performance of customer operations services for others incident to the company's regulated telecommunications operations which are not provided for elsewhere. (See also §§ 32.14(e) and 32.4999(e)).

(e) Contract services (plant maintenance) performed for others incident to the company's regulated telecommunications operations. This includes revenue from the incidental performance of nontariffed operating and maintenance activities for others which are similar in nature to those activities which are performed by the company in operating and maintaining its own telecommunications plant facilities. The records supporting the entries in this account shall be maintained with sufficient particularity to identify the revenue and associated Plant Specific Operations Expenses related to each undertaking. This account does not include revenue related to the performance of operation or maintenance activities under a joint operating agreement.

(f) The provision of billing and collection services to other telecommunications companies. This includes amounts charged for services such as message recording, billing, collection, billing analysis, and billing information services, whether rendered under tariff or contractual arrangements.

(g) Charges and credits resulting from contractual revenue pooling and/or sharing agreements for activities included in the miscellaneous revenue accounts only when they are not identifiable by miscellaneous revenue account in the settlement process. (See also § 32.4999(e)). The extent that the charges and credits resulting from a settlement process can be identified by miscellaneous revenue accounts they shall be recorded in the applicable account.

(h) The provision of transport and termination of local telecommunications traffic pursuant to section 251(c) of the Communications Act and part 51 of this chapter.

(i) The provision of unbundled network elements pursuant to section 251(c) of the Communications Act and part 51 of this chapter.

(j) This account shall also include other incidental regulated revenue such as:

(1) Collection overages (collection shortages shall be charged to Account 6623, Customer services);

(2) Unclaimed refunds for telecommunications services when not subject to escheats;

(3) Charges (penalties) imposed by the company for customer checks returned for non-payment;

(4) Discounts allowed customers for prompt payment;

(5) Late-payment charges;

(6) Revenue from private mobile telephone services which do not have access to the public switched network; and

(7) Other incidental revenue not provided for elsewhere in other Revenue accounts.

(k) Any definitely known amounts of losses of revenue collections due to fire or theft, at customers' coin-box stations, at public or semipublic telephone stations, in the possession of collectors en route to collection offices, on hand at collection offices, and between collection offices and banks shall be charged to Account 6720, General and Administrative.

[69 FR 53650, Sept. 2, 2004]

§ 32.5230 Directory revenue.

This account shall include revenue derived from alphabetical and classified sections of directories and shall also include fees paid by other entities for the right to publish the company's directories. Items to be included are:

(a) All revenue derived from the classified section of the directories;

(b) Revenue from the sale of new telephone directories whether they are the company's own directories or directories purchased from others. This shall also include revenue from the sale of specially bound telephone directories and special telephone directory covers;

(c) Amounts charged for additional and boldface listings, marginal displays, inserts, and other advertisements in the alphabetical section of the company's telephone directories; and

(d) Charges for unlisted and non-published telephone numbers.

[69 FR 44607, July 27, 2004]

§ 32.5280 Nonregulated operating revenue.

(a) This account shall include revenues derived from a nonregulated activity involving the common or joint use of assets or resources in the provision of regulated and nonregulated products or services.

(b) This account shall be debited and regulated revenue accounts shall be credited at tariffed rates when tariffed services are provided to nonregulated activities that are accounted for as prescribed in § 32.23(c) of this subpart.

(c) Separate subsidiary record categories shall be maintained for two groups of nonregulated revenue as follows: one subsidiary record for all revenues derived from regulated services treated as nonregulated for federal accounting purposes pursuant to Commission order and the second for all other revenues derived from a nonregulated activity as set forth in paragraph (a) of this section.

[53 FR 49322, Dec. 7, 1988, as amended at 64 FR 50008, Sept. 15, 1999; 67 FR 5694, Feb. 6, 2002]

§ 32.5300 Uncollectible revenue.

This account shall be charged with amounts concurrently credited to Account 1170, Receivables.

[67 FR 5694, Feb. 6, 2002]

Subpart E—Instructions for Expense Accounts

§ 32.5999 General.

(a) *Structure of the expense accounts.* (1) The expense section of the system of accounts shall be organized by expense group summary account, and subsidiary record category (if required).

(2) The expense section of this system of accounts shall be comprised of four major expense groups—Plant Specific Operations, Plant Nonspecific Operations, Customer Operations and Corporate Operations. Expenses to be recorded in Plant Specific and Plant Nonspecific Operations Expense Groups generally reflect cost associated with the various kinds of equipment identified in the plant asset accounts. Expenses to be recorded in the Customer Operations and Corporate Operations

accounts reflect the costs of, or are associated with, functions performed by people, irrespective of the organization in which any particular function is performed.

(3) Accounts shall be maintained as prescribed in this section subject to the conditions described in §32.13 in subpart B. Subsidiary record categories may be required below the account level by this system of accounts or by Commission order.

(b) *Plant Specific Operations Expense.* (1) The Plant Specific Operations Expense Accounts, 6110 through 6441, are used to record costs related to specific kinds of telecommunications plant.

(2) The Plant Specific Operations Expense accounts predominantly mirror the telecommunications plant in service detail accounts and are numbered consistently with them; the first digit of the expense account being six (6) and the remaining digits being the same as the last three numbers of the related plant account. In classifying Plant Specific Operations expenses, the text of the corresponding plant account should be consulted to ensure appropriateness.

(3) The Plant Specific Operations Expense accounts shall include the costs of inspecting, testing (except as specified in Account 6533, Testing Expense) and reporting on the condition of telecommunications plant to determine the need for repairs, replacements, rearrangements and changes; performing routine work to prevent trouble (except as specified in Account 6533), replacing items of plant other than retirement units; rearranging and changing the location of plant not retired; repairing material for reuse; restoring the condition of plant damaged by storms, floods, fire or other casualties (other than the cost of replacing retirement units); inspecting after repairs have been made; and receiving training to perform these kinds of work. Also included are the costs of direct supervision (immediate of first-level) and office support of this work.

(4) In addition to the activities specified in paragraph (b)(3) of this section, the appropriate Plant Specific Operations Expense accounts shall include the cost of personnel whose principal job is the operation of plant equipment, such as general purpose computer operators, aircraft pilots, chauffeurs and shuttle bus drivers. However, when the operation of equipment is performed as part of other identifiable functions (such as the use of office equipment, capital tools or motor vehicles), the operators' cost shall be charged to accounts appropriate for those functions. (For costs of operator services personnel, see Accounts 6621, Call completion services, and 6622, Number services, and for costs of test board personnel see Account 6533.)

(c) *Plant nonspecific operations expense.* The Plant Nonspecific Operations Expense accounts shall include expenses related to property held for future telecommunications use, provisioning expenses, network operations expenses, and depreciation and amortization expenses. Accounts in this group (except for Account 6540, Access expense, and Accounts 6560 through 6565) shall include the costs of performing activities described in narratives for individual accounts. These costs shall also include the costs of supervision and office support of these activities.

(d) *Customer Operations Expense.* The Customer Operations Expense accounts shall include the cost of performing customer related marketing and services activities described in narratives for individual accounts. These costs shall also include the costs of supervision, office support and training for these activities.

(e) *Corporate Operations Expense.* The Corporate Operations Expense accounts shall include the costs of performing executive and planning activities and general and administrative activities described in narratives for individual accounts. These costs shall also include the costs of supervision, office support and training for these activities.

(f) *Reimbursements.* Reimbursements of actual costs incurred in connection with joint operations or projects repairing plant due to damages by others, and obligations to make changes in telecommunications plant (such as highway relocations), shall be credited to the accounts originally charged.

(g) Expense accounts to be maintained.

Account title	Class A account	Class B account
Income Statement Accounts		
Plant specific operations expense:		
Network support expense		6110
Motor vehicle expense	6112	
Aircraft expense	6113	
Tools and other work equipment expense	6114	
General support expenses		6120
Land and building expenses	6121	
Furniture and artworks expense	6122	
Office equipment expense	6123	
General purpose computers expense	6124	
Central office switching expense		6210
Non-digital switching expense	6211	
Digital electronic switching expense	6212	
Operators system expense	6220	6220
Central office transmission expenses		6230
Radio systems expense	6231	
Circuit equipment expense	6232	
Information origination/termination expense		6310
Station apparatus expense	6311	
Large private branch exchange expense	6341	
Public telephone terminal equipment expense	6351	
Other terminal equipment expense	6362	
Cable and wire facilities expenses		6410
Poles expense	6411	
Aerial cable expense	6421	
Underground cable expense	6422	
Buried cable expense	6423	
Submarine and deep sea cable expense	6424	
Intrabuilding network cable expense	6426	
Aerial wire expense	6431	
Conduit systems expense	6441	
Plant nonspecific operations expense:		
Other property plant and equipment expenses		6510
Property held for future telecommunications use expense	6511	
Provisioning expense	6512	
Network operations expenses		6530
Power expense	6531	
Network administration expense	6532	
Testing expense	6533	
Plant operations administration expense	6534	
Engineering expense	6535	
Access expense	6540	6540
Depreciation and amortization expenses		6560
Depreciation expense—telecommunications plant in service	6561	
Depreciation expense—property held for future telecommunications use	6562	
Amortization expense—tangible	6563	
Amortization expense—intangible	6564	
Amortization expense—other	6565	
Customer operations expense:		
Marketing		6610
Product management and sales	6611	
Product advertising	6613	
Services		6620
Call completion services	6621	
Number services	6622	
Customer services	6623	
Corporate operations expense:		
General and administrative	6720	6720
Provision for uncollectible notes receivable	6790	6790

[51 FR 43499, Dec. 2, 1986, as amended at 52 FR 7580, Mar. 12, 1987; 64 FR 50008, Sept. 15, 1999; 65 FR 16335, Mar. 28, 2000; 67 FR 5694, Feb. 6, 2002; 69 FR 53651, Sept. 2, 2004]

§ 32.6110 Network support expenses.

(a) Class B telephone companies shall use this account for expenses of the type and character required of Class A companies in Accounts 6112 through 6114.

(b) Credits shall be made to this account by Class B companies for amounts transferred to Construction and/or other Plant Specific Operations Expense accounts. These amounts shall be computed on the basis of direct labor hours.

[67 FR 5695, Feb. 6, 2002]

§ 32.6112 Motor vehicle expense.

(a) This account shall include costs of fuel, lubrications, license and inspection fees, washing, repainting, and minor accessories. Also included are the costs of personnel whose principal job is operating motor vehicles, such as chauffeurs and shuttle bus drivers. The costs of users of motor vehicles whose principal job is not the operation of motor vehicles shall be charged to accounts appropriate for the activities performed.

(b) Credits shall be made to this account for amounts transferred to Construction and/or to other Plant Specific Operations Expense accounts. These amounts shall be computed on the basis of direct labor hours.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5695, Feb. 6, 2002]

§ 32.6113 Aircraft expense.

(a) This account shall include such costs as aircraft fuel, flight crews, mechanics and ground crews, licenses and inspection fees, washing, repainting, and minor accessories.

(b) Credits shall be made to this account for amounts transferred to Construction and/or to other Plant Specific Operations Expense accounts. These amounts shall be computed on the basis of direct labor hours.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5695, Feb. 6, 2002]

§ 32.6114 Tools and other work equipment expense.

(a) This account shall include costs incurred in connection with special purpose vehicles, garage work equipment and other work equipment included in Account 2114, Tools and other work equipment. This account shall be charged with costs incurred in connection with the work equipment itself. This account shall also include such costs as fuel, licenses and inspection fees, washing, repainting and minor accessories. The costs of using garage work equipment to maintain motor vehicles shall be charged to Account 6112, Motor vehicles expense. This account shall not be charged with the costs of operators of special purpose vehicles and other work equipment. The costs of operators of this equipment shall be charged to accounts appropriate for the activities performed.

(b) Credits shall be made to this account for amounts related to special purpose vehicles and other work equipment transferred to Construction and/or to other Plant Specific Operations Expense accounts. These amounts shall be computed on the basis of direct labor hours.

[64 FR 50008, Sept. 15, 1999, as amended at 67 FR 5695, Feb. 6, 2002]

§ 32.6120 General support expenses.

Class B telephone companies shall use this account for expenses of the type and character required of Class A companies in Accounts 6121 through 6124.

[67 FR 5695, Feb. 6, 2002]

§ 32.6121 Land and building expense.

(a) This account shall include expenses associated with land and buildings (excluding amortization of leasehold improvements). This account shall also include janitorial service, cleaning supplies, water, sewage, fuel and guard service, and electrical power.

(b) The cost of electrical power used to operate the telecommunications network shall be charged to Account 6531, Power Expense, and the cost of separately metered electricity used for operating specific types of equipment, such as computers, shall be charged to the expense account appropriate for such use.

§ 32.6122 Furniture and artworks expense.

This account shall include expenses associated with furniture and artworks.

§ 32.6123 Office equipment expense.

This account shall be charged only with costs incurred in connection with the office equipment itself. The costs

of operators of this equipment shall be charged to accounts appropriate for the activities performed.

§ 32.6124 General purpose computers expense.

This account shall include the costs of personnel whose principal job is the physical operation of general purpose computers and the maintenance of operating systems. This excludes the cost of preparation of input data or the use of outputs which are chargeable to the accounts appropriate for the activities being performed. Also excluded are costs incurred in planning and maintaining application systems and databases for general purpose computers. (See also § 32.6720, General and administrative.) Separately metered electricity for general purpose computers shall also be included in this account.

[67 FR 5695, Feb. 6, 2002]

§ 32.6210 Central office switching expenses.

Class B telephone companies shall use this account for expenses of the type and character required of Class A companies in Accounts 6211 through 6212.

[67 FR 5695, Feb. 6, 2002]

§ 32.6211 Non-digital switching expense.

This account shall include expenses associated with non-digital electronic switching and electro-mechanical switching.

[67 FR 5695, Feb. 6, 2002]

§ 32.6212 Digital electronic switching expense.

(a) This account shall include expenses associated with digital electronic switching. Digital electronic switching expenses shall be maintained in the following subaccounts: 6212.1 Circuit, 6212.2 Packet.

(b) This subaccount 6212.1 Circuit shall include expenses associated with digital electronic switching equipment used to provide circuit switching.

(c) This subaccount 6212.2 Packet shall include expenses associated with digital electronic switching equipment used to provide packet switching.

[67 FR 5695, Feb. 6, 2002]

§ 32.6220 Operator systems expense.

This account shall include expenses associated with operator systems equipment.

§ 32.6230 Central office transmission expense.

Class B telephone companies shall use this account for expenses of the type and character required of Class A companies in Accounts 6231 and 6232.

[67 FR 5695, Feb. 6, 2002]

§ 32.6231 Radio systems expense.

This account shall include expenses associated with radio systems.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5695, Feb. 6, 2002]

§ 32.6232 Circuit equipment expense.

(a) This account shall include expenses associated with circuit equipment. Circuit equipment expenses shall be maintained in the following subaccounts: 6232.1 Electronic, 6232.2 Optical.

(b) This subaccount 6232.1 Electronic shall include expenses associated with electronic circuit equipment.

(c) This subaccount 6232.2 Optical shall include expenses associated with optical circuit equipment.

[67 FR 5695, Feb. 6, 2002]

§ 32.6310 Information origination/termination expenses.

Class B telephone companies shall use this account for expenses of the type and character required of Class A telephone companies in Accounts 6311 through 6362.

[67 FR 5696, Feb. 6, 2002]

§ 32.6311 Station apparatus expense.

This account shall include expenses associated with station apparatus. Expenses associated with company internal use communication equipment shall be recorded in Account 6123, Office Equipment Expense.

§ 32.6341 Large private branch exchange expense.

This account shall include expenses associated with large private branch exchanges. Expenses associated with company internal use communication equipment shall be recorded in Account 6123, Office Equipment Expense.

§ 32.6351 Public telephone terminal equipment expense.

This account shall include expenses associated with public telephone terminal equipment.

§ 32.6362 Other terminal equipment expense.

This account shall include expenses associated with other terminal equipment.

§ 32.6410 Cable and wire facilities expenses.

Class B telephone companies shall use this account for expenses of the type and character required of Class A companies in Accounts 6411 through 6441.

[67 FR 5696, Feb. 6, 2002]

§ 32.6411 Poles expense.

This account shall include expenses associated with poles.

§ 32.6421 Aerial cable expense.

(a) This account shall include expenses associated with aerial cable.

(b) Subsidiary record categories shall be maintained as provided in § 32.2421(a) of subpart C.

§ 32.6422 Underground cable expense.

(a) This account shall include expenses associated with underground cable.

(b) Subsidiary record categories shall be maintained as provided in § 32.2422(a) of subpart C.

§ 32.6423 Buried cable expense.

(a) This account shall include expenses associated with buried cable.

(b) Subsidiary record categories shall be maintained as provided in § 32.2423(a) of subpart C.

§ 32.6424 Submarine and deep sea cable expense.

(a) This account shall include expenses associated with submarine and deep sea cable.

(b) Subsidiary record categories shall be maintained as provided in § 32.2424.

[67 FR 5696, Feb. 6, 2002]

§ 32.6426 Intrabuilding network cable expense.

(a) This account shall include expenses associated with intrabuilding network cable.

(b) Subsidiary record categories shall be maintained as provided in § 32.2426(a) of subpart C.

§ 32.6431 Aerial wire expense.

This account shall include expenses associated with aerial wire.

§ 32.6441 Conduit systems expense.

This account shall include expenses associated with conduit systems.

§ 32.6510 Other property, plant and equipment expenses.

Class B telephone companies shall use this account for expenses of the type and character required of Class A companies in Accounts 6511 and 6512.

[67 FR 5696, Feb. 6, 2002]

§ 32.6511 Property held for future telecommunications use expense.

This account shall include expenses associated with property held for future telecommunications use.

§ 32.6512 Provisioning expense.

(a) This account shall include costs incurred in provisioning material and supplies, including office supplies. This includes receiving and stocking, filling requisitions from stock, monitoring and replenishing stock levels, delivery of material, storage, loading or unloading and administering the reuse or refurbishment of material. Also included are adjustments resulting from the periodic inventory of material and supplies.

(b) Credits shall be made to this account for amounts transferred to construction and/or to Plant Specific Operations Expense. These costs are to be

cleared by adding to the cost of material and supplies a suitable loading charge.

[67 FR 5696, Feb. 6, 2002]

§ 32.6530 Network operations expense.

Class B telephone companies shall use this account for expenses of the type and character required of Class A companies in Accounts 6531 through 6535.

[67 FR 5696, Feb. 6, 2002]

§ 32.6531 Power expense.

This account shall include the cost of electrical power used to operate the telecommunications network.

§ 32.6532 Network administration expense.

This account shall include costs incurred in network administration. This includes such activities as controlling traffic flow, administering traffic measuring and monitoring devices, assigning equipment and load balancing, collecting and summarizing traffic data, administering trunking, and assigning interoffice facilities and circuit layout work.

§ 32.6533 Testing expense.

This account shall include costs incurred in testing telecommunications facilities from a testing facility (test desk or other testing system) to determine the condition of plant on either a routine basis or prior to assignment of the facilities; receiving, recording and analyzing trouble reports; testing to determine the nature and location of reported trouble condition; and dispatching repair persons or otherwise initiating corrective action. (Note also § 32.5999(b)(3) of this subpart.)

§ 32.6534 Plant operations administration expense.

(a) This account shall include costs incurred in the general administration of plant operations. This includes supervising plant operations (except as specified in § 32.5999(a)(3) of this subpart; planning, coordinating and monitoring plant operations; and performing staff work such as developing methods and procedures, preparing and conducting training (except on-the-job training) and coordinating safety programs.

(b) Credits shall be made to this account for amounts transferred to construction accounts. These amounts shall be computed on the basis of direct labor hours. (See § 32.2000(c)(2)(ii) of subpart C.)

§ 32.6535 Engineering expense.

(a) This account shall include costs incurred in the general engineering of the telecommunications plant which are not directly chargeable to an undertaking or project. This includes developing input to the fundamental planning process, performing preliminary work or advance planning in connection with potential undertakings, and performing special studies of an engineering nature.

(b) Credits shall be made to this account for amounts transferred to construction accounts. These amounts shall be computed on the basis of direct labor hours. (See § 32.2000(c)(2)(ii) of subpart C.)

§ 32.6540 Access expense.

(a) This account shall include amounts paid by interexchange carriers or other exchange carriers to another exchange carrier for the provision of carrier's carrier access.

(b) Subsidiary record categories shall be maintained in order that the entity may separately report interstate and intrastate carrier's carrier expense. Such subsidiary record categories shall be reported as required by part 43 of this Commission's Rules and Regulations.

[52 FR 43917, Nov. 17, 1987]

§ 32.6560 Depreciation and amortization expenses.

Class B telephone companies shall use this account for expenses of the type and character required of Class A companies in Accounts 6561 through 6565.

[69 FR 53652, Sept. 2, 2004]

§ 32.6561 Depreciation expense—telecommunications plant in service.

This account shall include the depreciation expense of capitalized costs in Accounts 2112 through 2441, inclusive.

[69 FR 44607, July 27, 2004]

§ 32.6562 Depreciation expense—property held for future telecommunications use.

This account shall include the depreciation expense of capitalized costs included in Account 2002, Property held for future telecommunications use.

[69 FR 53652, Sept. 2, 2004]

§ 32.6563 Amortization expense—tangible.

This account shall include only the amortization of costs included in Accounts 2681, Capital leases, and 2682, Leasehold improvements.

[69 FR 44607, July 27, 2004]

§ 32.6564 Amortization expense—intangible.

This account shall include the amortization of costs included in Account 2690, Intangibles.

[69 FR 44607, July 27, 2004]

§ 32.6565 Amortization expense—other.

(a) This account shall include only the amortization of costs included in Account 2005, Telecommunications plant adjustment.

(b) This account shall also include lump-sum write offs of amounts of plant acquisition adjustment as provided for in § 32.2005(b)(3) of subpart C.

(c) Subsidiary records shall be maintained so as to show the character of the amounts contained in this account.

[69 FR 44607, July 27, 2004]

§ 32.6610 Marketing.

Class B telephone companies shall use this account for expenses of the type and character required of Class A companies in Accounts 6611 through 6613.

[67 FR 5696, Feb. 6, 2002]

§ 32.6611 Product management and sales.

This account shall include:

(a) Costs incurred in performing administrative activities related to marketing products and services. This includes competitive analysis, product and service identification and specification, test market planning, demand forecasting, product life cycle analysis, pricing analysis, and identification and establishment of distribution channels.

(b) Costs incurred in selling products and services. This includes determination of individual customer needs, development and presentation of customer proposals, sales order preparation and handling, and preparation of sales records.

[67 FR 5696, Feb. 6, 2002]

§ 32.6613 Product advertising.

This account shall include costs incurred in developing and implementing promotional strategies to stimulate the purchase of products and services. This excludes nonproduct-related advertising, such as corporate image, stock and bond issue and employment advertisements, which shall be included in the appropriate functional accounts.

§ 32.6620 Services.

Class B telephone companies shall use this account for expenses of the type and character required of Class A companies in Accounts 6621 through 6623.

[69 FR 53652, Sept. 2, 2004]

§ 32.6621 Call completion services.

This account shall include costs incurred in helping customers place and complete calls, except directory assistance. This includes handling and recording; intercept; quoting rates, time and charges; and all other activities involved in the manual handling of calls.

[69 FR 44607, July 27, 2004]

§ 32.6622 Number services.

This account shall include costs incurred in providing customer number and classified listings. This includes preparing or purchasing, compiling, and disseminating those listings through directory assistance or other means.

§ 32.6623 Customer services.

(a) This account shall include costs incurred in establishing and servicing customer accounts. This includes:

(1) Initiating customer service orders and records;

(2) Maintaining and billing customer accounts;

(3) Collecting and investigating customer accounts, including collecting revenues, reporting receipts, administering collection treatment, and handling contacts with customers regarding adjustments of bills;

(4) Collecting and reporting pay station receipts; and

(5) Instructing customers in the use of products and services.

(b) This account shall also include amounts paid by interexchange carriers or other exchange carriers to another exchange carrier for billing and collection services. Subsidiary record categories shall be maintained in order that the entity may separately report interstate and intrastate amounts. Such subsidiary record categories shall be reported as required by part 43 of this Commission's rules and regulations.

[69 FR 44608, July 27, 2004]

§ 32.6720 General and administrative.

This account shall include costs incurred in the provision of general and administrative services as follows:

(a) Formulating corporate policy and in providing overall administration and management. Included are the pay, fees and expenses of boards of directors or similar policy boards and all board-designated officers of the company and their office staffs, e.g., secretaries and staff assistants.

(b) Developing and evaluating long-term courses of action for the future operations of the company. This includes performing corporate organization and integrated long-range planning, including management studies, options and contingency plans, and economic strategic analysis.

(c) Providing accounting and financial services. Accounting services include payroll and disbursements, property accounting, capital recovery, regulatory accounting (revenue requirements, separations, settlements and corollary cost accounting), non-customer billing, tax accounting, internal and external auditing, capital and operating budget analysis and control, and general accounting (accounting principles and procedures and journals, ledgers, and financial reports). Financial services include banking operations, cash management, benefit investment fund management (including actuarial services), securities management, debt trust administration, corporate financial planning and analysis, and internal cashier services.

(d) Maintaining relations with government, regulators, other companies and the general public. This includes:

(1) Reviewing existing or pending legislation (see also Account 7300, Nonoperating income and expense, for lobbying expenses);

(2) Preparing and presenting information for regulatory purposes, including tariff and service cost filings, and obtaining radio licenses and construction permits;

(3) Performing public relations and non-product-related corporate image advertising activities;

(4) Administering relations, including negotiating contracts, with telecommunications companies and other utilities, businesses, and industries. This excludes sales contracts (see also Account 6611, Product management and sales); and

(5) Administering investor relations.

(e) Performing personnel administration activities. This includes:

(1) Equal Employment Opportunity and Affirmative Action Programs;

(2) Employee data for forecasting, planning and reporting;

(3) General employment services;

(4) Occupational medical services;

(5) Job analysis and salary programs;

(6) Labor relations activities;

(7) Personnel development and staffing services, including counseling, career planning, promotion and transfer programs;

(8) Personnel policy development;

(9) Employee communications;

(10) Benefit administration;

(11) Employee activity programs;

(12) Employee safety programs; and

(13) Nontechnical training course development and presentation.

(f) Planning and maintaining application systems and databases for general purpose computers.

(g) Providing legal services: This includes conducting and coordinating litigation, providing guidance on regulatory and labor matters, preparing, reviewing and filing patents and contracts and interpreting legislation. Also included are court costs, filing fees, and the costs of outside counsel, depositions, transcripts and witnesses.

(h) Procuring material and supplies, including office supplies. This includes analyzing and evaluating suppliers' products, selecting appropriate suppliers, negotiating supply contracts, placing purchase orders, expediting and controlling orders placed for material, developing standards for material purchased and administering vendor or user claims.

(i) Making planned search or critical investigation aimed at discovery of new knowledge. It also includes translating research findings into a plan or design for a new product or process or for a significant improvement to an existing product or process, whether intended for sale or use. This excludes making routine alterations to existing products, processes, and other ongoing operations even though those alterations may represent improvements.

(j) Performing general administrative activities not directly charged to the user, and not provided in paragraphs (a) through (i) of this section. This includes providing general reference libraries, food services (e.g., cafeterias, lunch rooms and vending facilities), archives, general security investigation services, operating official private branch exchanges in the conduct of the business, and telecommunications and mail services. Also included are payments in settlement of accident and damage claims, insurance premiums for protection against losses and damages, direct benefit payments to or on behalf of retired and separated employees, accident and sickness disability payments, supplemental payments to employees while in governmental service, death payments, and other miscellaneous costs of a corporate nature. This account excludes the cost of office services, which are to be included in the accounts appropriate for the activities supported.

[67 FR 5696, Feb. 6, 2002]

§ 32.6790 Provision for uncollectible notes receivable.

This account shall be charged with amounts concurrently credited to Account 1170, Receivables.

[67 FR 5697, Feb. 6, 2002]

Subpart F—Instructions For Other Income Accounts

§ 32.6999 General.

(a) *Structure of the other income accounts.* The Other Income Accounts are designed to reflect both operating and nonoperating income items including taxes, extraordinary items and other income and expense items not properly included elsewhere.

(b) *Other income accounts listing.*

Account title	Class A account	Class B account
Other operating income and expense:		
Other operating income and expense	7100	7100
Operating taxes:		
Operating taxes		7200
Operating investment tax credits-net	7210	.....
Operating Federal income taxes	7220	.....
Operating state and local income taxes	7230	.....
Operating other taxes	7240	.....
Provision for deferred operating income taxes—net	7250	.....
Nonoperating income and expense:		
Nonoperating income and expense	7300	7300
Nonoperating taxes:		
Nonoperating taxes	7400	7400
Interest and related items:		
Interest and related items	7500	7500
Extraordinary items	7600	7600
Jurisdictional differences and non-regulated income items:		
Income effect of jurisdictional ratemaking difference—net	7910	7910

Account title	Class A account	Class B account
Nonregulated net income	7990	7990

[67 FR 5697, Feb. 6, 2002]

§ 32.7100 Other operating income and expenses.

This account shall be used to record the results of transactions, events or circumstances during the periods which are incidental or peripheral to the major or central operations of the company. It shall be used to record all items of an operating nature such as incidental work performed for others not provided for elsewhere. Whenever practicable the inflows and outflows associated with a transaction, event or circumstances shall be matched and the result shown as a net gain or loss. This account shall include the following:

(a) Profits realized from custom work (plant construction) performed for others incident to the company's regulated telecommunications operations. This includes profits from the incidental performance of nontariffed construction activities (including associated engineering and design) for others which are similar in nature to those activities which are performed by the company in constructing its own telecommunications plant facilities. The records supporting the entries in this account for income and custom work shall be maintained with sufficient particularity to identify separately the revenue and costs associated with each undertaking.

(b) Return on investment for the use of regulated property plant and equipment to provide nonregulated products and services.

(c) All gains and losses resulting from the exchange of foreign currency. Transaction (realized) gains or losses shall be measured based on the exchange rate in effect on the transaction date. Unrealized gains or losses shall be measured based on the exchange rate in effect at the balance sheet date.

(d) Gains or losses resulting from the disposition of land or artworks.

(e) Charges or credits, as appropriate, to record the results of transactions, events or circumstances which are of an operational nature, but occur irregularly or are peripheral to the major or central operations of the company and not provided for elsewhere.

[67 FR 5698, Feb. 6, 2002]

§ 32.7199 Content of accounts.

The Operating Tax accounts shall include the taxes arising from the central operations of the company.

§ 32.7200 Operating taxes.

Class B telephone companies shall use this account for operating taxes of the type and character required of Class A companies in Accounts 7210 through 7250.

[67 FR 5698, Feb. 6, 2002]

§ 32.7210 Operating investment tax credits—net.

(a) This account shall be charged and Account 4320, Unamortized Operating Investment Tax Credits—Net, shall be credited with investment tax credits generated from qualified expenditures related to regulated operations which the company defers rather than recognizes currently in income.

(b) This account shall be credited and Account 4320 shall be charged ratably with the amortization of each year's investment tax credits included in Account 4320 for investment services for ratemaking purposes. Such amortization shall be determined in relation to the period of time used for computing book depreciation on the property with respect to which the tax credits relate.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5698, Feb. 6, 2002]

§ 32.7220 Operating Federal income taxes.

(a) This account shall be charged and Account 4070, Income Taxes-Accrued, shall be credited for the amount of

Federal Income Taxes for the current period. This account shall also reflect subsequent adjustments to amounts previously charged.

(b) Taxes should be accrued each month on an estimated basis and adjustments made as later data becomes available.

(c) Tax credits, other than investment tax credits, if normalized, shall be recorded consistent with the accounting for investment tax credits and shall be amortized to income as directed by this Commission.

(d) No entries shall be made to this account to reflect interperiod tax allocations.

§ 32.7230 Operating state and local income taxes.

(a) This account shall be charged and Account 4070, Income Taxes—Accrued, shall be credited for the amount of state and local income taxes for the current period. This account shall also reflect subsequent adjustments to amounts previously charged.

(b) Taxes should be accrued each month on an estimated basis and adjustments made as later data becomes available.

(c) No entries shall be made to this account to reflect interperiod tax allocations.

§ 32.7240 Operating other taxes.

(a) This account shall be charged and Account 4080, Other Taxes—Accrued, shall be credited for all taxes, other than Federal, state and local income taxes and payroll related taxes, related to regulated operations applicable to current periods. Among the items includable in this account are property, gross receipts, franchise and capital stock taxes; this account shall also reflect subsequent adjustments to amounts previously charged.

(b) Special assessments for street and other improvements and special benefit taxes, such as water taxes and the like, shall be included in the operating expense accounts or investment accounts, as may be appropriate.

(c) Discounts allowed for prompt payment of taxes shall be credited to the account to which the taxes are chargeable.

(d) Interest on tax assessments which are not paid when due shall be included in Account 7500, Interest and related items.

(e) Taxes paid by the company under tax-free covenants on indebtedness shall be charged to Account 7300, Nonoperating income and expense.

(f) Sales and use taxes shall be accounted for, so far as practicable, as part of the cost of the items to which the taxes relate.

(g) Taxes on rented telecommunications plant which are borne by the lessee shall be credited by the owner to Account 5200, Miscellaneous revenue, and shall be charged by the lessee to the appropriate Plant Specific Operations Expense account.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5698, Feb. 6, 2002]

§ 32.7250 Provision for deferred operating income taxes—net.

(a) This account shall be charged or credited, as appropriate, *with contra entries* recorded to the following accounts for income tax expense that has been deferred in accordance with § 32.22 of subpart B.

4100 Net Current Deferred Operating Income Taxes
4340 Net Noncurrent Deferred Operating Income Taxes

(b) Subsidiary record categories shall be maintained to distinguish between property and nonproperty related deferrals and so that the company may separately report that amounts contained herein that relate to Federal, state and local income taxes. Such subsidiary record categories shall be reported as required by part 43 of this Commission's Rules and Regulations.

§ 32.7300 Nonoperating income and expense.

This account shall be used to record the results of transactions, events and circumstances affecting the company during a period and which are not operational in nature. This account shall include such items as nonoperating taxes, dividend income and interest income. Whenever practicable, the inflows and outflows associated with a transaction or event shall be matched and the result shown as a net gain or

loss. This account shall include the following:

(a) Dividends on investments in common and preferred stock, which is the property of the company, whether such stock is owned by the company and held in its treasury, or deposited in trust including sinking or other funds, or otherwise controlled.

(b) Dividends received and receivable from affiliated companies accounted for on the equity method shall be included in Account 1410, Other noncurrent assets, as a reduction of the carrying value of the investments.

(c) Interest on securities, including notes and other evidences of indebtedness, which are the property of the company, whether such securities are owned by the company and held in its treasury, or deposited in trust including sinking or other funds, or otherwise controlled. It shall also include interest on cash bank balances, certificates of deposits, open accounts, and other analogous items.

(d) For each month the applicable amount requisite to extinguish, during the interval between the date of acquisition and date of maturity, the difference between the purchase price and the par value of securities owned or held in sinking or other funds, the income from which is includable in this account. Amounts thus credited or charged shall be concurrently included in the accounts in which the securities are carried.

(e) Amounts charged to the telecommunications plant under construction account related to allowance for funds used during construction. (See § 32.2000(c)(2)(x).)

(f) Gains or losses resulting from:

(1) The disposition of land or artworks;

(2) The disposition of plant with traffic;

(3) The disposition of nonoperating telecommunications plant not previously used in the provision of telecommunications services.

(g) All other items of income and gains or losses from activities not specifically provided for elsewhere, including representative items such as:

(1) Fees collected in connection with the exchange of coupon bonds for registered bonds;

(2) Gains or losses realized on the sale of temporary cash investments or marketable equity securities;

(3) Net unrealized losses on investments in current marketable equity securities;

(4) Write-downs or write-offs of the book costs of investment in equity securities due to permanent impairment;

(5) Gains or losses of nonoperating nature arising from foreign currency exchange or translation;

(6) Gains or losses from the extinguishment of debt made to satisfy sinking fund requirements;

(7) Amortization of goodwill;

(8) Company's share of the earnings or losses of affiliated companies accounted for on the equity method; and

(9) The net balance of the revenue from and the expenses (including depreciation, amortization and insurance) of property, plant, and equipment, the cost of which is includable in Account 2006, Nonoperating plant.

(h) Costs that are typically given special regulatory scrutiny for ratemaking purposes. Unless specific justification to the contrary is given, such costs are presumed to be excluded from the costs of service in setting rates.

(1) Lobbying includes expenditures for the purpose of influencing public opinion with respect to the election or appointment of public officials, referenda, legislation, or ordinances (either with respect to the possible adoption of new referenda, legislation or ordinances, or repeal or modification of existing referenda, legislation or ordinances) or approval, modification, or revocation of franchises, or for the purpose of influencing the decisions of public officials. This also includes advertising, gifts, honoraria, and political contributions. This does not include such expenditures which are directly related to communications with and appearances before regulatory or other governmental bodies in connection with the reporting utility's existing or proposed operations;

(2) Contributions for charitable, social or community welfare purposes;

(3) Membership fees and dues in social, service and recreational or athletic clubs and organizations;

(4) Penalties and fines paid on account of violations of statutes. This account shall also include penalties and fines paid on account of violations of U.S. antitrust statutes, including judgements and payments in settlement of civil and criminal suits alleging such violations; and

(5) Abandoned construction projects.

(i) Cash discounts on bills for material purchased shall not be included in this account.

[67 FR 5698, Feb. 6, 2002]

§ 32.7400 Nonoperating taxes.

This account shall include taxes arising from activities which are not a part of the central operations of the entity.

(a) This account shall be charged and Account 4330, Unamortized nonoperating investment tax credits—net, shall be credited with investment tax credits generated from qualified expenditures related to other operations which the company has elected to defer rather than recognize currently in income.

(b) This account shall be credited and Account 4330 shall be charged with the amortization of each year's investment tax credits included in such accounts relating to amortization of previously deferred investment tax credits of other property or regulated property, the amortization of which does not serve to reduce costs of service (but the unamortized balance does reduce rate base) for ratemaking purposes. Such amortization shall be determined with reference to the period of time used for computing book depreciation on the property with respect to which the tax credits relate.

(c) This account shall be charged and Account 4070, Income taxes—accrued, shall be credited for the amount of nonoperating Federal income taxes and state and local income taxes for the current period. This account shall also reflect subsequent adjustments to amounts previously charged.

(d) Taxes shall be accrued each month on an estimated basis and adjustments made as more current data becomes available.

(e) Companies that adopt the flow-through method of accounting for investment tax credits shall reduce the calculated provision in this account by the entire amount of the credit realized during the year. Tax credits, other than investment tax credits, if normalized, shall be recorded consistent with the accounting for investment tax credits.

(f) No entries shall be made to this account to reflect interperiod tax allocation.

(g) Taxes (both Federal and state) shall be accrued each month on an estimated basis and adjustments made as later data becomes available.

(h) This account shall be charged and Account 4080, Other taxes—accrued, shall be credited for all nonoperating taxes, other than Federal, state and local income taxes, and payroll related taxes for the current period. Among the items includable in this account are property, gross receipts, franchise and capital stock taxes. This account shall also reflect subsequent adjustments to amounts previously charged.

(i) This account shall be charged or credited, as appropriate, with contra entries recorded to the following accounts for nonoperating tax expenses that has been deferred in accordance with § 32.22: 4110 Net Current Deferred Nonoperating Income Taxes, 4350 Net Noncurrent Deferred Nonoperating Income Taxes.

(j) Subsidiary record categories shall be maintained to distinguish between property and nonproperty related deferrals and so that the company may separately report the amounts contained herein that relate to Federal, state and local income taxes. Such subsidiary record categories shall be reported as required by part 43 of this chapter.

[67 FR 5699, Feb. 6, 2002]

§ 32.7500 Interest and related items.

(a) This account shall include the current accruals of interest on all classes of funded debt the principal of which is includable in Account 4200, Long term debt and funded debt. It shall also include the interest on funded debt the maturity of which has been extended by specific agreement. This account shall be kept so that the interest on each class of funded debt may be shown separately in the annual reports to this Commission.

(b) These accounts shall not include charges for interest on funded debt issued or assumed by the company and held by or for it, whether pledged as collateral or held in its treasury, in special deposits or in sinking or other funds.

(c) Interest expressly provided for and included in the face amount of securities issued shall be charged at the time of issuance to Account 1280, Prepayments, and cleared to this account as the term expires to which the interest applies.

(d) This account shall also include monthly amortization of balances in Account 4200, Long-term debt and funded debt.

(e) This account shall include the interest portion of each capital lease payment.

(f) This account shall include the monthly amortization of the balances in Account 1410, Other noncurrent assets.

(g) This account shall include all interest deductions not provided for elsewhere, e.g., discount, premium, and expense on notes maturing one year or less from date of issue.

(h) A list of representative items of indebtedness, the interest on which is chargeable to this account, follows:

(1) Advances from affiliated companies;

(2) Advances from nonaffiliated companies and other liabilities;

(3) Assessments for public improvements past due;

(4) Bond coupons, matured and unpaid;

(5) Claims and judgments;

(6) Customers' deposits;

(7) Funded debt mature, with respect to which a definite agreement as to extension has not been made;

(8) Notes payable on demand or maturing one year or less from date of issue;

(9) Open accounts;

(10) Tax assessments, past due; and

(11) Discount, premium, and issuance expense of notes maturing one year or less from date of issue.

[67 FR 5699, Feb. 6, 2002]

§ 32.7600 Extraordinary items.

(a) This account is intended to segregate the effects of events or transactions that are extraordinary. Extraordinary events and transactions are distinguished by both their unusual nature and by the infrequency of their occurrence, taking into account the environment in which the company operates. This account shall also include the related income tax effect of the extraordinary items.

(b) This account shall be credited and/or charged with nontypical, noncustomary and infrequently recurring gains and/or losses which would significantly distort the current year's income computed before such extraordinary items, if reported other than as extraordinary items.

(c) This account shall be charged or credited and Account 4070, Income taxes—accrued, shall be credited or charged for all current income tax effects (Federal, state and local) of extraordinary items.

(d) This account shall also be charged or credited, as appropriate, with a contra amount recorded to Account 4350, Net noncurrent deferred nonoperating income taxes or Account 4110, Net current deferred nonoperating income taxes for the income tax effects (Federal, state and local) of extraordinary items that have been deferred in accordance with § 32.22.

[67 FR 5700, Feb. 6, 2002]

§ 32.7899 Content of accounts.

Jurisdictional differences and nonregulated income amounts shall be included in Accounts 7910 and 7990.

§ 32.7910 Income effect of jurisdictional ratemaking differences—net.

This account shall include the impact on revenues and expenses of the jurisdictional ratemaking practices which vary from those of this Commission. All entries recorded in this account shall be recorded net of the applicable income tax effects and shall be supported by appropriate subsidiary records, where necessary, as provided for in § 32.13(e) of subpart B.

§ 32.7990 Nonregulated net income.

(a) This account shall be used by those companies who offer nonregulated activities that do not involve the joint or common use of assets or resources used in the provision of both

regulated and nonregulated products and services, and which have not established a separate subsidiary for that purpose.

(b) All revenue and expenses (including taxes) incurred in these nonregulated activities shall be recorded on separate books of account for such operations. Only the net of the total revenues and total expenses shall be recorded in this account, with a contra debit or credit to account 1406.3.

[52 FR 6562, Mar. 4, 1987]

Subpart G—Glossary

§ 32.9000 Glossary of terms.

When used in this system of accounts:

Accelerated depreciation means a depreciation method or period of time, including the treatment given cost of removal and gross salvage, used in calculating depreciation deductions on income tax returns which is different from the depreciation method or period of time prescribed by this Commission for use in calculating depreciation expense recorded in a company's books of account.

Account means a specific element of a chart of accounts used to record, classify and accumulate similar financial transactions resulting from the operations of the entity. ''Accounts'' or ''these accounts'' refer to the accounts of this system of accounts.

Accounting system means the total set of interrelated principles, rules, requirements, definitions, accounts, records, procedures and mechanisms necessary to operate and evaluate the entity from a financial perspective. An accounting system generally consists of a chart of accounts, various parallel subsystems and subsidiary records. An accounting system is utilized to provide the necessary financial information to users to meet judiciary and other responsibilities.

Affiliated companies means companies that directly or indirectly through one or more intermediaries, control or are controlled by, or are under common control with, the accounting company. See also Control.

Amortization means the systematic recoveries, through ratable charges to expense, of the cost of assets.

Associated equipment means that equipment which functions with a specific type of plant or with two (2) or more types of plant, e.g., switching equipment, network power equipment, circuit equipment, common channel network signaling equipment or network operations equipment. Associated equipment shall be classified to the account appropriate for the type of equipment with which it is predominately used rather than on its own characteristics.

Illustrative examples of associated equipment are:

Alarm and signal apparatus
Auxiliary framing
Cable and cable racks
Distributing frames and equipment thereon
Frame and aisle lighting equipment (not permanently attached to the building)
Relay racks and panels

Basic service area means the minimum specified calling area for which a tariff is prescribed.

Book cost means the amount at which property is recorded in these accounts, without deduction of related allowances.

Common carrier or *carrier* means any person engaged as a common carrier for hire, in interstate or foreign communication by wire or radio or in interstate or foreign radio transmission of energy, except where reference is made to common carriers not subject to this Act; but a person engaged in radio broadcasting shall not, insofar as such person is so engaged, be deemed a common carrier.

Company or *the company*, when not otherwise indicated in the context, means the accounting entity. It includes such unincorporated entities which may be subject to the Communications Act of 1934, as amended.

Control (including the terms ''controlling,'' ''controlled by,'' and ''under common control with'') means the possession directly or indirectly, of the power to direct or cause the direction of the management and policies of a

company, whether such power is exercised through one or more intermediary companies, or alone, or in conjunction with, or pursuant to an agreement with, one or more other companies, and whether such power is established through a majority or minority ownership or voting of securities, common directors, officers, or stockholders, voting trusts, holding trusts, affiliated companies, contract, or any other direct or indirect means.

Cost, except as applied to telecommunications plants, franchises, and patent rights, means the amount of money actually paid (or the current money value of any consideration other than money exchanged) for property or services. See also Original Cost.

Cost of removal means the cost of demolishing, dismantling, removing, tearing down, or otherwise disposing of telecommunications plant and recovering the salvage, including the cost of transportation and handling incident thereto.

Depreciation means the loss not restored by current maintenance, incurred in connection with the consumption or prospective retirement of telecommunications plant in the course of service from causes which are known to be in current operation, against which the company is not protected by insurance, and the effect of which can be forecast with a reasonable approach to accuracy. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in technology, changes in demand and requirements of public authorities.

Entity means a legal enterprise (common carrier) engaged in interstate communications within the meaning of the Communications Act of 1934, as amended.

Group plan, as applied to depreciation accounting, means the plan under which depreciation charges are accrued upon the basis of the original cost of all property included in each depreciable plant account, using the average service life thereof properly weighted, and upon the retirement of any depreciable property its cost is charged to the depreciation reserve whether or not the particular item has attained the average service life.

Indexed revenue threshold for a given year means $100 million, adjusted for inflation, as measured by the Department of Commerce Gross Domestic Product Chain-type Price Index (GDP-CPI), for the period from October 19, 1992 to the given year. The indexed revenue threshold for a given year shall be determined by multiplying $100 million by the ratio of the annual value of the GDP-CPI for the given year to the estimated seasonally adjusted GDP-CPI on October 19, 1992. The indexed revenue threshold shall be rounded to the nearest $1 million. The seasonally adjusted GDP-CPI on October 19, 1992 is determined to be 100.69.

Intangible property means assets that have no physical existence but instead have value because of the rights which ownership confers.

Intrasystems means assets consisting of:

(1) PBX and Key System Common Equipment (a switchboard or switching equipment shared by all stations);

(2) Associated CPE station equipment (usually telephone or Key Telephone Systems); and

(3) Intrasystem wiring (all cable or wiring and associated components which connect the common equipment and the station equipment, located on the customer's side of the demarcation point).

An intrasystem does not include property, plant or equipment which are not solely dedicated to its operation.

Mid-sized incumbent local exchange carrier is a carrier whose annual revenue from regulated telecommunications operations equals or exceeds the indexed revenue threshold and whose revenue when aggregated with the revenues of any local exchange carrier that it controls, is controlled by, or with which it is under common control is less than $7 billion (indexed for inflation as measured by the Department of Commerce Gross Domestic Product Chain-type Price Index (GDP-CPI)).

Minor items, as applied to depreciable telecommunications plant, means any part or element of such plant, which

when removed, (with or without replacement) does not initiate retirement accounting.

Original cost or *cost*, as applied to telecommunications plant, rights of way and other intangible property, means the actual money cost of (or the current money value of any consideration other than money exchanged for) property at the time when it was first dedicated to use by a regulated telecommunications entity, whether the accounting company or by predecessors.

For the application of this definition to property acquired from predecessors see §32.2000(b)(1) of subpart C. Note also the definition of Cost in this section.

Plant retired means plant which has been removed, sold, abandoned, destroyed, or otherwise withdrawn from service.

Retirement units, as applied to depreciable telecommunications plant, means those items of plant which when removed (with or without replacement) cause the initiation of retirement accounting entries.

Salvage value means the amount received for property retired, if sold, or if retained for reuse, the amount at which the material recovered is chargeable to Account 1220, Material and Supplies, or other appropriate account.

Straight-line method, as applied to depreciation accounting, means the plan under which the cost of property is charged to operating expenses and credited to accumulated depreciation through equal annual charges as nearly as may be during its service life.

Subsidiary record means accumulation of detailed information which is required by this Commission to be maintained in support of entries to the accounts.

Subsidiary record categories means those segregations of certain regulated costs, expenses and revenues which must be maintained and are subject to specific reporting requirements of this Commission.

Subsystems, parallel mechanisms means processes or procedures which augment the use of a chart of accounts in the financial operation of the entity. These subsystems operate on and/or process account and subsidiary record information for specific purposes.

Telecommunications means any transmission, emission, or reception of signs, signals, writing, images or sounds or intelligence of any nature by wire, radio, visual or other electromagnetic systems. This encompasses the aggregate of several modes of conveying information, signals or messages over a distance. Included in the telecommunications industry is the transmitting, receiving, or exchanging of information among multiple locations. The minimum elements required for the telecommunications process to occur are a message source, a transmission medium and a receiver.

Time of installation means the date at which telecommunications plant is placed in service.

Time of retirement means the date at which telecommunications plant is retired from service.

Tangible property means assets characterized by physical existence, such as land, buildings, equipment, furniture, fixtures and tools.

[51 FR 43499, Dec. 2, 1986, as amended at 61 FR 50245, Sept. 25, 1996; 62 FR 39778, July 24, 1997; 62 FR 51064, Sept. 30, 1997; 64 FR 50008, Sept. 15, 1999; 67 FR 5700, Feb. 6, 2002]

PART 36—JURISDICTIONAL SEPARATIONS PROCEDURES; STANDARD PROCEDURES FOR SEPARATING TELECOMMUNICATIONS PROPERTY COSTS, REVENUES, EXPENSES, TAXES AND RESERVES FOR TELECOMMUNICATIONS COMPANIES [1]

Subpart A—General

Sec.

36.1 General.
36.2 Fundamental principles underlying procedures.
36.3 Freezing of jurisdictional separations category relationships and/or allocation factors.

[1] The Commission has determined that the same jurisdictional separations used in the contiguous states are to be used for Alaska, Hawaii, Puerto Rico and the Virgin Islands. *Integration of Rates and Services*, Docket No. 21263, 87 FCC 2nd 18 (1981); *Integration of Rates and Services*, Docket No. 21264, 72 FCC 2nd 699 (1979).

36.4 Streamlining procedures for processing petitions for waiver of study area boundaries.

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36.151 General.
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36.202 General.

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36.223 Interest and related items—Account 7500.
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36.225 Income effect of jurisdictional ratemaking differences—Account 7910.

Subpart D—Operating Expenses and Taxes

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36.301 Section arrangement.
36.302 General.

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36.310 General.

NETWORK SUPPORT/GENERAL SUPPORT EXPENSES

36.311 Network Support/General Support Expenses—Accounts 6110 and 6120 (Class B Telephone Companies); Accounts 6112, 6113, 6114, 6121, 6122, 6123, and 6124 (Class A Telephone Companies).

CENTRAL OFFICE EXPENSES

36.321 Central office expenses—Accounts 6210, 6220, and 6230 (Class B telephone companies); Accounts 6211, 6212, 6220, 6231, and 6232 (Class A telephone companies).

INFORMATION ORIGINATION/TERMINATION EXPENSES

36.331 Information origination/termination expenses—Account 6310 (Class B telephone companies); Accounts 6311, 6341, 6351, and 6362 (Class A telephone companies).

CABLE AND WIRE FACILITIES EXPENSES

36.341 Cable and wire facilities expenses—Account 6410 (Class B telephone companies); Accounts 6411, 6421, 6422, 6423, 6424, 6426, 6431, and 6441 (Class A telephone companies).

PLANT NONSPECIFIC OPERATIONS EXPENSES

36.351 General.

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36.352 Other property plant and equipment expenses—Account 6510 (Class B telephone companies); Accounts 6511 and 6512 (Class A telephone companies).

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36.374 Telephone operator services.
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36.412 Apportionment procedures.

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Subparts F–G [Reserved]

APPENDIX TO PART 36—GLOSSARY

AUTHORITY: 47 U.S.C. 151, 154(i) and (j), 205, 221(c), 254, 303(r), 403, 410, and 1302 unless otherwise noted.

SOURCE: 52 FR 17229, May 6, 1987, unless otherwise noted.

EDITORIAL NOTE: Nomenclature changes to part 36 appear at 74 FR 23956, May 22, 2009, and 77 FR 30411, May 23, 2012.

Subpart A—General

§ 36.1 General.

(a) This part contains an outline of separations procedures for telecommunications companies on the station-to-station basis. These procedures are applicable either to property costs, revenues, expenses, taxes, and reserves as recorded on the books of the company or to estimated amounts.

(1) Where a value basis is used instead of book costs, the ''costs'' referred to are the ''values'' of the property derived from the valuation.

(b) The separations procedures set forth in this part are designed primarily for the allocation of property

costs, revenues, expenses, taxes and reserves between state and interstate jurisdictions. For separations, where required, of the state portion between exchange and toll or for separations of individual exchanges or special services, further analyses and studies may be required to adapt the procedures to such additional separations.

(c) The fundamental basis on which separations are made is the use of telecommunications plant in each of the operations. The first step is the assignment of the cost of the plant to categories. The basis for making this assignment is the identification of the plant assignable to each category and the determination of the cost of the plant so identified. The second step is the apportionment of the cost of the plant in each category among the operations by direct assignment where possible, and all remaining costs are assigned by the application of appropriate use factors.

(d) In assigning book costs to categories, the costs used for certain plant classes are average unit costs which equate to all book costs of a particular account or subaccount; for other plant classes, the costs used are those which either directly approximate book cost levels or which are equated to match total book costs at a given location.

(e) The procedures outlined herein reflect ''short-cuts'' where practicable and where their application produces substantially the same separations results as would be obtained by the use of more detailed procedures, and they assume the use of records generally maintained by Telecommunications Companies.

(f) The classification to accounts of telecommunications property, revenues, expenses, etc., set forth in this manual is that prescribed by the Federal Communications Commission's Uniform System of Accounts for Telecommunications Companies.

(g) In the assignment of property costs to categories and in the apportionment of such costs among the operations, each amount so assigned and apportioned is identified as to the account classification in which the property is included. Thus, the separated results are identified by property accounts and apportionment bases are provided for those expenses which are separated on the basis of the apportionment of property costs. Similarly, amounts of revenues and expenses assigned each of the operations are identified as to account classification.

(h) The separations procedures described in this part are not to be interpreted as indicating what property, revenues, expenses and taxes, or what items carried in the income, reserve and retained earnings accounts, should or should not be considered in any investigation or rate proceeding.

§ 36.2 Fundamental principles underlying procedures.

(a) The following general principles underlie the procedures outlined in this part:

(1) Separations are intended to apportion costs among categories or jurisdictions by actual use or by direct assignment.

(2) Separations are made on the ''actual use'' basis, which gives consideration to relative occupancy and relative time measurements.

(3) In the development of ''actual use'' measurements, measurements of use are (i) determined for telecommunications plant or for work performed by operating forces on a unit basis (e.g., conversation-minute-kilometers per message, weighted standard work seconds per call) in studies of traffic handled or work performed during a representative period for all traffic and (ii) applied to overall traffic volumes, i.e., 24-hour rather than busy-hour volumes.

(b) Underlying the procedures included in this manual for the separation of plant costs is an over-all concept which may be described as follows:

(1) Telecommunications plant, in general, is segregable into two broad classifications, namely, (i) interexchange plant, which is plant used primarily to furnish toll services, and (ii) exchange plant, which is plant used primarily to furnish local services.

(2) Within the interexchange classification, there are three broad types of plant, i.e., operator systems, switching plant, and trunk transmission equipment. Within the exchange classification there are four board types of plant, i.e., operator systems, switching

plant, truck equipment and subscriber plant. Subscriber plant comprises lines to the subscriber.

(3) In general, the basis for apportioning telecommunications plant used jointly for state and interstate operations are:

(i) Operator work time expressed in weighted standard work seconds is the basis for measuring the use of operator systems.

(ii) Holding-time-minutes is the basis for measuring the use of local and toll switching plant.

(iii) Conversation-minute-kilometers or conversation minutes is the basis for measuring the use of interexchange circuit plant and holding-time minutes is the basis for measuring the use of exchange trunk plant. While the use of holding-time-minute-kilometers is the basic fundamental allocation factor for interexchange circuit plant and exchange trunk plant, the use of conversation-minute-kilometers or conversation-minutes for the allocation of interexchange circuit plant and holding-time minutes for the allocation of exchange trunk plant are considered practical approximations for separations between state and interstate operations when related to the broad types of plant classifications used herein.

(iv) Message telecommunications subscriber plant shall be apportioned on the basis of a Gross Allocator which assigns 25 percent to the interstate jurisdiction and 75 percent to the state jurisdiction.

(c) Property rented to affiliates, if not substantial in amount, is included as used property of the owning company with the associated revenues and expenses treated consistently: Also such property rented from affiliates is not included with the used property of the company making the separations; the rent paid is included in its expenses. If substantial in amount, the following treatment is applied:

(1) In the case of property rented to affiliates, the property and related expenses and rent revenues are excluded from the telephone operations of the owning company, and

(2) In the case of property rented from affiliates, the property and related expenses are included with, and the rent expenses are excluded from, the telephone operations of the company making the separation.

(d) Property rented to or from non-affiliates is usually to be included as used property of the owning company with the associated revenues and expenses treated consistently. In the event the amount is substantial, the property involved and the revenues and expenses associated therewith may be excluded from or included in the telecommunications operations of the company. When required, the cost of property rented to or from non-affiliates is determined using procedures that are consistent with the procedures for the allocation of costs among the operations.

(e) Costs associated with services or plant billed to another company which have once been separated under procedures consistent with general principles set forth in this part, and are thus identifiable as entirely interstate or State in nature, shall be directly assigned to the appropriate operation and jurisdiction.

[52 FR 17229, May 6, 1987, as amended at 58 FR 44905, Aug. 25, 1993; 71 FR 65745, Nov. 9, 2006]

§ 36.3 Freezing of jurisdictional separations category relationships and/or allocation factors.

(a) Effective July 1, 2001, through June 30, 2017, all local exchange carriers subject to part 36 rules shall apportion costs to the jurisdictions using their study area and/or exchange specific jurisdictional allocation factors calculated during the twelve month period ending December 31, 2000, for each of the categories/sub-categories as specified herein. Direct assignment of private line service costs between jurisdictions shall be updated annually. Other direct assignment of investment, expenses, revenues or taxes between jurisdictions shall be updated annually. Local exchange carriers that invest in telecommunications plant categories during the period July 1, 2001, through June 30, 2017, for which it had no separations allocation factors for the twelve month period ending December

31, 2000, shall apportion that investment among the jurisdictions in accordance with the separations procedures in effect as of December 31, 2000 for the duration of the freeze.

(b) Effective July 1, 2001, through June 30, 2017, local exchange carriers subject to price cap regulation, pursuant to §61.41 of this chapter, shall assign costs from the part 32 accounts to the separations categories/sub-categories, as specified herein, based on the percentage relationships of the categorized/sub-categorized costs to their associated part 32 accounts for the twelve month period ending December 31, 2000. If a part 32 account for separations purposes is categorized into more than one category, the percentage relationship among the categories shall be utilized as well. Local exchange carriers that invest in types of telecommunications plant during the period July 1, 2001, through June 30, 2017, for which it had no separations category investment for the twelve month period ending December 31, 2000, shall assign such investment to separations categories in accordance with the separations procedures in effect as of December 31, 2000. Local exchange carriers not subject to price cap regulation, pursuant to §61.41 of this chapter, may elect to be subject to the provisions of paragraph (b) of this section. Such election must be made prior to July 1, 2001. Local exchange carriers electing to become subject to paragraph (b) shall not be eligible to withdraw from such regulation for the duration of the freeze. Local exchange carriers participating in Association tariffs, pursuant to §69.601 *et seq.*, shall notify the Association prior to July 1, 2001, of such intent to be subject to the provisions of paragraph (b). Local exchange carriers not participating in Association tariffs shall notify the Commission prior to July 1, 2001, of such intent to be subject to the provisions of paragraph (b).

(c) Effective July 1, 2001, through June 30, 2017, any local exchange carrier that sells or otherwise transfers exchanges, or parts thereof, to another carrier's study area shall continue to utilize the factors and, if applicable, category relationships as specified in paragraphs (a) and (b) of this section.

(d) Effective July 1, 2001, through June 30, 2017, any local exchange carrier that buys or otherwise acquires exchanges or part thereof, shall calculate new, composite factors and, if applicable, category relationships based on a weighted average of both the seller's and purchaser's factors and category relationships calculated pursuant to paragraphs (a) and (b) of this section. This weighted average should be based on the number of access lines currently being served by the acquiring carrier and the number of access lines in the acquired exchanges.

(1) To compute the composite allocation factors and, if applicable, the composite category percentage relationships of the acquiring company, the acquiring carrier shall first sum its existing (pre-purchase) access lines (A) with the total access lines acquired from selling company (B). Then, multiply its factors and category relationship percentages by (A/(A + B)) and those of the selling company by (B/(A + B)) and sum the results.

(2) For carriers subject to a freeze of category relationships, the acquiring carrier should remove all categories of investment from the selling carrier's list of frozen category relationships where no such category investment exists within the sold exchange(s). The seller's remaining category relationships must then be increased proportionately to total 100 percent. Then, the adjusted seller's category relationships must be combined with those of the acquiring carrier as specified in §36.3(d)(1) to determine the category relationships for the acquiring carrier's post-transfer study area.

(e) Any local exchange carrier study area converting from average schedule company status, as defined in §69.605(c) of this chapter, to cost company status during the period July 1, 2001, through June 30, 2017, shall, for the first twelve months subsequent to conversion categorize the telecommunications plant and expenses and develop separations allocation factors in accordance with the separations procedures in effect as of December 31, 2000. Effective July 1, 2001 through June 30, 2017, such companies shall utilize the separations allocation factors and account categorization subject to the requirements of

paragraphs (a) and (b) of this section based on the category relationships and allocation factors for the twelve months subsequent to the conversion to cost company status.

[66 FR 33204, June 21, 2001, as amended at 79 FR 36235, June 26, 2014]

§ 36.4 Streamlining procedures for processing petitions for waiver of study area boundaries.

Effective January 1, 2012, local exchange carriers seeking a change in study area boundaries shall be subject to the following procedure:

(a) *Public Notice and Review Period.* Upon determination by the Wireline Competition Bureau that a petitioner has filed a complete petition for study area waiver and that the petition is appropriate for streamlined treatment, the Wireline Competition Bureau will issue a public notice seeking comment on the petition. Unless otherwise notified by the Wireline Competition Bureau, the petitioner is permitted to alter its study area boundaries on the 60th day after the reply comment due date, but only in accordance with the boundary changes proposed in its application.

(b) *Comment Cycle.* Comments on petitions for waiver may be filed during the first 30 days following public notice, and reply comments may be filed during the first 45 days following public notice, unless the public notice specifies a different pleading cycle. All comments on petitions for waiver shall be filed electronically, and shall satisfy such other filing requirements as may be specified in the public notice.

[76 FR 73853, Nov. 29, 2011]

Subpart B—Telecommunications Property

GENERAL

§ 36.101 Section arrangement.

(a) This subpart is arranged in sections as follows:

GENERAL

Telecommunications Plant in Service—Account 2001—36.101 and 36.102.
General Support Facilities—Account 2110—36.111 and 36.112.
Central Office Equipment—Accounts 2210, 2220, 2230—36.121 thru 36.126.
Information Origination/Termination Equipment—Account 2310—36.141 and 36.142.
Cable and Wire Facilities—Account 2410—36.151 thru 36.157.
Amortization Assets—Accounts 2680 and 2690—36.161 and 36.162.
Telecommunications Plant—Other Accounts 2002 thru 2005—36.171.
Rural Telephone Bank Stock—36.172.
Material and Supplies—Accounts 1220, and Cash Working Capital—36.181 and 36.182.
Equal Access Equipment—36.191.

[60 FR 12138, Mar. 6, 1995]

§ 36.102 General.

(a) This section contains an outline of the procedures used in the assignment of Telecommunications Plant in Service—Account 2001 to categories and the apportionment of the cost assigned to each category among the operations.

(b) The treatment of rental plant is outlined in §§ 36.2(c) through 36.2(e). If the amount of such plant is substantial, the cost may be determined by using the general procedures set forth for the assignment of the various kinds of property to categories.

(c) The amount of depreciation deductible from the book cost or ''value'' is apportioned among the operations in proportion to the separation of the cost of the related plant accounts.

GENERAL SUPPORT FACILITIES

§ 36.111 General.

(a) The costs of the general support facilities are contained in Account 2110, Land and Support Assets. This account contains land, buildings, motor vehicles, aircraft, special purpose vehicles, garage work equipment, other work equipment, furniture, office equipment and general purpose computers.

§ 36.112 Apportionment procedure.

(a) The costs of the general support facilities of Class A Companies (which are defined in part 32 of the Commission's Rules) are apportioned among the operations on the basis of the separation of the costs of the combined Big Three Expenses which include the following accounts:

Plant Specific Expenses

Central Office Switching Expenses—Accounts 6211 and 6212
Operators Systems Expenses—Account 6220
Central Office Transmission Expenses—Accounts 6231 and 6232
Information Origination/Termination Expenses—Accounts 6311, 6341, 6351, and 6362
Cable and Wire Facilities Expenses—Accounts 6411, 6421, 6422, 6423, 6424, 6426, 6431, and 6441

Plant Non-Specific Expenses

Network Operations Expenses—Accounts 6531, 6532, 6533, 6534, and 6535

Customer Operations Expenses

Marketing—Account 6611 and 6613
Services—Account 6620

(b) The costs of the general support facilities for Class B Companies (which are defined by part 32 of the Commission's Rules) are apportioned among the operations on the basis of the separation of the costs of Central Office Equipment, Information Origination/Termination Equipment, and Cable and Wire Facilities, combined.

[52 FR 17229, May 6, 1987, as amended at 53 FR 33012, Aug. 29, 1988; 69 FR 12549, Mar. 17, 2004]

CENTRAL OFFICE EQUIPMENT

§ 36.121 General.

(a) The costs of central office equipment are carried in the following accounts:

Central Office Switching	Account 2210.
Non-digital Switching	Account 2211.
Digital Electronic Switching.	Account 2212.
Operator Systems	Account 2220.
Central Office—Transmission.	Account 2230.
Radio Systems	Account 2231.
Circuit Equipment	Account 2232.

(b) Records of the cost of central office equipment are usually maintained for each study area separately by accounts. However, each account frequently includes equipment having more than one use. Also, equipment in one account frequently is associated closely with equipment in the same building in another account. Therefore, the separations procedures for central office equipment have been designed to deal with categories of plant rather than with equipment in an account.

(c) In the separation of the cost of central office equipment among the operations, the first step is the assignment of the equipment in each study area to categories. The basic method of making this assignment is the identification of the equipment assignable to each category, and the determination of the cost of the identified equipment by analysis of accounting, engineering and other records.

(1) The cost of common equipment not assigned to a specific category, e.g., common power equipment, including emergency power equipment, aisle lighting and framework, including distributing frames, is distributed among the categories in proportion to the cost of equipment, (excluding power equipment not dependent upon common power equipment) directly assigned to categories.

(i) The cost of power equipment used by one category is assigned directly to that category, e.g., 130 volt power supply provided for circuit equipment. The cost of emergency power equipment protecting only power equipment used by one category is also assigned directly to that category.

(ii) Where appropriate, a weighting factor is applied to the cost of circuit equipment in distributing the power plant costs not directly assigned, in order to reflect the generally greater power use per dollar of cost of this equipment.

(d) The second step is the apportionment of the cost of the equipment in each category among the operations through the application of appropriate use factors or by direct assignment.

[52 FR 17229, May 6, 1987, as amended at 69 FR 12549, Mar. 17, 2004]

§ 36.122 Categories and apportionment procedures.

(a) The following categories of central office equipment and apportionment procedures therefore are set forth in §§ 36.123 through 36.126.

Operator Systems Equipment.	Category 1.

Tandem Switching Equipment.	Category 2.
Local Switching Equipment.	Category 3.
Circuit Equipment	Category 4.

§ 36.123 Operator systems equipment—Category 1.

(a) Operator systems equipment is contained in Account 2220. It includes all types of manual telephone switchboards except tandem switchboards and those used solely for recording of calling telephone numbers in connection with customer dialed charge traffic. It includes all face equipment, terminating relay circuits of trunk and toll line circuits, cord circuits, cable turning sections, subscriber line equipment, associated toll connecting trunk equipment, number checking facilities, ticket distributing systems, calculagraphs, chief operator and other desks, operator chairs, and other such equipment.

(1) Operator systems equipment is generally classified according to operating arrangements of which the following are typical:

(i) Separate toll boards

(ii) Separate local manual boards

(iii) Combined local manual and toll boards

(iv) Combined toll and DSA boards

(v) Separate DSA and DSB boards

(vi) Service observing boards

(vii) Auxiliary service boards

(viii) Traffic service positions

(2) If switchboards as set forth in § 36.123(a) are of the key pulsing type, the cost of the key pulsing senders, link and trunk finder equipment is included with the switchboards.

(3) DSB boards include the associated DSB dial equipment, such as link and sender equipment.

(4) Traffic service position systems include the common control and trunk equipment in addition to the associated groups of positions wherever located.

(5) Effective July 1, 2001, through June 30, 2017, study areas subject to price cap regulation, pursuant to § 61.41 of this chapter, shall assign the average balance of Account 2220, Operator Systems, to the categories/subcategories, as specified in paragraph (a)(1) of this section, based on the relative percentage assignment of the average balance of Account 2220 to these categories/subcategories during the twelve month period ending December 31, 2000.

(6) Effective July 1, 2001 through June 30, 2017, all study areas shall apportion the costs assigned to the categories/subcategories, as specified in paragraph (a)(1) of this section, among the jurisdictions using the relative use measurements for the twelve month period ending December 31, 2000 for each of the categories/subcategories specified in paragraphs (b) through (e) of this section.

(b) The cost of the following operator systems equipment is apportioned among the operations on the basis of the relative number of weighted standard work seconds handled at the switchboards under consideration.

(1) The following types of switchboards at toll centers are generally apportioned individually:

(i) *Separate toll boards.* These usually include outward, through and inward positions in separate lines and associated inward toll switchboard positions in line.

(ii) Switchboards handling both local and toll, either combined or having segregated local and toll positions in the same line.

(iii) Switchboards handling both toll and DSA, either combined or having segregated toll and DSA positions in the same line.

(iv) Traffic service positions, including separately located groups of these positions when associated with a common basic control unit.

(2) The following types of switchboards at toll centers are apportioned individually, or by groups of comparable types of boards for each exchange:

(i) *Separate local manual boards.* This includes the local positions of manual boards where inward toll positions are in the same line.

(ii) Separate DSA boards.

(iii) Separate DSB boards.

(3) Tributary boards may be treated individually if warranted or they may be treated on a group basis.

(c) Auxiliary service boards generally handle rate and route, information, and intercept service at individual or joint positions. The cost of these boards is apportioned as follows:

(1) The cost of separate directory assistance boards is apportioned among the operations on the basis of the relative number of weighted standard work seconds handled at the boards under consideration. Directory assistance weighted standard work seconds are apportioned among the operations on the basis of the classification of these weighted standard work seconds as follows:

(i) Directory assistance weighted standard work seconds first are classified between calls received over toll directory assistance trunks from operators or customers and all other directory assistance calls.

(ii) The directory assistance weighted standard work seconds of each type further are classified separately among the operations on the basis of an analysis of a representative sample of directory assistance calls of each type with reference to the locations of the calling and called stations for each call.

(2) The cost of separate intercept boards and automated intercept systems in the study area is apportioned among the operations on the basis of the relative number of subscriber line minutes of use.

(3) The cost of separate rate and route boards is generally included with the cost of the toll boards served and is apportioned with those boards.

(4) Where more than one auxiliary service is handled at an auxiliary board, the cost of the board is apportioned among the auxiliary services on the basis of the relative number of weighted standard work seconds for each service. The cost of that part of the board allocated to each auxiliary service is apportioned among the operations in the same manner as for a separate auxiliary board.

(d) The cost of joint exchange and toll service observing boards is first apportioned between exchange and toll use on the basis of the relative number of exchange and toll service observing units at these boards. The cost of separate toll service observing boards and the toll portion of joint service observing boards is apportioned between state and interstate operations on the basis of the relative number of toll minutes of use associated with the toll messages originating in the offices observed.

(e) Traffic Service Position System (TSPS) investments are apportioned as follows:

(1) Operator position investments are apportioned on the basis of the relative weighted standard work seconds for the entire TSPS complex.

(2) Remote trunk arrangement (RTA) investments are apportioned on the basis of the relative processor real time (i.e., actual seconds) required to process TSPS traffic originating from the end offices served by each RTA.

(3) The remaining investments at the central control location, such as the stored program control and memory, is apportioned on the basis of the relative processor real time (i.e., actual seconds) for the entire TSPS complex.

[52 FR 17229, May 6, 1987, as amended at 66 FR 33205, June 21, 2001; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36236, June 26, 2014]

§ 36.124 Tandem switching equipment—Category 2.

(a) Tandem switching equipment is contained in Accounts 2210, 2211, and 2212. It includes all switching equipment in a tandem central office, including any associated tandem switchboard positions and any intertoll switching equipment. Intertoll switching equipment includes switching equipment used for the interconnection of message toll telephone circuits with each other or with local or tandem telephone central office trunks, intertoll dial selector equipment, or intertoll trunk equipment in No. 5 type electronic offices. Equipment, including switchboards used for recording of calling telephone numbers and other billing information in connection with customer dialed charge traffic is included with Local Switching Equipment—Category 3.

(1) At toll center toll offices, intertoll switching equipment comprises equipment in the toll office used in the interconnection of: Toll center to toll center circuits; toll center to tributary circuits; tributary to tributary circuits; toll center to tandem circuits or in the interconnection of the aforementioned types of circuits with

trunks to local offices in the toll center city, i.e., interconnection with toll switching trunks, operator trunks, information trunks, testing trunks, etc. Equipment associated with the local office end of such trunks is included with local switching equipment or switchboard categories as appropriate.

(2) At tributary offices, this category includes intertoll switching equipment similar to that at toll center toll offices if it is used in the interconnection of: Tributary to tributary circuits; tributary to subtributary circuits; subtributary to subtributary circuits; toll center to subtributary circuits; or if it is used jointly in the interconnection of any of the aforementioned types of circuits and in the interconnection of such toll circuits with trunk circuits for the handling of traffic terminating in the tributary office. Where comparable equipment has no joint use but is used only for the handling of traffic terminating in the tributary office, it is included in the local switching equipment category.

(3) At all switching entities, this category includes intertoll switching equipment similar to that at toll center toll offices if it is used in the interconnection of switched private line trunks or TWX switching plant trunks when these functions are in addition to the message telephone switching function. Switching entities wholly dedicated to switching of special services are assigned to Category 3—Local Switching Equipment.

(b) The costs of central office equipment items assigned this category are to be directly assigned when possible. When direct assignment is not possible the costs shall be apportioned among the operations on the basis of the relative number of study area minutes of use of this equipment.

(c) Effective July 1, 2001, through June 30, 2017, study areas subject to price cap regulation, pursuant to §61.41 of this chapter, shall assign the average balances of Accounts 2210, 2211, and 2212 to Category 2, Tandem Switching Equipment based on the relative percentage assignment of the average balances of Account 2210, 2211, 2212, and 2215 to Category 2, Tandem Switching Equipment during the twelve month period ending December 31, 2000.

(d) Effective July 1, 2001, through June 30, 2017, all study areas shall apportion costs in Category 2, Tandem Switching Equipment, among the jurisdictions using the relative number of study area minutes of use, as specified in paragraph (b) of this section, for the twelve month period ending December 31, 2000. Direct assignment of any subcategory of Category 2 Tandem Switching Equipment between jurisdictions shall be updated annually.

[52 FR 17229, May 6, 1987, as amended at 66 FR 33205, June 21, 2001; 69 FR 12549, Mar. 17, 2004; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36236, June 26, 2014]

§ 36.125 Local switching equipment—Category 3.

(a) Local switching equipment is included in accounts 2210, 2211, and 2212. It comprises all central office switching equipment not assigned other categories. Examples of local switching equipment are basic switching train, toll connecting trunk equipment, interlocal trunks, tandem trunks, terminating senders used for toll completion, toll completing train, call reverting equipment, weather and time of day service equipment, and switching equipment at electronic analog or digital remote line locations. Equipment used for the identification, recording and timing of customer dialed charge traffic, or switched private line traffic (*e.g.* transmitters, recorders, call identity indexers, perforators, ticketers, detectors, mastertimes) switchboards used solely for recording of calling telephone numbers in connection with customer dialed charge traffic, or switched private line traffic (or both) is included in this local switching category. Equipment provided and used primarily for operator dialed toll or customer dialed charge traffic except such equipment included in Category 2 Tandem Switching Equipment is also included in this local switching category. This includes such items as directors translators, sender registers, out trunk selectors and facilities for toll intercepting and digit absorption. Special services switching equipment which primarily performs the switching function for special services (*e.g.*

switching equipment, TWX concentrators and switchboards) is also included in this local switching category.

(1) Local office, as used in § 36.125, comprises one or more local switching entities of the same equipment type (e.g., step-by-step, No. 5 Crossbar) in an individual location. A local switching entity comprises that local central office equipment of the same type which has a common intermediate distributing frame, market group or other separately identifiable switching unit serving one or more prefixes (NNX codes).

(2) A host/remote local switching complex is composed of an electronic analog or digital host office and all of its remote locations. A host/remote local switching complex is treated as one local office. The current jurisdictional definition of an exchange will apply.

(3) Dial equipment minutes of use (DEM) is defined as the minutes of holding time of the originating and terminating local switching equipment. Holding time is defined in the Glossary.

(4) The interstate allocation factor is the percentage of local switching investment apportioned to the interstate jurisdiction.

(5) The interstate DEM factor is the ratio of the interstate DEM to the total DEM. A weighted interstate DEM factor is the product of multiplying a weighting factor, as defined in paragraph (f) of this section, to the interstate DEM factor. The state DEM factor is the ratio of the state DEM to the total DEM.

(b) Beginning January 1, 1993, Category 3 investment for study areas with 50,000 or more access lines is apportioned to the interstate jurisdiction on the basis of the interstate DEM factor. Category 3 investment for study areas with 50,000 or more access lines is apportioned to the state jurisdiction on the basis of the state DEM factor.

(c)–(e) [Reserved]

(f) Beginning January 1, 1998, for study areas with fewer than 50,000 access lines, Category 3 investment is apportioned to the interstate jurisdiction by the application of an interstate allocation factor that is the lesser of either .85 or the sum of the interstate DEM factor specified in paragraph (a)(5) of this section, and the difference between the 1996 interstate DEM factor and the 1996 interstate DEM factor multiplied by a weighting factor as determined by the table below. The Category 3 investment that is not assigned to the interstate jurisdiction pursuant to this paragraph is assigned to the state jurisdiction.

Number of access lines in service in study area	Weighting factor
0–10,000	3.0
10,001–20,000	2.5
20,001–50,000	2.0
50,001–or above	1.0

(g) For purposes of this section, an access line is a line that does not include WATS access lines, special access lines or private lines.

(h) Effective July 1, 2001, through June 30, 2017, study areas subject to price cap regulation, pursuant to § 61.41 of this chapter, shall assign the average balances of Accounts 2210, 2211, and 2212 to Category 3, Local Switching Equipment, based on the relative percentage assignment of the average balances of Account 2210, 2211, 2212 and 2215 to Category 3, during the twelve month period ending December 31, 2000.

(i) Effective July 1, 2001, through June 30, 2017, all study areas shall apportion costs in Category 3, Local Switching Equipment, among the jurisdictions using relative dial equipment minutes of use for the twelve month period ending December 31, 2000.

(j) If the number of a study area's access lines increases such that, under paragraph (f) of this section, the weighted interstate DEM factor for 1997 or any successive year would be reduced, that lowered weighted interstate DEM factor shall be applied to the study area's 1996 unweighted interstate DEM factor to derive a new local switching support factor. If the number of a study area's access lines decreases or has decreased such that, under paragraph (f) of this section, the weighted interstate DEM factor for 2010 or any successive year would be raised, that higher weighted interstate DEM factor shall be applied to the study area's 1996 unweighted interstate DEM factor to

derive a new local switching support factor.

[52 FR 17229, May 6, 1987, as amended at 53 FR 33011, 33012, Aug. 29, 1988; 62 FR 32946, June 17, 1997; 63 FR 2124, Jan. 13, 1998; 66 FR 33205, June 21, 2001; 69 FR 12549, Mar. 17, 2004; 71 FR 65745, Nov. 9, 2006; 75 FR 17874, Apr. 8, 2010; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36236, June 26, 2014]

§ 36.126 Circuit equipment—Category 4.

(a) For the purpose of this section, the term ''Circuit Equipment'' encompasses the Radio Systems and Circuit Equipment contained in Accounts 2230 through 2232 respectively. It includes central office equipment, other than switching equipment and automatic message recording equipment, which is used to derive communications transmission channels or which is used for the amplification, modulation, regeneration, testing, balancing or control of signals transmitted over communications transmission channels. Examples of circuit equipment in general use include:

(1) Carrier telephone and telegraph system terminals.

(2) Telephone and telegraph repeaters, termination sets, impedance compensators, pulse link repeaters, echo suppressors and other intermediate transmission amplification and balancing equipment except that included in switchboards.

(3) Radio transmitters, receivers, repeaters and other radio central office equipment except message switching equipment associated with radio systems.

(4) Composite ringers, line signaling and switching pad circuits.

(5) Concentration equipment.

(6) Composite sets and repeating coils.

(7) Program transmission amplifiers, monitoring devices and volume indicators.

(8) Testboards, test desks, repair desks and patch bays, including those provided for test and control, and for telegraph and transmission testing.

(b) For apportionment among the operations, the cost of circuit equiment is assigned to the following subsidiary categories:

(1) *Exchange Circuit Equipment—Category 4.1.* (i) Wideband Exchange Line Circuit Equipment—Category 4.11.

(ii) Exchange Trunk Circuit Equipment (Wideband and Non-Wideband)—Category 4.12.

(iii) Exchange Line Circuit Equipment Excluding Wideband—Category 4.13.

(2) *Interexchange Circuit Equipment—Category 4.2.* (i) Interexchange Circuit Equipment Furnished to Another Company for Interstate Use—Category 4.21.

(ii) Interexchange Circuit Equipment Used for Wideband Services including Satellite and Earth Station Equipment used for Wideband Service—Category 4.22.

(iii) All Other Interexchange Circuit Equipment—Category 4.23.

(3) *Host/Remote Message Circuit Equipment—Category 4.3.* (4) In addition, for the purpose of identifying and separating property associated with special services, circuit equipment included in Categories 4.12 (other than wideband equipment) 4.13 and 4.23 is identified as either basic circuit equipment, i.e., equipment that performs functions necessary to provide and operate channels suitable for voice transmission (telephone grade channels), or special circuit equipment, i.e., equipment that is peculiar to special service circuits. Carrier telephone terminals and carrier telephone repeaters are examples of basic circuit equipment is general use, while audio program transmission amplifiers, bridges, monitoring devices and volume indicators, telegraph carrier terminals and telegraph repeaters are examples of special circuit equipment in general use. Cost of exchange circuit equipment included in Categories 4.12 and 4.13 and the interexchange circuit equipment in Categories 4.21, 4.22 and 4.23 are segregated between basic circuit equipment and special circuit equipment only at those locations where amounts of interexchange and exchange special circuit equipment are significant. Where such segregation is not made, the total costs in these categories are classified as basic circuit equipment.

(5) Effective July 1, 2001, through June 30, 2014, study areas subject to price cap regulation, pursuant to

§ 61.41, shall assign the average balances of Accounts 2230 through 2232 to the categories/subcategories as specified in § 36.126(b)(1) through (b)(4) based on the relative percentage assignment of the average balances of Accounts 2230 through 2232 costs to these categories/subcategories during the twelve month period ending December 31, 2000.

(6) Effective July 1, 2001, through June 30, 2017, study areas subject to price cap regulation, pursuant to § 61.41 of this chapter, shall assign the average balances of Accounts 2230 through 2232 to the categories/subcategories as specified in paragraphs (b)(1) through (4) of this section based on the relative percentage assignment of the average balances of Accounts 2230 through 2232 costs to these categories/subcategories during the twelve month period ending December 31, 2000.

(c) Apportionment of Exchange Circuit Equipment Among the Operations:

(1) Wideband Exchange Line Circuit Equipment—Category 4.11—The cost of exchange circuit equipment in this category is determined separately for each wideband facility. The respective costs are allocated to the appropriate operation in the same manner as the related exchange line cable and wire facilities described in § 36.155.

(2) Exchange Trunk Circuit Equipment (Wideband and Non-Wideband)—Category 4.12—The cost of exchange circuit equipment associated with this category for the study area is allocated to the appropriate operation in the same manner as the related exchange trunk cable and wire facilities as described in § 36.155.

(3) Exchange Line Circuit Equipment Excluding Wideband—Category 4.13—The cost of Circuit Equipment associated with exchange line plant excluding wideband for the study area is assigned to subcategories and is allocated to the appropriate operation in the same manner as the related exchange line cable and wire facilities for nonwideband service as described in § 36.154.

(4) Effective July 1, 2001, through June 30, 2017, all study areas shall apportion costs in the categories/subcategories, as specified in paragraphs (b)(1) through (4) of this section, among the jurisdictions using the relative use measurements or factors, as specified in paragraphs (c)(1) through (3) of this section for the twelve month period ending December 31, 2000. Direct assignment of any subcategory of Category 4.1 Exchange Circuit Equipment to the jurisdictions shall be updated annually.

(d) Apportionment of Interexchange Circuit Equipment among the Operations: Procedures to be Used by Interexchange Carriers. (1) Interexchange Circuit Equipment Furnished to Another Company for Interstate Use—Category 4.21—This category comprises that circuit equipment provided for the use of another company as an integral part of its interexchange circuit facilities used wholly for interstate services. This category includes such circuit equipment as telephone carrier, terminals telegraph carrier terminals, and microwave systems used wholly for interstate services. The total cost of the circuit equipment in this category for the study area is assigned to the interstate operation.

(2) Interexchange Circuit Equipment Used for Wideband Service—Category 4.22—This category includes the circuit equipment portion of interexchange channels used for wideband services. The cost of interexchange circuit equipment in this category is determined separately for each wideband channel and is segregated between message and private line services on the basis of the use of the channels provided. The respective costs are allocated to the appropriate operation in the same manner as the related interexchange cable and wire facilities as described in § 36.156.

(3) All Other Interexchange Circuit Equipment—Category 4.23—This category includes the cost of all interexchange circuit equipment not assigned to Categories 4.21 and 4.22. Interexchange carriers shall freeze the allocation factors for Category 4.23 investment at levels reached on December 31, 1985, derived by using the procedures in effect at that time. On January 1, 1988, and thereafter, that frozen allocation factor shall be applied to each interexchange carrier's Category 4.23 investment to derive the interstate allocation. On January 1, 1988, and thereafter, the amount of investment

allocated to the interstate jurisdiction will vary but the relative proportion of the total investment that is allocated to the interstate jurisdiction will remain frozen at 1985 levels.

(e) Apportionment of Interexchange Circuit Equipment among the Operations: Procedures To Be Used by Exchange Carriers. (1) Interexchange Circuit Equipment Furnished to Another Company for Interstate Use—Category 4.21—This category comprises that circuit equipment provided for the use of another company as an integral part of its interexchange circuit facilities used wholly for interstate services. This category includes such circuit equipment as telephone carrier terminals telegraph carrier terminals, and microwave systems used wholly for interstate services. The total cost of the circuit equipment in this category for the study area is assigned to the interstate operation.

(2) Interexchange Circuit Equipment Used for Wideband Service—Category 4.22—This category includes the circuit equipment portion of interexchange channels used for wideband services. The cost of interexchange circuit equipment in this category is determined separately for each wideband channel and is segregated between message and private line services on the basis of the use of the channels provided. The respective costs are allocated to the appropriate operation in the same manner as the related interexchange cable and wire facilities described in § 36.156.

(3) All Other Interexchange Circuit Equipment—Category 4.23—This category includes the cost of all interexchange circuit equipment not assigned to Categories 4.21 and 4.22. The cost of interexchange basic circuit equipment used for the following classes of circuits is included in this category: Jointly used message circuits, *i.e.*, message switching plant circuits carrying messages from the state and interstate operations; circuits used for state private line service; and circuits used for state private line services.

(i) An average interexchange circuit equipment cost per equivalent interexchange telephone termination for all circuits is determined and applied to the equivalent interexchange telephone termination counts of each of the following classes of circuits: Private Line, State Private Line, Message. The cost of interstate private line circuits is assigned directly to the interstate operation. The cost of state private line circuits is assigned directly to the state operation. The cost of message circuits is apportioned between the state and interstate operations on the basis of the relative number of study area conversation-minutes applicable to such facilities.

(ii) [Reserved]

(iii) The cost of special circuit equipment is segregated among telegraph grade private line services and other private line services based on an analysis of the use of the equipment and in accordance with § 36.126(b)(4). The special circuit equipment cost assigned to telegraph grade and other private line services is directly assigned to the appropriate operations.

(4) Effective July 1, 2001, through June 30, 2017, all study areas shall apportion costs in the categories/subcategories specified in paragraphs (e)(1) through (3) of this section among the jurisdictions using relative use measurements or factors, as specified in paragraphs (e)(1) through (3) for the twelve month period ending December 31, 2000. Direct assignment of any subcategory of Category 4.2 Interexchange Circuit Equipment to the jurisdictions shall be updated annually.

(f) Apportionment of Host/Remote Message Circuit Equipment Among the Operations.

(1) Host/Remote Message Circuit Equipment—Category 4.3. This category includes message host/remote location circuit equipment for which a message circuit switching function is performed at the host central office associated with cable and wire facilities as described in § 36.152(c).

(i) The category 4.3 cost of host/remote circuit equipment assigned to message services for the study area is apportioned among the exchange, intrastate toll, and interstate toll operations on the basis of the assignment of host/remote message cable and wire facilities as described in § 36.157.

(ii) [Reserved]

(2) Effective July 1, 2001, through June 30, 2017, all study areas shall apportion costs in the subcategory specified in paragraph (f)(1) of this section among the jurisdictions using the allocation factor, as specified in paragraph (f)(1)(i) of this section, for this subcategory for the twelve month period ending December 31, 2000. Direct assignment of any Category 4.3 Host/Remote Message Circuit Equipment to the jurisdictions shall be updated annually.

[52 FR 17229, May 6, 1987, as amended at 53 FR 33012 Aug. 29, 1988; 66 FR 33205, June 21, 2001; 69 FR 12550, Mar. 17, 2004; 71 FR 65745, Nov. 9, 2006; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36236, June 26, 2014]

INFORMATION ORIGINATION/TERMINATION (IOT) EQUIPMENT

§ 36.141 General.

(a) Information Origination/Termination Equipment is maintained in Account 2310 and includes station apparatus, embedded customer premises wiring, large private branch exchanges, public telephone terminal equipment, and other terminal equipment.

(b) The costs in Account 2310 shall be segregated between Other Information Origination/Termination Equipment—Category 1, and New Customer Premises Equipment—Category 2 by an analysis of accounting, engineering and other records.

(c) Effective July 1, 2001, through June 30, 2017, local exchange carriers subject to price cap regulation, pursuant to §61.41 of this chapter, shall assign the average balance of Account 2310 to the categories, as specified in paragraph (b) of this section, based on the relative percentage assignment of the average balance of Account 2310 to these categories during the twelve month period ending December 31, 2000.

[52 FR 17229, May 6, 1987, as amended at 66 FR 33206, June 21, 2001; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36237, June 26, 2014]

§ 36.142 Categories and apportionment procedures.

(a) *Other Information Origination/Termination Equipment—Category 1.* This category includes the cost of other information origination/termination equipment not assigned to Category 2. The costs of other information origination/termination equipment are allocated pursuant to the factor that is used to allocate subcategory 1.3 Exchange Line C&WF.

(b) *Customer Premises Equipment—Category 2.* This category includes the cost of Customer Premises Equipment that was detariffed pursuant to the Second Computer Inquiry decision. It shall be assigned to the state operations.

(c) Effective July 1, 2001, through June 30, 2017, all study areas shall apportion costs in the categories, as specified in §36.141(b), among the jurisdictions using the relative use measurements or factors, as specified in paragraph (a) of this section, for the twelve month period ending December 31, 2000. Direct assignment of any category of Information Origination/Termination Equipment to the jurisdictions shall be updated annually.

[52 FR 17229, May 6, 1987, as amended at 66 FR 33206, June 21, 2001; 71 FR 65746, Nov. 9, 2006; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36237, June 26, 2014]

CABLE AND WIRE FACILITIES

§ 36.151 General.

(a) Cable and Wire Facilities, Account 2410, includes the following types of communications plant in service: Poles and antenna supporting structures, aerial cable, underground cable, buried cable, submarine cable, deep sea cable, intrabuilding network cable, aerial wire and conduit systems.

(b) For separations purposes, it is necessary to analyze the cable and wire facilities classified in subordinate records in order to determine their assignment to the categories listed in the following paragraphs.

(c) In the separation of the cost of cable and wire facilities among the operations, the first step is the assignment of the facilities to certain categories. The basic method of making this assignment is the identification of the facilities assignable to each category and the determination of the cost of the facilities so identified. Because of variations among companies in the character of the facilities and operating conditions, and in the accounting and engineering records

maintained, the detailed methods followed, of necessity, will vary among the companies. The general principles to be followed, however, will be the same for all companies.

(d) The second step is the apportionment of the cost of the facilities in each category among the operations through the application of appropriate factors or by direct assignment.

§ 36.152 Categories of Cable and Wire Facilities (C&WF).

(a) C&WF are basically divided between exchange and interexchange. Exchange C&WF consists of the following categories:

(1) Exchange Line C&WF *Excluding Wideband*—Category 1—This category includes C&W facilities between local central offices and subscriber premises used for message telephone, private line, local channels, and for circuits between control terminals and radio stations providing very high frequency maritime service or urban or highway mobile service.

(2) *Wideband and* Exchange Trunk C&WF—Category 2—This category includes all wideband, including Exchange Line Wideband and C&WF between local central offices and Wideband facilities. It also includes C&WF between central offices or other switching points used by any common carrier for interlocal trunks wholly within an exchange or metropolitan service area, interlocal trunks with one or both terminals outside a metropolitan service area carrying some exchange traffic, toll connecting trunks, tandem trunks principally carrying exchange traffic, the exchange trunk portion of WATS access lines, the exchange trunk portion of private line local channels, and the exchange trunk portion of circuits between control terminals and radio stations providing very high frequency maritime service or urban or highway mobile service.

(3) The procedures for apportioning the cost of exchange cable and wire facilities among the operations are set forth in §§ 36.154 and 36.155.

(b) Interexchange C&WF—Category 3—This category includes the C&WF used for message toll and toll private line services. It includes cable and wire facilities carrying intertoll circuits, tributary circuits, the interexchange channel portion of special service circuits, circuits between control terminals and radio stations used for overseas or coastal harbor service, interlocal trunks between offices in the different exchange or metropolitan service areas carrying only message toll traffic and certain tandem trunks which carry principally message toll traffic.

(1) The procedures for apportioning the cost of interexchange cable and wire facilities among the operations are set forth in § 36.156.

(c) Host/Remote Message C&WF—Category 4—This category includes the cost of message host/remote location C&WF for which a message circuit switching function is performed at the host central office. It applies to C&WF between host offices and all remote locations. The procedures for apportioning the cost of these facilities among the operations are set forth in § 36.157.

(d) Effective July 1, 2001, through June 30, 2017, study areas subject to price cap regulation, pursuant to § 61.41 of this chapter, shall assign the average balance of Account 2410 to the categories/subcategories, as specified in paragraph (a) through (c) of this section based on the relative percentage assignment of the average balance of Account 2410 to these categories/subcategories during the twelve month period ending December 31, 2000.

[52 FR 17229, May 6, 1987, as amended at 66 FR 33206, June 21, 2001; 71 FR 65746, Nov. 9, 2006; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36237, June 26, 2014]

§ 36.153 Assignment of Cable and Wire Facilities (C&WF) to categories.

(a) Cable consists of: Aerial cable, underground cable, buried cable, submarine cable, deep sea cable and intrabuilding network cable. Where an entire cable or aerial wire is assignable to one category, its cost and quantity are, where practicable, directly assigned.

(1) *Cable.* (i) There are two basic methods for assigning the cost of cable to the various categories. Both of them are on the basis of conductor cross section. The methods are as follows:

(A) By section of cable, uniform as to makeup and relative use by categories. From an analysis of cable engineering and assignment records, determine in terms of equivalent gauge the number of pairs in use or reserved, for each category. The corresponding percentages of use, or reservation, are applied to the cost of the section of cable, i.e., sheath meters times unit cost per meter, to obtain the cost assignable to each category.

(B) By using equivalent pair kilometers, i.e., pair kilometers expressed in terms of equivalent gauge. From an analysis of cable engineering and assignment records, determine the equivalent pair kilometers in use for each category by type of facility, e.g., quadded, paired. The equivalent pair kilometers are then divided by a cable fill factor to obtain the equivalent pair kilometers in plant. The total equivalent pair kilometers in plant assigned to each category is summarized by type of facility, e.g., quadded and paired, and priced at appropriate average unit costs per equivalent pair kilometer in plant. If desired, this study may be made in terms of circuit kilometers rather than physical pair kilometers, with average cost and fill data consistent with the basis of the facilities kilometer count.

(ii) In the assignment of the cost of cable under the two basic methods described in §36.153(a)(1)(i) consideration is given to the following:

(A) Method (A) described in §36.153(a)(1)(i)(A) will probably be found more desirable where there is a relatively small amount of cable of variable make-up and use by categories. Conversely, method (B) described in §36.153(a)(1)(i)(B) will probably be more desirable where there is a large amount of cable of variable make-up and use by categories. However, in some cases a combination of both methods may be desirable.

(B) It will be desirable in some cases to determine the amount assignable to a particular category by deducting from the total the sum of the amounts assigned to all other categories.

(C) For use in the assignment of poles to categories, the equivalent sheath kilometers of aerial cable assigned to each category are determined. For convenience, these quantities are determined in connection with assignment of cable costs.

(D) Where an entire cable is assignable to one category, its costs and quantity are, where practicable, directly assigned.

(iii) For cables especially arranged for high-frequency transmission such as shielded, disc-insulated and coaxial, recognition is given to the additional costs which are charged to the high-frequency complement.

(2) *Cable Loading.* (i) Methods for assigning the cost of loading coils, cases, etc., to categories are comparable with those used in assigning the associated cable to categories. Loading associated with cable which is directly assigned to a given category is also directly assigned. The remaining loading is assigned to categories in either of the following bases:

(A) By an analysis of the use made of the loading facilities where a loading coil case includes coils assignable to more than one category, e.g., in the case of a single gauge uniformly loaded section, the percentage used in the related cable assignment are applicable, or

(B) By pricing out each category by determining the pair meters of loaded pairs assigned to each category and multiplying by the unit cost per pair meter of loading by type.

(3) *Other Cable Plant.* (i) In view of the small amounts involved, the cost of all protected terminals and gas pressure contactor terminals in the toll cable subaccounts is assigned to the appropriate Interexchange Cable & Wire Facilities categories. The cost of all other terminals in the exchange and toll cable subaccounts is assigned to Exchange Cable and Wire Facilities.

(b) *Aerial Wire.* (1) The cost of wire accounted for as exchange is assigned to the appropriate Exchange Cable & Wire Facilities categories. The cost of wire accounted for as toll, which is used for exchange, is also assigned to the appropriate Exchange Cable & Wire Facilities categories. The cost of the remaining wire accounted for as toll is assigned to the appropriate Interexchange Cable & Wire Facilities categories as described in §36.156. For companies not maintaining exchange

and toll subaccounts, it is necessary to review the plant records and identify wire plant by use. The cost of wire used for providing circuits directly assignable to a category is assigned to that category. The cost of wire used for providing circuit facilities jointly used for exchange and interexchange lines is assigned to categories on the basis of the relative number of circuit kilometers involved.

(c) *Poles and Antenna Supporting Structures.* (1) In the assignment of these costs, anchors, guys, crossarms, antenna supporting structure, and right-of-way are included with the poles.

(2) Poles. (i) The cost of poles is assigned to categories based on the ratio of the cost of poles to the total cost of aerial wire and aerial cable.

(d) *Conduit Systems.* (1) The cost of conduit systems is assigned to categories on the basis of the assignment of the cost of underground cable.

[53 FR 17229, May 6, 1987, as amended at 53 FR 33012, Aug. 29, 1988; 58 FR 44905, Aug. 25, 1993]

§ 36.154 Exchange Line Cable and Wire Facilities (C&WF)—Category 1—apportionment procedures.

(a) *Exchange Line C&WF—Category 1.* The first step in apportioning the cost of exchange line cable and wire facilities among the operations is the determination of an average cost per working loop. This average cost per working loop is determined by dividing the total cost of exchange line cable and wire Category 1 in the study area by the sum of the working loops described in subcategories listed below. The subcategories are:

Subcategory 1.1—State Private Lines and State WATS Lines. This subcategory shall include all private lines and WATS lines carrying exclusively state traffic as well as private lines and WATS lines carrying both state and interstate traffic if the interstate traffic on the line involved constitutes ten percent or less of the total traffic on the line.

Subcategory 1.2—Interstate private lines and interstate WATS lines. This subcategory shall include all private lines and WATS lines that carry exclusively interstate traffic as well as private lines and WATS lines carrying both state and interstate traffic if the interstate traffic on the line involved constitutes more than ten percent of the total traffic on the line.

Subcategory 1.3—Subscriber or common lines that are jointly used for local exchange service and exchange access for state and interstate interexchange services.

(b) The costs assigned to subcategories 1.1 and 1.2 shall be directly assigned to the appropriate jurisdication.

(c) Effective January 1, 1986, 25 percent of the costs assigned to subcategory 1.3 shall be allocated to the interstate jurisdiction.

(d)–(f) [Reserved]

(g) Effective July 1, 2001, through June 30, 2017, all study areas shall apportion Subcategory 1.3 Exchange Line C&WF among the jurisdictions as specified in paragraph (c) of this section. Direct assignment of subcategory Categories 1.1 and 1.2 Exchange Line C&WF to the jurisdictions shall be updated annually as specified in paragraph (b) of this section.

[52 FR 17229, May 6, 1987, as amended at 53 FR 33012, Aug. 29, 1988; 54 FR 31033, July 26, 1989; 66 FR 33206, June 21, 2001; 67 FR 17014, Apr. 9, 2002; 71 FR 65746, Nov. 9, 2006; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36237, June 26, 2014]

§ 36.155 Wideband and exchange trunk (C&WF)—Category 2—apportionment procedures.

(a) The cost of C&WF applicable to this category shall be directly assigned where feasible. If direct assignment is not feasible, cost shall be apportioned between the state and interstate jurisdictions on the basis of the relative number of minutes of use.

(b) Effective July 1, 2001, through June 30, 2017, all study areas shall apportion Category 2 Wideband and exchange trunk C&WF among the jurisdictions using the relative number of minutes of use, as specified in paragraph (a) of this section, for the twelve-month period ending December

31, 2000. Direct assignment of any Category 2 equipment to the jurisdictions shall be updated annually.

[52 FR 17229, May 6, 1987, as amended at 66 FR 33206, June 21, 2001; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36237, June 26, 2014]

§ 36.156 Interexchange Cable and Wire Facilities (C&WF)—Category 3—apportionment procedures.

(a) An average interexchange cable and wire facilities cost per equivalent interexchange telephone circuit kilometer for all circuits in Category 3 is determined and applied to the equivalent interexchange telephone circuit kilometer counts of each of the classes of circuits.

(b) The cost of C&WF applicable to this category shall be directly assigned where feasible. If direct assignment is not feasible, cost shall be apportioned between the state and interstate jurisdiction on the basis of conversation-minute kilometers as applied to toll message circuits, etc.

(c) Effective July 1, 2001, through June 30, 2017, all study areas shall directly assign Category 3 Interexchange Cable and Wire Facilities C&WF where feasible. All study areas shall apportion the non-directly assigned costs in Category 3 equipment to the jurisdictions using the relative use measurements, as specified in paragraph (b) of this section, during the twelve-month period ending December 31, 2000.

[58 FR 44905, Aug. 25, 1993, as amended at 66 FR 33206, June 21, 2001; 71 FR 65746, Nov. 9, 2006; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36237, June 26, 2014]

§ 36.157 Host/remote message Cable and Wire Facilities (C&WF)—Category 4—apportionment procedures.

(a) *Host/Remote Message C&WF—Category 4.* The cost of host/remote C&WF used for message circuits, i.e., circuits carrying only message traffic, is included in this category.

(1) The cost of host/remote message C&WF excluding WATS closed end access lines for the study area is apportioned on the basis of the relative number of study area minutes-of-use kilometers applicable to such facilities.

(2) The cost of host/remote message C&WF used for WATS closed end access for the study area is directly assigned to the appropriate jurisdiction.

(b) Effective July 1, 2001, through June 30, 2017, all study areas shall apportion Category 4 Host/Remote message Cable and Wire Facilities C&WF among the jurisdictions using the relative number of study area minutes-of-use kilometers applicable to such facilities, as specified in paragraph (a)(1) of this section, for the twelve month period ending December 31, 2000. Direct assignment of any Category 4 equipment to the jurisdictions shall be updated annually.

[52 FR 17229, May 6, 1987, as amended at 58 FR 44905, Aug. 25, 1993; 66 FR 33206, June 21, 2001; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36237, June 26, 2014]

AMORTIZABLE ASSETS

§ 36.161 Tangible assets—Account 2680.

(a) Tangible Assets, Account 2680 includes the costs of property acquired under capital leases and the original cost of leasehold improvements.

(b) The costs of capital leases are apportioned among the operations based on similar plant owned or by analysis.

(c) The cost of leasehold improvements are apportioned among the operations in direct proportion to the costs of the related primary account.

§ 36.162 Intangible assets—Account 2690.

(a) Intangible Assets, Account 2690 includes the costs of organizing and incorporating the company, franchises, patent rights, and other intangible property having a life of more than one year.

(b) The amount included in this account is apportioned among the operations on the basis of the separation of the cost of Telecommunications Plant In Service, Account 2001, excluding the Intangible Assets, Account 2690.

TELECOMMUNICATIONS PLANT—OTHER

§ 36.171 Property held for future telecommunications use—Account 2002; Telecommunications plant under construction—Account 2003; and Telecommunications plant adjustment—Account 2005.

The amounts carried in Accounts 2002, 2003, and 2005 are apportioned among the operations on the basis of the apportionment of Account 2001, Telecommunications Plant in Service.

[60 FR 12138, Mar. 6, 1995]

RURAL TELEPHONE BANK STOCK

§ 36.172 Other noncurrent assets—Account 1410.

(a) The amounts carried in this account shall be separated into subsidiary record categories:

(1) Class B RTB Stock and

(2) All other.

(b) The amounts contained in category (2) all other of §36.172(a)(2), shall be excluded from part 36 jurisdictional separations.

(c) The amounts contained in category (1) Class B RTB stock of §36.172(a)(1), shall be allocated based on the relative separations of Account 2001, Telephone Plant in Service.

[52 FR 17229, May 6, 1987, as amended at 53 FR 33012, Aug. 29, 1988]

MATERIAL AND SUPPLIES AND CASH WORKING CAPITAL

§ 36.181 Material and supplies—Account 1220.

(a) The amount included in Account 1220 is apportioned among the operations on the basis of the apportionment of the cost of cable and wire facilities in service. Any amounts included in Account 1220 associated with the Customer Premises portion of Account 2310 equipment, shall be excluded from the amounts which are allocated to the interstate operation.

§ 36.182 Cash working capital.

(a) The amount for cash working capital, if not determined directly for a particular operation, is apportioned among the operations on the basis of total expenses less non-cash expense items.

EQUAL ACCESS EQUIPMENT

§ 36.191 Equal access equipment.

(a) Equal access investment includes only initial incremental expenditures for hardware and other equipment related directly to the provision of equal access which would not be required to upgrade the capabilities of the office involved absent the provision of equal access. Equal access investment is limited to such expenditures for converting central offices which serve competitive interexchange carriers or where there has been a bona fide request for conversion to equal access.

(b) Equal access investment is first segregated from all other amounts in the primary accounts.

(c) The equal access investment determined in this manner is allocated between the jurisdictions on the basis of relative state and interstate equal access traffic including interstate interLATA equal access traffic, intrastate interLATA equal access traffic, and BOC interstate corridor toll traffic as well as AT&T and OCC intraLATA equal access usage. Local exchange traffic and BOC intraLATA toll traffic is excluded. In the case of independent telephone companies, intrastate toll service provided by the independent local exchange company is excluded in determining intrastate usage, but intrastate toll service provided by long distance carriers affiliated with the local exchange company is included.

(d) Effective July 1, 2001, through June 30, 2017, all study areas shall apportion Equal Access Equipment, as specified in paragraph (a) of this section, among the jurisdictions using the relative state and interstate equal access traffic, as specified in paragraph (c) of this section, for the twelve month period ending December 31, 2000.

[52 FR 17229, May 6, 1987, as amended at 53 FR 33012, Aug. 29, 1988; 66 FR 33206, June 21, 2001; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36237, June 26, 2014]

Subpart C—Operating Revenues and Certain Income Accounts

GENERAL

§ 36.201 Section arrangement.

(a) This subpart is arranged in sections as follows:

General	36.202
Operating Revenues	36.211
Basic local services revenue—Account 5000 (Class B telephone companies); Basic area revenue—Account 5001 (Class A telephone companies)	36.212
Network Access Revenues—Accounts 5081 thru 5083	36.213
Long Distance Message Revenue—Account 5100	36.214
Miscellaneous Revenue—Account 5200	36.215
Uncollectible Revenue—Account 5300	36.216
Certain Income Accounts:	
Other Operating Income and Expenses—Account 7100	36.221
Nonoperating Income and Expenses—Account 7300	36.222
Interest and Related Items—Account 7500	36.223
Extraordinary Items—Account 7600	36.224
Income Effect of Jurisdictional Ratemaking Differences—Account 7910	36.225

[69 FR 12550, Mar. 17, 2004]

§ 36.202 General.

(a) This section sets forth procedures for the apportionment among the operations of operating revenues and certain income and expense accounts.

(b) Except for the Network Access Revenues, subsidiary record categories are maintained for all revenue accounts in accordance with the requirements of part 32. These subsidiary records identify services for the appropriate jurisdiction and will be used in conjunction with apportionment procedures stated in this manual.

[52 FR 17299, May 6, 1987, as amended at 69 FR 12550, Mar. 17, 2004]

OPERATING REVENUES

§ 36.211 General.

(a) Operating revenues are included in the following accounts:

Account title	Account No.
Basic local service revenue (Class B telephone companies)	5000
Basic Area Revenue (Class A telephone companies)	5001
Network Access Revenues:	
End User Revenue	5081
Switched Access Revenue	5082
Special Access Revenue	5083
Long Distance Message Revenue	5100
Miscellaneous Revenue	5200
Uncollectible Revenue	5300

[69 FR 12550, Mar. 17, 2004]

§ 36.212 Basic local services revenue—Account 5000 (Class B telephone companies); Basic area revenue—Account 5001 (Class A telephone companies).

(a) Local private line revenues from broadcast program transmission audio services and broadcast program transmission video services are assigned to the interstate operation.

(b) Revenues that are attributable to the origination or termination of interstate FX or CCSA like services shall be assigned to the interstate jurisdiction.

(c) Wideband Message Service revenues from monthly and miscellaneous charges, service connections, move and change charges, are apportioned between state and interstate operations on the basis of the relative number of minutes-of-use in the study area. Effective July 1, 2001, through June 30, 2017, all study areas shall apportion Wideband Message Service revenues among the jurisdictions using the relative number of minutes of use for the twelve-month period ending December 31, 2000.

(d) All other revenues in this account are assigned to the exchange operation based on their subsidiary record categories or on the basis of analysis and studies.

[52 FR 17229, May 6, 1987, as amended at 66 FR 33206, June 21, 2001; 71 FR 65746, Nov. 9, 2006; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36237, June 26, 2014]

§ 36.213 Network access services revenues.

(a) End User Revenue—Account 5081. Revenues in this account are directly assigned on the basis of analysis and studies.

(b) Switched Access Revenue—Account 5082. Revenues in this account are directly assigned on the basis of analysis and studies.

(c) Special Access Revenue—Account 5083. Revenues in this account are directly assigned on the basis of analysis and studies.

[52 FR 17299, May 6, 1987, as amended at 69 FR 12550, Mar. 17, 2004]

§ 36.214 Long distance message revenue—Account 5100.

(a) Wideband message service revenues from monthly and miscellaneous charges, service connections, move and change charges, are apportioned between state and interstate operations on the basis of the relative number of minutes-of-use in the study area. Effective July 1, 2001, through June 30, 2017, all study areas shall apportion Wideband Message Service revenues among the jurisdictions using the relative number of minutes of use for the twelve-month period ending December 31, 2000.

(b) Long Distance private line service revenues from broadcast program transmission audio services and broadcast program transmission video services are assigned to the interstate operation.

(c) All other revenues in this account are directly assigned based on their subsidiary record categories or on the basis of analysis and studies.

[52 FR 17229, May 6, 1987, as amended at 66 FR 33206, June 21, 2001; 71 FR 65746, Nov. 9, 2006; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36237, June 26, 2014]

§ 36.215 Miscellaneous revenue—Account 5200.

(a) Directory revenues are assigned to the exchange operation.

(b) Billing and collection revenues are assigned on the basis of services being provided.

(c) All other revenues are apportioned on the basis of analysis.

§ 36.216 Uncollectible revenue—Account 5300.

The amounts in this account are apportioned among the operations on the basis of analysis during a representative period of the portion of Account 1171, Allowance for doubtful accounts, related to telecommunications billing.

[69 FR 12551, Mar. 17, 2004]

CERTAIN INCOME ACCOUNTS

§ 36.221 Other operating income and expenses—Account 7100.

(a) Amounts relating to translation in foreign exchange differentials are assigned to the interstate operations.

(b) All other amounts are apportioned based on Telecommunications Plant in Service, Account 2001, if plant related, or on the nature of the item reflected in the account, if not plant related.

§ 36.222 Nonoperating income and expenses—Account 7300.

(a) Only allowance for funds used during construction, and charitable, social and community welfare contributions are considered in this account for separations purposes.

(b) Subsidiary record categories should be maintained for this account that include identification of amounts made to the account for (1) credits representing allowance for funds used during construction and (2) contributions for charitable, social or community welfare purposes, employee activities, membership dues and fees in service clubs, community welfare association and similar organizations.

(c) The portion reflecting allowance for funds used during construction is apportioned on the basis of the cost of Telecommunications Plant Under Construction—Account 2003. The portion reflecting costs for social and community welfare contributions and fees is apportioned on the basis of the apportionment of corporate operations expenses.

[52 FR 17229, May 6, 1987, as amended at 60 FR 12138, Mar. 6, 1995]

§ 36.223 Interest and related items—Account 7500.

(a) Only interest paid relating to capital leases is considered in this account for separations purposes. Subsidiary Record Categories should be maintained for this account that include details relating to interest expense on capital leases. Such interest expense is apportioned on a basis consistent with

the associated capital leases in Account 2680.

§ 36.224 Extraordinary items—Account 7600.

(a) Amounts in this account of an operating nature are apportioned on a basis consistent with the nature of these items.

§ 36.225 Income effect of jurisdictional ratemaking differences—Account 7910.

(a) Amounts in this account are directly assigned to the appropriate jurisdiction.

Subpart D—Operating Expenses and Taxes

GENERAL

§ 36.301 Section arrangement.

(a) This subpart is arranged in sections as follows:

General	36.301 and 36.302.
Plant Specific Operations Expenses:	
General	36.310.
Network Support/General Support Expenses—Accounts 6110 and 6120 (Class B Telephone Companies); Accounts 6112, 6113, 6114, 6121, 6122, 6123, and 6124 (Class A Telephone Companies).	36.311.
Central Office Expenses—Accounts 6210, 6220, 6230 (Class B Telephone Companies); Accounts 6211, 6212, 6220, 6231, and 6232 (Class A Telephone Companies).	36.321
Information Origination/Termination Expenses—Account 6310 (Class B Telephone Companies); Accounts 6311, 6341, 6351, and 6362 (Class A Telephone Companies).	36.331.
Cable and Wire Facilities Expenses—Account 6410 (Class B Telephone Companies); Accounts 6411, 6421, 6422, 6423, 6424, 6426, 6431, and 6441 (Class A Telephone Companies).	36.341.
Plant Nonspecific Operations Expenses:	
General	36.351.
Other Property Plant and Equipment Expenses—Account 6510 (Class B Telephone Companies); Accounts 6511 and 6512 (Class A Telephone Companies).	36.352.
Network Operations Expenses—Account 6530 (Class B Telephone Companies); Accounts 6531, 6532, 6533, 6534, and 6535 (Class A Telephone Companies).	36.353.
Access Expenses—Account 6540.	36.354.
Depreciation and Amortization Expenses—Account 6560.	36.361.
Customer Operations Expenses:	
General	36.371.
Marketing—Account 6610 (Class B Telephone Companies); Accounts 6611 and 6613 (Class A Telephone Companies).	36.372.
Services—Account 6620	36.373.
Telephone Operator Services.	36.374.
Published Directory Listing	36.375.
All Other	36.376.
Category 1—Local Bus. Office Expense.	36.377.
Category 2—Customer Services (Revenue Accounting).	36.378.
Message Processing Expense	36.379.
Other Billing and Collecting Expense.	36.380.
Carrier Access Charge Billing and Collecting Expense.	36.381.
Category 3—All other Customer Service Expense.	36.382.
Corporate Operations Expenses:	
General	36.391.
General and Administrative Expenses—Account 6720.	36.392.
Operating Taxes—Account 7200 (Class B Telephone Companies); Accounts 7210, 7220, 7230, 7240, and 7250 (Class A Telephone Companies).	36.411 and 36.412.
Equal Access Expenses	36.421.

[69 FR 12551, Mar. 17, 2004]

§ 36.302 General.

(a) This section sets forth procedures for the apportionment among the operations of operating expenses and operating taxes.

(b) As covered in § 36.2 (c) and (d), the treatment of expenses relating to plant furnished to and obtained from others

under rental arrangements is consistent with the treatment of such plant.

(c) In accordance with requirements in part 32 § 32.5999 (f) expenses recorded in the expense accounts are segregated in the accounting process among the following subsidiary record categories as appropriate to each account:

Salaries and Wages
Benefits
Rents
Other Expenses
Clearances

(1) Subsidiary Record Categories (SRC) for Salaries and Wages, Benefits and Other Expenses are applicable to all of the expense accounts except for:

Access Expense contained in Account 6540
Depreciation and Amortization Expenses—Account 6560

(i) SRC for access expenses are maintained to identify interstate and state access expense and billing and collection expense for carrier's carrier.

(ii) Depreciation and Amortization Expense SRCs identify the character of the items contained in the account.

(2) SRCs for Rents and Clearance are only applicable to the Plant Specific Operating Expense accounts 6110 thru 6410.

PLANT SPECIFIC OPERATIONS EXPENSES

§ 36.310 General.

(a) Plant specific operations expenses include the following accounts:

Network Support Expenses.	Account 6110 (Class B Telephone Companies); Accounts 6112, 6113, and 6114 (Class A Telephone Companies)
General Support Expenses.	Account 6120 (Class B Telephone Companies); Accounts 6121, 6122, 6123, and 6124 (Class A Telephone Companies).
Central Office Switching Expenses.	Account 6210 (Class B Telephone Companies); Accounts 6211 and 6212 (Class A Telephone Companies)
Operator System Expenses.	Account 6220
Central Office Transmission Expenses.	Account 6230 (Class B Telephone Companies); Accounts 6231 and 6232 (Class A Telephone Companies).
Information Origination/Termination Expenses.	Account 6310 (Class B Telephone Companies); Accounts 6311, 6341, 6351, and 6362 (Class A Telephone Companies).
Cable and Wire Facilities Expenses.	Account 6410 (Class B Telephone Companies); Accounts 6411, 6421, 6422, 6423, 6424, 6426, 6431, and 6441 (Class A Telephone Companies).

(b) These accounts are used to record costs related to specific kinds of telecommunications plant and predominantly mirror the telecommunications plant in service detail accounts. Accordingly, these expense accounts will generally be apportioned in the same manner as the related plant accounts.

(c) Except where property obtained from or furnished to other companies is treated as owned property by the company making the separation, and the related operating rents are excluded from the separation studies as set forth in § 36.2 (c) and (d), amounts are apportioned among the operations on bases generally consistent with the treatment prescribed for similar plant costs and consistent with the relative magnitude of the items involved.

[52 FR 17229, May 6, 1987, as amended at 53 FR 33012, Aug. 29, 1988; 69 FR 12551, Mar. 17, 2004]

NETWORK SUPPORT/GENERAL SUPPORT EXPENSES

§ 36.311 Network Support/General Support Expenses—Accounts 6110 and 6120 (Class B Telephone Companies); Accounts 6112, 6113, 6114, 6121, 6122, 6123, and 6124 (Class A Telephone Companies).

(a) Network Support Expenses are expenses associated with motor vehicles, aircraft, special purpose vehicles, garage work equipment, and other work equipment. General Support Expenses are expenses associated with land and buildings, furniture and artworks, office equipment, and general purpose computers.

(b) The expenses in these account are apportioned among the operations on the basis of the separation of account 2110, Land and Support Assets.

CENTRAL OFFICE EXPENSES

§ 36.321 Central office expenses—Accounts 6210, 6220, and 6230 (Class B telephone companies); Accounts 6211, 6212, 6220, 6231, and 6232 (Class A telephone companies).

(a) The expenses related to central office equipment are summarized in the following accounts:

Central Office Switching Expense.	Account 6210 (Class B telephone companies); Accounts 6211 and 6212 (Class A telephone companies).
Operator Systems Expense.	Account 6220.
Central Office Transmission Expense.	Account 6230 (Class B telephone companies); Accounts 6231 and 6232 (Class A telephone companies).

(b) The expense in these accounts are apportioned among the operations on the basis of the separation of the investments in central office equipment. Accounts 2210, 2220 and 2230, combined.

[52 FR 17229, May 6, 1987, as amended at 69 FR 12552, Mar. 17, 2004]

INFORMATION ORIGINATION/TERMINATION EXPENSES

§ 36.331 Information origination/termination expenses—Account 6310 (Class B telephone companies); Accounts 6311, 6341, 6351, and 6362 (Class A telephone companies).

(a) The expenses in this account are classified as follows:

(1) Other Information Origination/Termination Equipment Expenses; Customer Premises Equipment Expenses

(2) For some companies, these classifications are available from accounting records; for others, they are obtained by means of analyses of plant, accounting or other records for a representative period.

(b) Other Information Origination/Termination Equipment Expenses include all expenses not associated with Customer Premises Equipment expenses. These expenses shall be apportioned between state and interstate operations in accordance with the apportionment of the related investment as per § 36.142(a).

(c) Expenses related to Customer Premises Equipment shall be assigned to the state operations.

[52 FR 17229, May 6, 1987, as amended at 53 FR 33012, Aug. 29, 1988]

CABLE AND WIRE FACILITIES EXPENSES

§ 36.341 Cable and wire facilities expenses—Account 6410 (Class B telephone companies); Accounts 6411, 6421, 6422, 6423, 6424, 6426, 6431, and 6441 (Class A telephone companies).

(a) This account includes the expenses for poles, antenna supporting structures, aerial cable, underground cable, buried cable, submarine cable, deep sea cable, intrabuilding network cable, aerial wire, and conduit systems.

(b) The general method of separating cable and wire facilities expenses amoung the operations is to assign them on the basis of Account 2410—Cable and Wire Facilities.

PLANT NONSPECIFIC OPERATIONS EXPENSES

§ 36.351 General.

(a) Plant nonspecific operations expenses include the following accounts:

Other Property Plant and Equipment Expenses.	Account 6510 (Class B telephone companies); Accounts 6511 and 6512 (Class A telephone companies).
Network Operations Expenses.	Account 6530 (Class B telephone companies); Accounts 6531, 6532, 6533, 6534, and 6535 (Class A telephone companies).
Access Expenses	Account 6540.
Depreciation and Amortization Expenses.	Account 6560.

[69 FR 12552, Mar. 17, 2004]

PLANT EXPENSES—OTHER

§ 36.352 Other property plant and equipment expenses—Account 6510 (Class B telephone companies); Accounts 6511 and 6512 (Class A telephone companies).

(a) This account is used to record the expenses associated with (1) property held for future telecommunications use and (2) the provisioning of material and supplies.

(b) The expenses in this account are apportioned among the operations based on the separation of Account 2001—Telecommunications Plant in Service.

NETWORK OPERATIONS EXPENSES

§ 36.353 Network operations expenses—Account 6530 (Class B telephone companies); Accounts 6531, 6532, 6533, 6534, and 6535 (Class A telephone companies).

(a) This account includes the expenses associated with the provisions of power, network administration, testing, plant operations administration, and engineering.

(b) The expenses in this account are apportioned among the operations based on the separations of Account 2210, Central Office Switching, Account 2220 Operator Systems, Account 2230 Central Office Transmission, Account 2310, Information Origination/Termination and Account 2410, Cable and Wire Facilities, Combined.

§ 36.354 Access expenses—Account 6540.

(a) This account includes access charges paid to exchange carriers for exchange access service. These are directly assigned to the appropriate jurisdiction based on subsidiary record categories or on analysis and study.

DEPRECIATION AND AMORTIZATION EXPENSES

§ 36.361 Depreciation and amortization expenses—Account 6560.

(a) This account includes the depreciation expenses for telecommunications plant in service and for property held for future telecommunications use. It also includes the amortization expense for tangible and intangible asserts.

(b) Expenses recorded in this account shall be separated on the basis of the separation of the associated primary Plant Accounts or related categories.

CUSTOMER OPERATIONS EXPENSES

§ 36.371 General.

Customer Operations Expenses are included in the following accounts:

Marketing	Account 6610 (Class B telephone companies); Accounts 6611 and 6613 (Class A telephone companies).
Services	Account 6620.

[69 FR 12552, Mar. 17, 2004]

§ 36.372 Marketing—Account 6610 (Class B telephone companies); Accounts 6611 and 6613 (Class A telephone companies).

The expenses in this account are apportioned among the operations on the basis of an analysis of current billing for a representative period, excluding current billing on behalf of others and billing in connection with intercompany settlements. Effective July 1, 2001, through June 30, 2017, all study areas shall apportion expenses in this account among the jurisdictions using the analysis during the twelve-month period ending December 31, 2000.

[79 FR 36238, June 26, 2014]

§ 36.373 Services—Account 6620.

(a) For apportionment purposes, the expenses in this account are first segregated on the basis of an analysis of job functions into the following classifications: Telephone operator services: publishing directory listing; and all other.

(1) Expenses may be apportioned among the operations for groups of exchanges. A group of exchanges may include all exchanges in the study area.

§ 36.374 Telephone operator services.

(a) Expenses in this classification include costs incurred for operators in call completion service and number services. This includes intercept, quoting rates, directory information, time charges, and all other operator

functions performed in the central office, private branch exchange, teletypewriter exchange, and at public telephone stations.

(b) Effective July 1, 2001, through June 30, 2017, study areas subject to price cap regulation, pursuant to § 61.41 of this chapter, shall assign the balance of Account 6620-Services to the Telephone operator expense classification based on the relative percentage assignment of the balance of Account 6620 to this classification during the twelve month period ending December 31, 2000.

(c) Expenses in this classification are apportioned among the operations on the basis of the relative number of weighted standard work seconds as determined by analysis and study for a representative period.

(d) Effective July 1, 2001, through June 30, 2017, all study areas shall apportion Telephone operator expenses among the jurisdictions using the relative number of weighted standard work seconds, as specified in paragraph (c) of this section, during the twelve-month period ending December 31, 2000.

[52 FR 17229, May 6, 1987, as amended at 66 FR 33207, June 21, 2001; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36238, June 26, 2014]

§ 36.375 Published directory listing.

(a) This classification includes expenses for preparing or purchasing, compiling and disseminating directory listings.

(b) Published directory expense is assigned as follows:

(1) Classified directory expense and all expense of soliciting advertising is assigned to the exchange operation.

(2) The expense of alphabetical and street address directories and traffic information records is apportioned among the operations on the basis of the relative number of study area subscriber line minutes-of-use applicable to each operation.

(3) The expense associated with directories and traffic information records prepared for one locality and used in another locality is known as ''foreign directories expense.'' Such expense is assigned to the appropriate operation on the basis of the location of the point where used with respect to the locality for which the directories and records were prepared.

(4) Effective July 1, 2001, through June 30, 2017, study areas subject to price cap regulation, pursuant to § 61.41 of this chapter, shall assign the balance of Account 6620-Services to the classifications, as specified in paragraphs (b)(1) through (4) of this section, based on the relative percentage assignment of the balance of Account 6620 to these classifications during the twelve month period ending December 31, 2000.

(5) Effective July 1, 2001, through June 30, 2017, all study areas shall apportion Published directory listing expenses using the underlying relative use measurements, as specified in paragraphs (b)(1) through (4) of this section, during the twelve-month period ending December 31, 2000. Direct assignment of any Publishing directory listing expense to the jurisdictions shall be updated annually.

[52 FR 17229, May 6, 1987, as amended at 66 FR 33207, June 21, 2001; 71 FR 65746, Nov. 9, 2006; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36238, June 26, 2014]

§ 36.376 All other.

(a) For apportionment purposes this classification must be divided into three categories:

(1) Category 1—Local Business Office Expense.

(2) Category 2—Customer Services Expense.

(3) Category 3—All Other Customer Services Expense.

§ 36.377 Category 1—Local business office expense.

(a) The expense in this category for the area under study is first segregated on the basis of an analysis of job functions into the following subcategories: End user service order processing; end user payment and collection; end user billing inquiry; interexchange carrier service order processing; interexchange carrier payment and collection; interexchange carrier billing inquiry; and coin collection and administration. Effective July 1, 2001, through June 30, 2017, study areas subject to price cap regulation, pursuant to § 61.41 of this

chapter, shall assign the balance of Account 6620-Services to the subcategories, as specified in this paragraph (a), based on the relative percentage assignment of the balance of Account 6620 to these categories/subcategories during the twelve month period ending December 31, 2000.

(1) End-user service order processing includes expenses related to the receipt and processing of end users' orders for service and inquiries concerning service. This subcategory does not include any service order processing expenses for services provided to the interexchange carriers. End user service order processing expenses are first segregated into the following subcategories based on the relative number of actual contacts which are weighted, if appropriate, to reflect differences in the average work time per contact: Local service order processing; presubscription; directory advertising; State private line and special access; interstate private line and special access; other State message toll including WATS; other interstate message toll including WATS.

(i) Local service order processing expense (primarily local telephone service orders) is assigned to the State jurisdiction.

(ii) Presubscription service order processing expense is assigned to the interstate jurisdiction.

(iii) Directory advertising service order processing expense is assigned to the State jurisdiction.

(iv) State private line and special access service order processing expense is assigned to the State jurisdiction.

(v) Interstate private line and special access service order processing expense is assigned to the interstate jurisdiction.

(vi) Other State message toll including WATS service order processing expense is assigned to the State jurisdiction.

(vii) Other Interstate message toll including WATS service order processing expense is assigned to the interstate jurisdiction.

(viii) [Reserved]

(ix) Effective July 1, 2001, through June 30, 2017, study areas subject to price cap regulation, pursuant to §61.41 of this chapter, shall assign the balance of Account 6620-Services to the categories/subcategories, as specified in paragraphs (a)(1)(i) through (viii) of this section, based on the relative percentage assignment of the balance of Account 6620 to these categories/subcategories during the twelve month period ending December 31, 2000. Effective July 1, 2001, through June 30, 2017, all study areas shall apportion TWX service order processing expense, as specified in paragraph (a)(1)(viii) of this section among the jurisdictions using relative billed TWX revenues for the twelve-month period ending December 31, 2000. All other subcategories of End-user service order processing expense, as specified in paragraphs (a)(1)(i) through (viii) shall be directly assigned.

(2) End user payment and collection includes expenses incurred in relation to the payment and collection of amounts billed to end users. It also includes commissions paid to payment agencies (which receive payment on customer accounts) and collection agencies. This category does not include any payment or collection expenses for services provided to interexchange carriers. End user payment and collection expenses are first segregated into the following subcategories based on relative total state and interstate billed revenues (excluding revenues billed to interexchange carriers and/or revenues deposited in coin boxes) for services for which end user payment and collection is provided: State private line and special access; interstate private line and special access; State message toll including WATS; interstate message toll including WATS, and interstate subscriber line charge; local, including directory advertising.

(i) State private line and special access payment and collection expense is assigned to the State jurisdiction.

(ii) Interstate private line and special access payment and collection expense is assigned to the interstate jurisdiction.

(iii) State message toll including WATS payment and collection expense is assigned to the State jurisdiction.

(iv) Interstate message toll including WATS and interstate subscriber line charge payment and collection expense

is assigned to the interstate jurisdiction.

(v) Local, including directory advertising payment and collection expense is assigned to the State jurisdiction.

(vi) [Reserved]

(vii) Effective July 1, 2001, through June 30, 2017, study areas subject to price cap regulation, pursuant to §61.41 of this chapter, shall assign the balance of Account 6620-Services to the subcategories, as specified in paragraphs (a)(2)(i) through (vi) of this section, based on the relative percentage assignment of the balance of Account 6620 to these categories/subcategories during the twelve month period ending December 31, 2000. All other subcategories of End User payment and collection expense, as specified in paragraphs (a)(2)(i) through (v) of this section, shall be directly assigned.

(3) End user billing inquiry includes expenses related to handling end users' inquiries concerning their bills. This category does not include expenses related to the inquiries of interexchange carriers concerning their bills. End user billing inquiry costs are first segregated into the following subcategories based on the relative number of actual contracts, weighted if appropriate, to reflect differences in the average work time per contact: State private line and special access; interstate private line and special access; State message toll including WATS, interstate message toll including WATS, interstate subscriber line charge; and other.

(i) State private line and special access billing inquiry expense is directly assigned to the State jurisdiction.

(ii) Interstate private line and special access billing inquiry expense is directly assigned to the interstate jurisdiction.

(iii) State message toll including WATS billing inquiry expense is directly assigned to the State jurisdiction.

(iv) Interstate message toll including WATS, and interstate subscriber line charge billing inquiry expense is directly assigned to the interstate jurisdiction.

(v) [Reserved]

(vi) Other billing inquiry expense (primarily related to local bills but also including directory advertising) is directly assigned to the State jurisdiction.

(vii) Effective July 1, 2001, through June 30, 2017, study areas subject to price cap regulation, pursuant to §61.41 of this chapter, shall assign the balance of Account 6620-Services to the subcategories, as specified in paragraphs (a)(3)(i) through (vi) of this section, based on the relative percentage assignment of the balance of Account 6620 to these subcategories during the twelve month period ending December 31, 2000. All other subcategories of End user billing inquiry expense, as specified in paragraphs (a)(2)(i) through (vi) shall be directly assigned.

(4) Interexchange carrier service order processing includes expenses associated with the receipt and processing of interexchange carrier orders for service and inquiries about service. Interexchange carrier service order processing expenses are assigned to the following subcategories based on the relative number of actual contacts which are weighted, if appropriate, to reflect differences in the average work time per contact: State special access and private line; interstate special access and private line; State switched access and message toll including WATS; interstate switched access and message toll including WATS; State billing and collection; and interstate billing and collection.

(i) State special access and private line service order processing expense is directly assigned to the State jurisdiction.

(ii) Interstate special access and private line service order processing expense is directly assigned to the interstate jurisdiction.

(iii) State switched access and message toll including WATS service order processing expense is directly assigned to the State jurisdiction.

(iv) Interstate switched access and message toll including WATS service order processing expense is directly assigned to the interstate jurisdiction.

(v) State billing and collection service order processing expense is directly assigned to the state jurisdiction.

(vi) Interstate billing and collection service order processing expense is directly assigned to the interstate jurisdiction.

(vii) Effective July 1, 2001, through June 30, 2017, study areas subject to price cap regulation, pursuant to § 61.41 of this chapter, shall assign the balance of Account 6620-Services to the subcategories, as specified in paragraphs (a)(4)(i) through (vi) of this section, based on the relative percentage assignment of the balance of Account 6620 to these subcategories during the twelve month period ending December 31, 2000. All subcategories of Interexchange carrier service order processing expense, as specified in paragraphs (a)(2)(i) through (vi), shall be directly assigned.

(5) Interexchange carrier payment and collection includes expenses associated with the payment and collection of interexchange carrier billings, including commissions paid to payment and collection agents. Interexchange carrier payment and collection expenses are assigned to the following subcategories based on relative total State and interstate revenues billed to the interexchange carriers: State special access and private line; interstate special access and private line; State switched access and message toll including WATS; interstate switched access and message toll including WATS; State billing and collection; and interstate billing and collection.

(i) State special access and private line payment and collection expense is directly assigned to the State jurisdiction.

(ii) Interstate special access and private line payment and collection expense is directly assigned to the interstate jurisdiction.

(iii) State switched access and message toll including WATS payment and collection expense is directly assigned to the State jurisdiction.

(iv) Interstate switched access and message toll including WATS payment and collection expense is directly assigned to the interstate jurisdiction.

(v) State billing and collection payment and collection expense is directly assigned to the State jurisdiction.

(vi) Interstate billing and collection payment and collection expense is directly assigned to the interstate jurisdiction.

(vii) Effective July 1, 2001, through June 30, 2017, study areas subject to price cap regulation, pursuant to § 61.41 of this chapter, shall assign the balance of Account 6620-Services to the subcategories, as specified in paragraphs (a)(5)(i) through (vi) of this section, based on the relative percentage assignment of the balance of Account 6620 to these subcategories during the twelve month period ending December 31, 2000. All subcategories of Interexchange carrier payment expense, as specified in paragraphs (a)(2)(i) through (vi) shall be directly assigned.

(6) Interexchange carrier billing inquiry includes expenses related to the handling of interexchange carrier billing inquiries. Interexchange carrier billing inquiry expenses are assigned to the following subcategories based on the relative number of actual contacts, weighted if appropriate, to reflect differences in the average work time per contact: State special access and private line; interstate special access and private line; State switched access and message toll including WATS; interstate switched access and message toll including WATS; State billing and collection; and interstate billing and collection.

(i) State special access and private line billing inquiry expenses is directly assigned to the State jurisdiction.

(ii) Interstate special access and private line billing inquiry expense is directly assigned to the interstate jurisdiction.

(iii) State switched access and message toll including WATS billing inquiry expense is directly assigned to the State jurisdiction.

(iv) Interstate switched access and message toll including WATS billing inquiry expense is directly assigned to the interstate jurisdiction.

(v) State billing and collection billing inquiry expense is directly assigned to the State jurisdiction.

(vi) Interstate Billing and Collection billing inquiry expense is directly assigned to the interstate jurisdiction.

(vii) Effective July 1, 2001, through June 30, 2017, study areas subject to price cap regulation, pursuant to § 61.41

of this chapter, shall assign the balance of Account 6620-Services to the subcategories, as specified in paragraphs (a)(6)(i) through (vi) of this section, based on the relative percentage assignment of the balance of Account 6620 to these subcategories during the twelve month period ending December 31, 2000. All subcategories of Interexchange carrier billing inquiry expense, as specified in paragraphs (a)(2)(i) through (vi), shall be directly assigned.

(7) [Reserved]

[52 FR 17229, May 6, 1987, as amended at 66 FR 33207, June 21, 2001; 71 FR 65746, Nov. 9, 2006; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36238, June 26, 2014]

§ 36.378 Category 2—Customer services (revenue accounting).

(a) The Revenue Accounting proportion of Account 6620 expenses comprise the salaries and other expenses in Account 6620 directly assignable or allocable to the billing of customers and the accounting for revenues, including the supervision of such work.

(b) Revenue Accounting expenses for the study area are separated on the basis of a Job Function analysis into three main classifications: Message processing expense, other billing and collecting expense, and carrier access charge billing and collecting expense.

(1) Effective July 1, 2001, through June 30, 2017, study areas subject to price cap regulation, pursuant to § 61.41 of this chapter, shall assign the balance of Account 6620-Services to the classifications, as specified in paragraph (b) of this section, based on the relative percentage assignment of the balance of Account 6620 to those classifications during the twelve month period ending December 31, 2000.

(2) [Reserved]

(c) The term ''ticket'' denotes either a ticket prepared manually by an operator or the mechanized equivalent of such a ticket processed by the revenue accounting office.

[52 FR 17229, May 6, 1987, as amended at 66 FR 33208, June 21, 2001; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36239, June 26, 2014]

§ 36.379 Message processing expense.

(a) This classification includes the salary and machine expense of data processing equipment, including supervision, general accounting administrative and miscellaneous expense associated with the processing of individual toll tickets and local message tickets.

(b) The expense assigned to this classification is divided into the subcategories Toll Ticket Processing Expense and Local Message Processing Expense on the basis of the relative number of messages. Toll Ticket Processing Expense is allocated between the State and interstate jurisdiction on the basis of the relative number of toll messages. Local Message Processing Expense is assigned to the exchange operation.

(1) Effective July 1, 2001, through June 30, 2017, study areas subject to price cap regulation, pursuant to § 61.41 of this chapter, shall assign the balance of Account 6620-Services to the subcategories, as specified in this paragraph (b), based on the relative percentage assignment of the balance of Account 6620 to those subcategories during the twelve month period ending December 31, 2000.

(2) Effective July 1, 2001, through June 30, 2017, all study areas shall apportion Toll Ticketing Processing Expense among the jurisdictions using the relative number of toll messages for the twelve-month period ending December 31, 2000. Local Message Process Expense is assigned to the state jurisdiction.

[52 FR 17229, May 6, 1987, as amended at 66 FR 33208, June 21, 2001; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36239, June 26, 2014]

§ 36.380 Other billing and collecting expense.

(a) This classification includes the salary expense, including supervision, general accounting administrative, and miscellaneous expense, associated with the preparation of customer bills other than carrier access charge bills and with other revenue accounting functions not covered in § 36.379. Included in this classification are the expenses incurred in the preparation of monthly bills, initial and final bills, the application of service orders to billing records

(establishing, changing, or discontinuing customers' accounts), station statistical work, controlling record work and the preparation of revenue reports.

(b) Local exchange carriers that bill or collect from end users on behalf of interexchange carriers shall allocate one third of the expenses assigned this classification to the interstate jurisdiction, and two thirds of the expenses assigned this classification to the state jurisdiction.

(c) Local exchange carriers that do not bill or collect from end users on behalf of interexchange carriers shall allocate five percent of the expenses assigned this classification to the interstate jurisdiction, and ninety-five percent of the expenses assigned this classification to the state jurisdiction.

(d) Effective July 1, 2001, through June 30, 2017, study areas subject to price cap regulation, pursuant to § 61.41 of this chapter, shall assign the balance of Account 6620-Services to the Other billing and collecting expense classification based on the relative percentage assignment of the balance of Account 6620 to those subcategory during the twelve month period ending December 31, 2000.

(e) Effective July 1, 2001, through June 30, 2017, all study areas shall apportion Other billing and collecting expense among the jurisdictions using the allocation factor utilized, pursuant to paragraph (b) or (c) of this section, for the twelve month period ending December 31, 2000.

[53 FR 33011, Aug. 29, 1988, as amended at 62 FR 15416, Apr. 1, 1997; 66 FR 33208, June 21, 2001; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36239, June 26, 2014]

§ 36.381 Carrier access charge billing and collecting expense.

(a) This classification includes the revenue accounting functions associated with the billing and collecting of access charges to interexchange carriers.

(b) Of access charges other than end user common line access charges are assessed for the origination or termination of intrastate services in a particular state, one-half of such expense shall be apportioned to interstate operations. If no such access charges are assessed in a particular state, all such expense shall be assigned to interstate operations.

(c) Effective July 1, 2001, through June 30, 2017, study areas subject to price cap regulation, pursuant to § 61.41 of this chapter, shall assign the balance of Account 6620-Services to the Carrier access charge billing and collecting expense classification based on the relative percentage assignment of the balance of Account 6620 to that classification during the twelve month period ending December 31, 2000.

(d) Effective July 1, 2001, through June 30, 2017, all study areas shall apportion Carrier access charge billing and collecting expense among the jurisdictions using the allocation factor, pursuant to paragraph (b) of this section, for the twelve-month period ending December 31, 2000.

[52 FR 17229, May 6, 1987, as amended at 66 FR 33208, June 21, 2001; 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36239, June 26, 2014]

§ 36.382 Category 3—All other customer services expense.

(a) Effective July 1, 2001, through June 30, 2017, study areas subject to price cap regulation, pursuant to § 61.41 of this chapter, shall assign the balance of Account 6620-Services to this category based on the relative percentage assignment of the balance of Account 6620 to this category during the twelve month period ending December 31, 2000.

(b) Category 3 is apportioned on the basis of Categories 1 and 2.

[66 FR 33208, June 21, 2001, as amended at 75 FR 30301, June 1, 2010; 76 FR 30841, May 27, 2011; 79 FR 36239, June 26, 2014]

CORPORATE OPERATIONS EXPENSE

§ 36.391 General.

Corporate Operations Expenses are included in the following account:

General and Administrative Account 6720.

[69 FR 12552, Mar. 17, 2004]

§ 36.392 General and administrative—Account 6720.

(a) These expenses are divided into two categories:

(1) Extended Area Services (EAS).

(2) All other.

(b) Extended Area Services (EAS) settlements are directly assigned to the exchange operation.

(c) The expenses in this account are apportioned among the operations on the basis of the separation of the cost of the combined Big Three Expenses which include the following accounts:

Plant Specific Expenses

Central Office Switching Expenses—Account 6210 (Class B Telephone Companies); Accounts 6211 and 6212 (Class A Telephone Companies)

Operators Systems Expenses—Account 6220

Central Office Transmission Expenses—Account 6230 (Class B Telephone Companies); Accounts 6231 and 6232 (Class A Telephone Companies)

Information Origination/Termination Expenses—Account 6310 (Class B Telephone Companies); Accounts 6311, 6341, 6351, and 6362 (Class A Telephone Companies)

Cable and Wire Facilities Expense—Account 6410 (Class B Telephone Companies); Accounts 6411, 6421, 6422, 6423, 6424, 6426, 6431, and 6441 (Class A Telephone Companies)

Plant Non-Specific Expenses

Network Operations Expenses—Account 6530 (Class B Telephone Companies); Accounts 6531, 6532, 6533, 6534, and 6535 (Class A Telephone Companies)

Customer Operations Expenses

Marketing—Account 6610 (Class B Telephone Companies); Accounts 6611 and 6613 (Class A Telephone Companies)

Services—Account 6620

[52 FR 17229, May 6, 1987, as amended at 69 FR 12552, Mar. 17, 2004]

OPERATING TAXES

§ 36.411 Operating taxes—Account 7200 (Class B Telephone Companies); Accounts 7210, 7220, 7230, 7240, and 7250 (Class A Telephone Companies).

(a) This account includes the taxes arising from the operations of the company, i.e.,

Operating Investment Tax Credits

Operating Federal Income Taxes

Operating State and Local Income Taxes

Operating Other Taxes

Provision for Deferred Operating Income Taxes

§ 36.412 Apportionment procedures.

(a) For apportionment purposes, the expenses in this account are segregated into two groups as follows: (1) Operating Federal, State and local income taxes and (2) all other operating taxes.

(b) Operating Federal, State and local income taxes are apportioned among the operations on the basis of the approximate net taxable income (positive or negative) applicable to each of the operations. The approximate net taxable income from each of the operations is the summation of the following amounts apportioned to each operation by means of the procedures set forth in this Manual:

(1) Operating revenues,

(2) Less operating expenses,

(3) Less operating taxes except the net income tax being apportioned and except any other tax not treated as a deductible item in the determination of taxable net income for this purpose.

(4) Less operating fixed charges.

(i) The amount of fixed charges attributable to the operations is obtained by subtracting the tax component (positive or negative) attributable to other than the operating fixed charges, i.e., fixed charges on non-operating investments are that proportion of total fixed charges which non-operating net investments are of total operating and non-operating net investments.

(ii) Operating fixed charges including interest on Rural Telephone Bank Stock are apportioned among the operations on the basis of the separation of the cost of telephone plant less appropriate reserves.

(c) Other operating taxes should be directly assigned to the appropriate jurisdiction where possible, e.g., Local Gross Receipts may be directly identified as applicable to one jurisdiction. Where direct assignment is not feasible, these expenses should be apportioned among the operations on the basis of the separation of the cost of Telecommunications Plant in Service—Account 2001.

EQUAL ACCESS EXPENSES

§ 36.421 Equal access expenses.

(a) Equal access expenses include only initial incremental pre-subscription costs and other initial incremental expenditures related directly to the provision of equal access, that would not be required to upgrade the capabilities of the office involved absent the provision of equal access. Equal access expenses are limited to such expenditures for converting central offices that serve competitive interexchange carriers or where there has been a bona fide request for conversion to equal access.

(b) Equal access expenses are apportioned between the jurisdictions by first segregating them from all other expenses in the primary accounts and then allocating them on the same basis as equal access investment.

Subpart E—Reserves and Deferrals

§ 36.501 General.

For separations purposes, reserves and deferrals include the following accounts:

Other Jurisdictional Assets—Net.	Account 1500.
Accumulated Depreciation.	Account 3100.
Accumulated Depreciation—Property Held for Future Telecommunications Use.	Account 3200.
Accumulated Amortization—Capital Leases.	Account 3400 (Class B Telephone Companies); Account 3410 (Class A Telephone Companies).
Net Current Deferred Operating Income Taxes.	Account 4100.
Net Noncurrent Deferred Operating Income Taxes.	Account 4340.
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[69 FR 12553, Mar. 17, 2004]

§ 36.502 Other jurisdictional assets—Net—Account 1500.

(a) Amounts in this account are separated based upon analysis of the specific items involved.

§ 36.503 Accumulated depreciation—Account 3100.

(a) Amounts recorded in this account shall be separated on the basis of the separation of the associated primary Plant Accounts or related categories, excluding amortizable assets.

§ 36.504 Accumulated depreciation—Property held for future telecommunications use—Account 3200.

(a) Amounts in this account are apportioned among the operations on the basis of the separation of the costs of the related items carried in Account 2002—Property Held for Future Telecommunications Use.

§ 36.505 Accumulated amortization—Tangible—Account 3400 (Class B Telephone Companies); Accumulated amortization—Capital Leases—Account 3410 (Class A Telephone Companies).

(a) Amounts in these accounts are apportioned among the operations on the basis of the separation of the related accounts.

§ 36.506 Net current deferred operating income taxes—Account 4100, Net noncurrent deferred operating income taxes—Account 4340.

(a) Amounts in these accounts are maintained by plant account and are apportioned among the operations on the basis of the separations of the related plant accounts.

§ 36.507 Other jurisdictional liabilities and deferred credits—Net—Account 4370.

(a) Amounts in this account are separated based upon an analysis of the specific items involved.

Subparts F–G [Reserved]

APPENDIX TO PART 36—GLOSSARY

The descriptions of terms in this glossary are broad and have been prepared to assist in understanding the use of such terms in the separation procedures. Terms which are defined in the text of this part are not included in this glossary.

Access Line

A communications facility extending from a customer's premises to a serving central office comprising a subscriber line and, if

necessary, a trunk facility, e.g., a WATS access line.

Book Cost

The cost of property as recorded on the books of a company.

Cable Fill Factor

The ratio of cable conductor or cable pair kilometers in use to total cable conductor or cable pair kilometers available in the plant, e.g., the ratio of revenue producing cable pair kilometers in use to total cable pair kilometers in plant.

Category

A grouping of items of property or expense to facilitate the apportionment of their costs among the operations and to which, ordinarily, a common measure of use is applicable.

Central Office

A switching unit, in a telephone system which provides service to the general public, having the necessary equipment and operations arrangements for terminating and interconnecting subscriber lines and trunks or trunks only. There may be more than one central office in a building.

Channel

An electrical path suitable for the transmission of communications between two or more points, ordinarily between two or more stations or between channel terminations in Telecommunication Company central offices. A channel may be furnished by wire, fiberoptics, radio or a combination thereof.

Circuit

A fully operative communications path established in the normal circuit layout and currently used for message, WATS access, or private line services.

Circuit Kilometers

The route kilometers or revenue producing circuits in service, determined by measuring the length in terms of kilometers, of the actual path followed by the transmission medium.

Common Channel Network Signaling

Channels between switching offices used to transmit signaling information independent of the subscribers' communication paths or transmission channels.

Complement (of cable)

A group of conductors of the same general type (e.g., quadded, paired) within a single cable sheath.

Complex

All groups of operator positions, wherever located, associated with the same call distribution and/or stored program control unit.

Concentration Equipment

Central office equipment whose function is to concentrate traffic from subscriber lines onto a lesser number of circuits between the remotely located concentration equipment and the serving central office concentration equipment. This concentration equipment is connected to the serving central office line equipment.

Connection—Minute

The product of (a) the number of messages and, (b) the average minutes of connection per message.

Conversation—Minute

The product of (a) the number of messages and, (b) the average minutes of conversation per message.

Conversation—Minute—Kilometers

The product of (a) the number of messages, (b) the average minutes of conversation per message and (c) the average route kilometers of circuits involved.

Cost

The cost of property owned by the Telephone Company whose property is to be apportioned among the operations. This term applies either to property costs recorded on the books of the company or property costs determined by other evaluation methods.

Current Billing

The combined amount of charges billed, excluding arrears.

Customer Dialed Charge Traffic

Traffic which is both (a) handled to completion through pulses generated by the customer and (b) for which either a message unit change, bulk charge or message toll charge is except for that traffic recorded by means of message registers.

Customer Premises Equipment

Items of telecommunications terminal equipment in Accounts 2310 referred to as CPE in §64.702 of the Federal Communication Commission's Rules adopted in the *Second Computer Inquiry* such as telephone instruments, data sets, dialers and other supplemental equipment, and PBX's which are provided by common carriers and located on customer premises and inventory included in these accounts to be used for such purposes. Excluded from this classification are similar items of equipment located on telephone

company premises and used by the company in the normal course of business as well as over voltage protection equipment, customer premises wiring, coin operated public or pay telephones, multiplexing equipment to deliver multiple channels to the customer, mobile radio equipment and transmit earth stations.

Customer Premises Wire

The segment of wiring from the customer's side of the protector to the customer premises equipment.

DSA Board

A local dial office switchboard at which are handled assistance calls, intercepted calls and calls from miscellaneous lines and trunks. It may also be employed for handling certain toll calls.

DSB Board

A switchboard of a dial system for completing incoming calls received from manual offices.

Data Processing Equipment

Office equipment such as that using punched cards, punched tape, magnetic or other comparable storage media as an operating vehicle for recording and processing information. Includes machines for transcribing raw data into punched cards, etc., but does not include such items as key-operated, manually or electrically driven adding, calculating, bookkeeping or billing machines, typewriters or similar equipment.

Dial Switching Equipment

Switching equipment actuated by electrical impulses generated by a dial or key pulsing arrangement.

Equal Access Costs

Include only initial incremental presubscription costs and initial incremental expenditures for hardware and software related directly to the provision of equal access which would not be required to upgrade the switching capabilities of the office involved absent the provisions of equal access.

Equivalent Gauge

A standard cross section of cable conductors for use in equating the metallic content of cable conductors of all gauge to a common base.

Equivalent Kilometers of 104 Wire

The basic units employed in the allocation of pole lines costs for determining the relative use made of poles by aerial cables and by aerial wire conductors of various sizes. This unit reflects the relative loads of such cable and wire carried on poles.

Equivalent Pair Kilometers

The product of sheath Kilometers and the number of equivalent gauge pairs of conductors in a cable.

Equivalent Sheath Kilometers

The product of (a) the length of a section of cable in kilometers (sheath kilometers) and (b) the ratio of the metallic content applicable to a particular group of conductors in the cable (e.g., conductors assigned to a category) to the metallic content of all conductors in the cable.

Exchange Transmission Plant

This is a combination of (a) exchange cable and wire facilities (b) exchange central office circuit equipment, including associated land and buildings and (c) information origination/termination equipment which forms a complete channel.

Holding Time

The time in which an item of telephone plant is in actual use either by a customer or an operator. For example, on a completed telephone call, holding time includes conversation time as well as other time in use. At local dial offices any measured minutes which result from other than customer attempts to place calls (as evidenced by the dialing of at least one digit) are not treated as holding time.

Host Central Office

An electronic analog or digital base switching unit containing the central call processing functions which service the host office and its remote locations.

Information Origination/Termination Equipment

Equipment used to input into or receive output from the telecommunications network.

Interexchange Channel

A circuit which is included in the interexchange transmission equipment.

Interexchange Transmission Equipment

The combination of (a) interexchange cable and wire facilities, (b) interexchange circuit equipment and, (c) associated land and buildings.

Interlocal Trunk

A circuit between two local central office units, either manual or dial. Interlocal trunks may be used for either exchange or toll traffic or both.

Intertoll Circuits

Circuits between toll centers and circuits between a toll center and a tandem system in a different toll center area.

Local Channel

The portion of a private line circuit which is included in the exchange transmission plant. However, common usage of this term usually excludes information origination/termination equipment.

Local Office

A central office serving primarily as a place of termination for subscriber lines and for providing telephone service to the subscribers on these lines.

Loop

A pair of wires, or its equivalent, between a customer's station and the central office from which the station is served.

Message

A completed call, i.e., a communication in which a conversation or exchange of information took place between the calling and called parties.

Message Service or Message Toll Service

Switched service furnished to the general public (as distinguished from private line service). Except as otherwise provided, this includes exchange switched services and all switched services provided by interexchange carriers and completed by a local telephone company's access services, e.g., MTS, WATS, Execunet, open-end FX and CCSA/ONALs.

Message Units

Unit of measurement used for charging for measured message telephone exchange traffic within a specified area.

Metropolitan Service Area

The area around and including a relatively large city and in which substantially all of the message telephone traffic between the city and the suburban points within the area is classified as exchange in one or both directions.

Minutes-of-Use

A unit of measurement expressed as either holding time or conversation time.

Minutes-of-Use-Kilometers

The product of (a) the number of minutes-of-use and (b) the average route kilometers of circuits involved.

Multi-Center Exchange

An exchange area in which are located two or more local central office buildings or wire centers.

Operations

The term denoting the general classifications of services rendered to the public for which separate tariffs are filed, namely exchange, state toll and interstate toll.

Operator Trunks

A general term, ordinarily applied to trunks between manually operated switchboard positions and local dial central offices in the same wire center.

Private Line Service

A service for communications between specified locations for a continuous period or for regularly recurring periods at stated hours.

Remote Access Line

An access line (e.g., for WATS service) between a subscriber's premises in one toll rate center and a serving central office located in a different toll rate center.

Remote Line Location

A remotely located subscriber line access unit which is normally dependent upon the central processor of the host office for call processing functions.

Remote Trunk Arrangement (RTA)

Arrangement that permits the extension of TSPS functions to remote locations.

Reservation

That amount or quantity of property kept or set apart for a specific use.

Reserved

Kept or set apart for a specific use.

Separations

The process by which telecommunication property costs, revenues, expenses, taxes and reserves are apportioned among the operations.

Service Observing Unit

A unit of work measurement which is used as the common denominator to express the relative time required for handling the various work functions at service observing boards.

Sheath Kilometers

The actual length of cable in route kilometers.

Special Services

All services other than message telephones, e.g., private line services.

Station-to-Station Basis

The term applied to the basis of toll rate making which contemplates that the message toll service charge (telephone) covers the use made of all facilities between the originating station and the terminating station, including the stations, and the services rendered in connection therewith.

Study Area

Study area boundaries shall be frozen as they are on November 15, 1984.

Subscriber Line or Exchange Line

A communication channel between a telephone station or PBX station and the central office which serves it.

Subtributary Office

A class of tributary office which does not have direct access to its toll center, but which is connected to its toll center office by means of circuits which are switched through to the toll center at another tributary office.

Tandem Area

The general areas served by the local offices having direct trunks to or from the tandem office. This area may consist of one or more communities or may include only a portion of a relatively large city.

Tandem Circuit or Trunk

A general classification of circuits or trunks between a tandem central office unit and any other central office or switchboard.

Tandem Connection

A call switched at a tandem office.

Tandem Office

A central office unit used primarily as an intermediate switching point for traffic between local central offices within the tandem area. Where qualified by a modifying expression, or other explanation, this term may be applied to an office employed for both the interconnection of local central offices within the tandem area and for the interconnection of these local offices with other central offices, e.g., long haul tandem office.

Toll Center

An office (or group of offices) within a city which generally handles the originating and incoming toll traffic for that city to or from other toll center areas and which handles through switched traffic. The toll center normally handles the inward toll traffic for its tributary exchanges and, in general, either handles the outward traffic originating at its tributaries or serves as the outlet to interexchange circuits for outward traffic ticketed and timed at its tributaries. Toll centers are listed as such in the Toll Rate and Route Guide.

Toll Center Area

The areas served by a toll center, including the toll center city and the communities served by tributaries of the toll center.

Toll Center Toll Office

A toll office (as contrasted to a local office) in a toll center city.

Toll Circuit

A general term applied to interexchange trunks used primarily for toll traffic.

Toll Connecting Trunk

A general classification of trunks carrying toll traffic and ordinarily extending between a local office and a toll office, except trunks classified as tributary circuits. Examples of toll connecting trunks include toll switching trunks, recording trunks and recording-completing trunks.

Toll Office

A central office used primarily for supervising and switching toll traffic.

Traffic Over First Routes

A term applied to the routing of traffic and denoting routing via principal route for traffic between any two points as distinguished from alternate routes for such traffic.

Operator System

A stored program electronic system associated with one or more toll switching systems which provides centralized traffic service position functions for several local offices at one location.

Tributary Circuit

A circuit between a tributary office and a toll switchboard or intertoll dialing equipment in a toll center city.

Tributary Office

A local office which is located outside the exchange in which a toll center is located, which has a different rate center from its toll center and which usually tickets and times only a part of its originating toll traffic, but which may ticket or time all or none, of such traffic. The toll center handles all outward traffic not ticketed and timed at the tributary and normally switches all inward toll traffic from outside the tributary's

toll center to the tributary. Tributary offices are indicated as such in the Toll Rate and Route Guide.

Trunks

Circuit between switchboards or other switching equipment, as distinguished from circuits which extend between central office switching equipment and information origination/termination equipment.

TSPS Complex

All groups of operator positions, wherever located, associated with the same TSPS stored program control units.

Weighted Standard Work Second

A measurement of traffic operating work which is used to express the relative time required to handle the various kinds of calls or work functions, and which is weighted to reflect appropriate degrees of waiting to serve time.

Wide Area Telephone Service WATS

A toll service offering for customer dial type telecommunications between a given customer station and stations within specified geographic rate areas employing a single access line between the customer location and the serving central office. Each access line may be arranged for either outward (OUT–WATS) or inward (IN–WATS) service or both.

Wideband Channel

A communication channel of a bandwidth equivalent to twelve or more voice grade channels.

Working Loop

A revenue producing pair of wires, or its equivalent, between a customer's station and the central office from which the station is served.

[71 FR 65747, Nov. 9, 2006]

PARTS 37–39 [RESERVED]

FINDING AIDS

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Table of OMB Control Numbers

The OMB control numbers for chapter I of title 47 are consolidated into §0.408. For the convenience of the user, §0.408 is reprinted below.

§0.408 OMB control numbers and expiration dates assigned pursuant to the Paperwork Reduction Act of 1995.

(a) *Purpose*. This section displays the OMB control numbers and expiration dates for the Commission information collection requirements assigned by the Office of Management and Budget (''OMB'') pursuant to the Paperwork Reduction Act of 1995, Public Law 104–13. The Commission intends that this section comply with the requirement that agencies ''display'' current control numbers and expiration dates assigned by the Director, OMB, for each approved information collection requirement. Notwithstanding any other provisions of law, no person shall be subject to any penalty for failing to comply with a collection of information subject to the Paperwork Reduction Act (PRA) that does not display a currently valid OMB control number. Questions concerning the OMB control numbers and expiration dates should be directed to the Associate Managing Director—Performance Evaluation and Records Management, (''AMD–PERM''), Office of Managing Director, Federal Communications Commission, Washington, DC 20554 by sending an email to *Judith-B.Herman@fcc.gov*.

(b) *Display*.

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3060–0410	FCC 495A and FCC 495B	09/30/14
3060–0411	FCC 485	09/30/14
3060–0414	Terrain Shielding Policy	10/31/12
3060–0419	Secs. 76.94, 76.95, 76.105, 76.106, 76.107, and 76.1609	06/30/14
3060–0422	Sec. 68.5	08/31/13
3060–0423	Sec. 73.3588	04/30/14
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3060–0433	FCC 320	05/31/14
3060–0434	Sec. 90.20(e)(6)	07/31/14
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3060–0441	Secs. 90.621 and 90.693	08/31/12
3060–0454	Secs. 43.51, 64.1001 and 64.1002	06/30/14
3060–0463	Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, Report and Order and Declaratory Ruling, CG Doc. No. 03–123, FCC 07–186.	06/30/14
3060–0466	Secs. 73.1201, 74.783 and 74.1283	10/31/13
3060–0470	Secs. 64.901 and 64.903, and RAO Letters 19 and 26	06/30/14
3060–0473	Sec. 74.1251	05/31/14
3060–0474	Sec. 74.1263	09/30/14
3060–0484	Secs. 4.1 and 4.2 and Part 4 of the Commission's Rules Concerning Disruptions to Communications (NORS).	02/28/14
3060–0489	Sec. 73.37	06/30/15
3060–0496	FCC Report 43–08	04/30/13
3060–0500	Sec. 76.1713	08/31/13
3060–0501	Secs. 73.1942, 76.206 and 76.1611	10/31/14
3060–0506	FCC 302–FM	11/30/14
3060–0508	Part 1 and Part 22 Reporting and Recordkeeping Requirements	09/30/14
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3060–0512	FCC Report 43–01	04/30/15
3060–0519	Rules and Regulations Implementing the Telephone Consumer Protection Act (TCPA) of 1991, Order, CG Docket No. 02–278.	10/31/14
3060–0526	Sec. 69.123, Density Pricing Zone Plans, Expanded Interconnection with Local Telephone Company Facilities.	05/31/14
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3060–0550	FCC 328	05/31/14
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3060–0565	Sec. 76.944	03/31/15
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3060–0589	FCC 159, FCC 159–B, FCC 159–C, FCC 159–E and 159–W	03/31/14
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3060–0633	Secs. 73.1230, 74.165, 74.432, 74.564, 74.664, 74.765, 74.832 and 74.1265	08/31/13
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3060–0636	Secs. 2.906, 2.909, 2.1071, 2.1075, 2.1077, and 15.37	05/31/15
3060–0645	Secs. 17.4, 17.48 and 17.49	04/30/15
3060–0647	Cable Price Survey and Supplemental Questions and FCC 333	08/31/13
3060–0649	Secs. 76.1601, 76.1617, 76.1697 and 76.1708	08/31/13
3060–0652	Secs. 76.309, 76.1602, 76.160 and 76.1619	07/31/14
3060–0653	Sec. 64.703(b) and (c)	03/31/14
3060–0655	Requests for Waivers of Regulatory and Application Fees	07/31/13
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3060–0667	Secs. 76.630, 76.1621 and 76.1622	03/31/14
3060–0668	Sec. 76.936	09/30/13
3060–0669	Sec. 76.946	11/30/13
3060–0674	Sec. 76.1618	06/30/14
3060–0678	Part 25 of the Commission's Rules Governing the Licensing of, and Spectrum Usage by, Satellite Network Stations and Space Stations.	09/30/13
3060–0685	FCC 1210 and FCC 1240	12/31/14
3060–0686	Secs. 63.10, 63.11, 63.13, 63.18, 63.19, 63.21, 63.24, 63.25 and 1.1311, International Section 214 Process and Tariff Requirements and FCC 214, FCC 214TC and FCC 214STA.	02/28/14
3060–0687	Access to Telecommunications Equipment and Services by Persons with Disabilities, CC Docket No. 87–124.	05/31/15
3060–0688	FCC 1235	08/31/13
3060–0690	Sec. 101.17	04/30/15
3060–0691	Sec. 90.665	07/31/13
3060–0692	Secs. 76.613, 76.802 and 76.804	02/28/13
3060–0695	Sec. 87.219	10/31/14
3060–0698	Secs. 25.203(i) and 73.1030(a)(2), Radio Astronomy Coordination Zone in Puerto Rico	03/31/14
3060–0700	FCC 1275	07/31/13
3060–0703	FCC 1205	01/31/15
3060–0704	Secs. 42.10, 42.11 and 64.1900 and Section 254(g), Policy and Rule Concerning the Interstate, Interexchange Marketplace.	09/30/14
3060–0706	Secs. 76.952 and 76.990, Cable Act Reform	06/30/14
3060–0707	Over-the Air Reception Devices (OTARD)	03/31/14
3060–0710	Policy and Rules Under Parts 1 and 51 Concerning the Implementation of the Local Competition Provisions in the Telecommunications Act of 1996—CC Docket No. 96–98.	07/31/13
3060–0713	Alternative Broadcast Inspection Program (ABIP) Compliance Notification	04/30/14
3060–0715	Telecommunications Carriers' Use of Customer Proprietary Network Information (CPNI) and Other Customer Information—CC Docket No. 96–115.	07/31/14
3060–0716	Secs. 73.88, 73.718, 73.685 and 73.1630	04/30/15
3060–0717	Secs. 64.703(a), 64.709 and 64.710	06/30/14
3060–0718	Part 101 Rule Sections Governing the Terrestrial Microwave Fixed Radio Service	04/30/15
3060–0719	Quarterly Report of IntraLATA Carriers Listing Payphone Automatic Number Identifications (ANIs).	03/31/13
3060–0723	47 U.S.C. Section 276, Public Disclosure of Network Information by Bell Operating Companies (BOCs).	10/31/12
3060–0725	Quarterly Filing of Nondiscrimination Reports (on Quality of Service, Installation, and Maintenance) by Bell Operating Companies (BOC's).	05/31/15
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3060–0734	Secs. 53.209, 53.211 and 53.213	08/31/14
3060–0737	Disclosure Requirements for Information Services Provided Under a Presubscription or Comparable Arrangement.	01/31/15
3060–0740	Sec. 95.1015	10/31/14
3060–0741	Implementation of the Local Competition Provisions on the Telecommunications Act of 1996—CC Docket No. 96–98.	01/31/14
3060–0742	Secs. 52.21, 52.22, 52.23, 52.24, 52.25, 52.26, 52.27, 52.28, 52.29, 52.30, 52.31, 52.32, 52.33, 52.34, 52.35 and 52.36; and CC Docket No. 95–116.	07/31/13
3060–0743	Implementation of the Pay Telephone Reclassification and Compensation Provisions of the Telecommunications Act of 1996—CC Docket No. 96–128.	02/28/13
3060–0745	Implementation of the Local Exchange Carrier Tariff Streamlining Provisions of the Telecommunications Act of 1996, CC Docket No. 96–187.	10/31/12
3060–0748	Secs. 64.1504, 64.1509 and 64.1510, Pay-Per-Call and Other Information Services	04/30/13
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3060–0758	Secs. 5.55, 5.61, 5.75, 5.85, and 5.93, Experimental Radio Service Regulations, ET Docket No. 96–256.	04/30/13
3060–0760	272 Sunset Order; WC Docket No. 06–120; Access Charge Reform, CC Docket No. 96–262, First Report and Order; Second Order on Reconsideration and Memorandum Opinion and Order; and Fifth Report and Order.	09/30/14
3060–0761	Sec. 79.1	Pending OMB review and approval.
3060–0763	FCC Report 43–06	02/28/15
3060–0767	Secs. 1.2110, 1.2111 and 1.2112, Auction and Licensing Disclosures—Ownership and Small Business Status.	06/30/14
3060–0768	28 GHz Band Segmentation Plan Amending the Commission's Rules to Redesignate the 27.5–29.5 GHz Frequency Band, to Reallocate the 29.5–30.0 GHz Frequency Band, and to Establish Rules and Policies.	08/31/14
3060–0770	Secs. 1.774, 61.49, 61.55, 61.58, 69.4, 69.707, 69.713 and 69.729	10/31/14
3060–0773	Sec. 2.803	12/31/12

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3060–0774	Parts 36 and 54, Federal-State Joint Board on Universal Service	06/30/14
3060–0775	Sec. 64.1903	04/30/13
3060–0779	Secs. 90.20(a)(1)(iii), 90.769, 90.767, 90.763(b)(l)(i)(a), 90.763(b)(l)(i)(B), 90.771(b) and 90.743, Rules for Use of the 220 MHz Band by the Private Land Mobile Radio Service (PLMRS).	11/30/13
3060–0782	Petition for Limited Modification of LATA Boundaries to Provide Expanded Local Calling Service (ELCS) at Various Locations.	11/30/12
3060–0783	Sec. 90.176	01/31/15
3060–0787	Implementation of Subscriber Carrier Selection Changes Provisions of the Telecommunications Act of 1996; Policies and Rules Concerning Unauthorized Changes of Consumers' Long Distance Carriers.	07/31/14
3060–0788	DTV Showings/Interference Agreements	10/31/13
3060–0790	Sec. 68.110(c)	09/30/12
3060–0791	Sec. 32.7300	09/30/12
3060–0795	FCC 606	08/31/14
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3060–0799	FCC 602	09/30/13
3060–0800	FCC 603	02/28/14
3060–0804	FCC 465, FCC 466, FCC 466–A and FCC 467	11/30/14
3060–0805	Secs. 90.523, 90.527, 90.545 and 90.1211	07/31/14
3060–0806	FCC 470 and FCC 471	10/31/13
3060–0807	Sec. 51.803 and Supplemental Procedures for Petitions to Section 252(e)(5) of the Communications Act of 1934, as amended.	07/31/13
3060–0809	Communications Assistance for Law Enforcement Act (CALEA)	02/28/14
3060–0812	Exemption from Payment of Regulatory Fees When Claiming Non-Profit Status	12/31/14
3060–0813	Sec. 20.18, Enhanced 911 Emergency Calling Systems	02/28/15
3060–0814	Sec. 54.301, Local Switching Support and Local Switching Support Data Collection Form and Instructions.	12/31/13
3060–0816	FCC 477	04/30/13
3060–0817	Computer III Further Remand Proceedings: BOC Provision of Enhanced Services (ONA Requirements), CC Docket No. 95–20.	06/30/15
3060–0819	Secs. 54.400–54.707 and FCC 497	10/31/12
3060–0823	Part 64, Pay Telephone Reclassification	03/31/14
3060–0824	FCC 498	11/30/12
3060–0833	Implementation of Section 255 of the Telecommunications Act of 1996: Complaint Filings.	05/31/14
3060–0835	FCC 806, FCC 824, FCC 827 and FCC 829	09/30/12
3060–0837	FCC 302–TV	04/30/13
3060–0844	Carriage of the Transmissions of Digital Television Broadcast Stations	10/31/13
3060–0848	Deployment of Wireline Services Offering Advanced Telecommunications Capability—CC Docket No. 98–147.	02/28/15
3060–0849	Commercial Availability of Navigation Devices	07/31/14
3060–0850	FCC 605	06/30/14
3060–0853	FCC 479, FCC 486 and FCC 500	10/31/13
3060–0854	Truth-in-Billing Format, CC Docket No. 98–170 and CG Docket No. 04–208	09/30/14
3060–0855	FCC 499–A and FCC 499–Q	10/31/14
3060–0856	FCC 472, FCC 473 and FCC 474	06/30/13
3060–0859	Public Notice—Suggested Guidelines for Petitions for Ruling under Section 253 of the Telecommunications Act.	05/31/15
3060–0862	Handling Confidential Information	07/31/14
3060–0863	Satellite Delivery of Network Signals to Unserved Households for Purposes of the Satellite Home Viewer Act (SHVA).	06/30/14
3060–0865	Wireless Telecommunications Bureau Universal Licensing System Recordkeeping and Third-Party Disclosure Requirements.	08/31/13
3060–0874	FCC 475B, FCC 501, FCC 2000 Series A–F, FCC 1088A, B, C, D, E, F, and H	Pending OMB review and approval.
3060–0876	Sec. 54.703 and Secs. 54.719, 54.720, 54.721, 54.722, 54.723, 54.724 and 54.725	10/31/12
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3060–0888	Secs. 1.221, 1.229, 1.248, 76.7, 76.9, 76.61, 76.914, 76.1001, 76.1003, 76.1302 and 76.1513.	01/31/15
3060–0895	Sec. 52.15, CC Docket No. 99–200 and FCC 502	06/30/13
3060–0896	Broadcast Auction Form Exhibits	10/31/14
3060–0905	Sec. 18.213	08/31/14
3060–0906	FCC 317 and Sec. 73.624(g)	11/30/14
3060–0910	Third Report and Order in CC Docket No. 94–102 to Ensure Compatibility with Enhanced 911 Emergency Calling Systems.	09/30/12
3060–0912	Secs. 76.501, 76.503 and 76.504, Cable Attribution Rules	03/31/15
3060–0917	FCC 160	05/31/13
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3060–0928	FCC 302–CA	10/31/12
3060–0931	Sec. 80.103, Digital Selective Calling (DSC) Operating Procedures; Maritime Mobile Services Identity (MMSI).	07/31/12
3060–0932	FCC 301–CA and Sec. 74.793(d)	11/30/13
3060–0936	Secs. 95.1215 and 95.1217	06/30/15
3060–0937	Establishment of a Class A Television Service, MM Docket No. 00–10	07/31/13
3060–0938	FCC 319	02/28/15
3060–0942	Access Charge Reform, Price Cap Performance Review for Local Exchange Carriers, Low-Volume Long Distance Users, Federal-State Joint Board on Universal Service.	06/30/13
3060–0944	Secs. 1.767 and 1.768,; Executive Order (E.O.) 10530, Cable Landing License Act; FCC 220.	02/28/14
3060–0950	Bidding Credits for Tribal Lands	08/31/13
3060–0951	Sec. 1.1204(b) Note, and Sec. 1.1206(a) Note 1	03/31/13
3060–0952	Proposed Demographic Information and Notifications, Second FNPRM, CC Docket Nos. 98–147.	03/31/13
3060–0953	Secs. 95.1111 and 95.1113	05/31/13
3060–0955	Secs. 25.114, 25.115, 25.133, 25.137, 25.143, 25.203, and 25.279; 2 GHz Mobile Satellite Service Reports.	01/31/13
3060–0957	Sec. 20.18(i) and (g)	12/31/13
3060–0960	Secs. 76.122, 76.123, 76.124 and 76.127	03/31/14
3060–0962	Redesignation of the 18 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the Ka-Band, and the Allocation of Additional Spectrum for Broadcast Satellite Service Use.	08/31/14
3060–0967	Sec. 79.2	08/31/13
3060–0971	Sec. 52.15	02/28/14
3060–0972	FCC 507, FCC 508 and FCC 509, Multi-Association Group (MAG) Plan Order, Parts 54 and 69 Filing Requirements for Regulation of Interstate Services of Non-Price Cap Incumbent LECs and Interexchange Carriers.	02/28/14
3060–0973	Sec. 64.1120(e)	09/30/13
3060–0975	Secs. 68.3 and 1.4000	11/30/13
3060–0979	License Audit Letter	01/31/13
3060–0980	Sec. 76.66, Implementation of the Satellite Home Viewer Extension and Reauthorization Act of 1999; (SHVERA) Rules, Local Broadcast Signal Carriage Issues, Retransmission Consent Issues.	07/31/14
3060–0984	Secs. 90.35(b)(2) and 90.175(b)(1)	01/31/14
3060–0986	FCC 525	04/30/15
3060–0987	Sec. 20.18(l)(1)(i–iii) and 20.18(l)(2)(i–iii), 911 Callback Capability; Non-initialized Handsets.	09/30/14
3060–0989	Secs. 63.01, 63.03 and 63.04	07/31/14
3060–0991	AM Measurement Data	01/31/15
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3060–0994	Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Band.	02/28/13
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3060–0996	AM Auction Section 307(b) Submissions	07/31/14
3060–0997	Sec. 52.15(k)	04/30/14
3060–0998	Sec. 87.109	07/31/13
3060–0999	Sec. 20.19 and Hearing Aid Compatibility Status Report	12/31/13
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3060–1003	Communications Disaster Information Reporting System (DIRS)	06/30/15
3060–1004	Commission Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems.	08/31/12
3060–1005	Numbering Resource Optimization—Phase 3	05/31/14
3060–1008	Secs. 27.50 and 27.602	09/30/14
3060–1013	Mitigation of Orbital Debris	02/28/14
3060–1014	Ku-Band NGSO FSS	12/31/14
3060–1015	Ultra Wideband Transmission Systems Operating Under Part 15	01/31/15
3060–1021	Sec. 25.139	03/31/14
3060–1022	Secs. 101.1403, 101.103(f), 101.1413, 101.1440 and 101.1417	08/31/14
3060–1028	International Signaling Point Code (ISPC)	02/28/14
3060–1029	Data Network Identification Code (DNIC)	02/28/14
3060–1030	Service Rules for Advanced Wireless Services (AWS) in the 1.7 GHz and 2.1 GHz Bands.	06/30/13
3060–1031	Commission's Initiative to Implement Enhanced 911 (E911) Emergency Services	10/31/12
3060–1033	FCC 396–C	02/28/13
3060–1034	Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Radio Broadcast Service and FCC 335–AM, FCC 335–FM.	06/30/13
3060–1035	FCC 309, FCC 310 and FCC 311, Part 73, Subpart F, International Broadcast Stations	01/31/15
3060–1039	FCC 620 and FCC 621	09/30/14
3060–1042	Request for Technical Support—Help Request Form	08/31/13
3060–1043	Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, Report and Order, CC Docket No. 98–67; FCC 04–137.	03/31/14

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3060–1044	Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, CC Docket No. 01–338, and WC Docket No. 04–313, FCC 04–290, Order on Remand.	04/30/13
3060–1045	FCC 324 and Sec. 76.1610	02/28/15
3060–1046	Part 64, Pay Telephone Reclassification and Compensation Provisions of the Telecommunications Act of 1996.	06/30/14
3060–1047	Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, Report and Order, FCC 03–112.	01/31/15
3060–1048	Sec. 1.929(c)(1)	02/28/13
3060–1050	Sec. 97.303	10/31/13
3060–1053	Sec. 64.604, Telecommunications Relay Services, and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, Two-Line Captioned Telephone Order.	04/30/13
3060–1054	FCC 422–IB	02/28/13
3060–1056	FCC 421–IB	01/31/13
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3060–1059	Global Mobile Personal Communications by Satellite (GMPCS)/E911 Call Centers	11/30/13
3060–1060	Wireless E911 Coordination Initiative Letter to State 911 Coordinators	11/30/13
3060–1061	Earth Stations on Board Vessels (ESVs)	12/31/12
3060–1062	Schools and Libraries Universal Service Support Mechanism—Notification of Equipment Transfers.	06/30/13
3060–1063	Global Mobile Personal Communications by Satellite (GMPCS) Authorization, Marketing and Importation Rules.	02/28/13
3060–1064	Regulatory Fee Assessment True-Ups	06/30/14
3060–1066	FCC 312–R and Secs. 25.121(e) and 25.131(h)	02/28/13
3060–1067	FCC 312–EZ	03/31/13
3060–1069	Rules and Policies Concerning Attribution of Joint Sales Agreements in Local Television Markets, NPRM, MB Docket No. 94–256, FCC 04–173.	05/31/13
3060–1070	Sec. 101.1523 and Allocation and Service Rules for the 71–76 GHz, 81–86 GHz and 92–95 GHz Bands.	10/31/14
3060–1078	Rules and Regulations Implementing the Controlling the Assault of Non-Solicited Pornography and Marketing Act of 2003 (CAN–SPAM Act), CG Docket No. 04–53.	11/30/13
3060–1079	Sec. 15.240, Radio Frequency Identification Equipment (RFID)	02/28/14
3060–1080	Improving Public Safety Communications in the 800 MHz Band; TA–13.1 and TA–14.1	09/30/14
3060–1081	Secs. 54.202, 54.209, 54.307, 54.313, 54.314 and 54.809	07/31/14
3060–1084	Rules and Regulations Implementing Minimum Customer Account Record Obligations on All Local and Interexchange Carriers (CARE), CG Docket No. 02–386.	06/30/13
3060–1085	Sec. 9.5, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance	06/30/15
3060–1086	Secs. 74.786, 74.787, 74.790, 74.794 and 74.796	08/31/14
3060–1087	Sec. 15.615	06/30/14
3060–1088	Rules and Regulations Implementing the Telephone Consumer Protection Act (TCPA) of 1991, CG Docket No. 05–338, FCC 06–42.	05/31/13
3060–1089	Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, E911 Requirements for IP–Enabled Service.	12/31/13
3060–1092	FCC 609–T and FCC 611–T	01/31/14
3060–1094	Secs. 27.14 and 27.1221	03/31/14
3060–1095	Surrenders of Authorizations for International Carrier, Space Station and Earth Station Licensees.	01/31/15
3060–1096	Prepaid Calling Card Service Provider Certification, WC Docket No. 05–68	04/30/13
3060–1097	Service Rules and Policies for the Broadcasting Satellite Service (BSS)	11/30/14
3060–1100	Sec. 15.117(k)	06/30/13
3060–1101	Children's Television Requests for Preemption Flexibility	04/30/13
3060–1103	Sec. 76.41	06/30/13
3060–1104	Sec. 83.682(d)	03/31/14
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3060–1106	Licensing and Service Rules for Vehicle Mounted Earth Stations (VMES)	12/31/12
3060–1108	Consummations of Assignments and Transfers of Control of Authorization	06/30/13
3060–1110	Sunset of the Cellular Radiotelephone Service Analog Service Requirement and Related Matters, FCC 07–103.	10/31/13
3060–1111	Secs. 225 and 255, Interconnected Voice Over Internet Protocol (VoIP) Services	04/30/14
3060–1112	Comprehensive Review of the Universal Service Fund Management, Administration, and Oversight.	11/30/13
3060–1113	Commercial Mobile Alert System (CMAS)	07/31/14
3060–1115	DTV Consumer Education Initiative; Sec. 73.674, and FCC 388	09/30/12
3060–1116	Submarine Cable Reporting	12/31/14
3060–1120	Service Quality Measurement Plan for Interstate Special Access and Monthly Usage Reporting Requirements (272 Sunset Rulemaking).	09/30/14
3060–1122	Preparation of Annual Reports to Congress for the Collection & Expenditure of Fees or Charges for Enhanced 911 (E911) Services under the NET 911 Improvement Act of 2008.	05/31/15
3060–1124	Sec. 80.231	01/31/15
3060–1126	Sec. 10.350	06/30/15

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3060–1127	First Responder Emergency Contact Information in the Universal Licensing System (ULS).	03/31/13
3060–1128	National Broadband Plan Survey of Consumers	03/31/13
3060–1129	Broadband Speed Test and Unavailability Registry	02/28/13
3060–1130	National Broadband Plan Survey of Businesses	02/28/13
3060–1131	Implementation of the NET 911 Improvement Act of 2008: Location Information from Owners and Controllers of 911 and E911 Capabilities.	12/31/12
3060–1133	FCC 308 and Secs. 73.3545 and 73.3580	01/31/13
3060–1135	Rules Authorizing the Operation of Low Power Auxiliary Stations (including Wireless Microphones).	08/31/13
3060–1136	Spectrum Dashboard Customer Feedback	08/31/13
3060–1138	Secs. 1.49 and 1.54	04/30/13
3060–1139	Residential Fixed Broadband Services Testing and Measurement	02/28/14
3060–1140	Requests for Waiver of Various Petitioners to Allow the Establishment of 700 MHz Interoperable Public Safety Wireless Broadband Networks, Order, PS Docket No. 06–229, DA 10–2342.	06/30/14
3060–1142	Electronic Tariff Filing System (ETFS),WC Docket No. 10–141, FCC 10–127, NPRM	09/30/13
3060–1143	E–Rate Deployed Ubiquitously (EDU) 2011 Pilot Program	04/30/14
3060–1144	Consumer Survey	02/28/14
3060–1145	Structure and Practices of the Video Relay Service Program, CG Docket No. 10–51	09/30/14
3060–1146	Implementation of the 21st Century Communications and Video Accessibility Act of 2010, Section 105, Relay Services for Deaf-Blind Individuals, CG Docket No. 10–210.	Pending OMB review and approval.
3060–1147	Wireless E911 Phase II Location Accuracy Requirements	05/31/15
3060–1148	Sec. 79.3	Pending OMB review and approval.
3060–1150	Structure and Practices of the Video Relay Service Program, Second Report and Order, CG Docket No. 10–51.	06/30/15
3060–1151	Secs. 1.1420, 1.1422, and 1.1424	01/31/15
3060–1152	Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band (Third Report and Order, PS Docket No. 06–229, FCC 11–6).	06/30/14
3060–1153	Satellite Digital Radio Service (SDARS)	07/31/14
3060–1154	Commercial Advertisement Loudness Mitigation (''CALM'') Act; Financial Hardship and General Waiver Requests.	06/30/15
3060–1155	Secs. 15.713, 15.714, 15.715 and 15.717	02/28/15
3060–1157	Formal Complaint Procedures, Preserving the Open Internet and Broadband Industry Practices, Report and Order, GN Docket No. 09–191 and WC Docket No. 07–52.	09/30/14
3060–1158	Disclosure of Network Management Practices, Preserving the Open Internet and Broadband Industry Practices, Report and Order, GN Docket No. 09–191 and WC Docket No. 07–52.	09/30/14
3060–1159	Part 25—Satellite Communications; and Part 27—Miscellaneous Wireless Communications Services in the 2.3 GHz Band.	09/30/14
3060–1161	Sec. 27.14(g)–(l)	10/31/14
3060–1162	Closed Captioning of Video Programming Delivered Using Internet Protocol, and Apparatus Closed Caption Requirements.	Pending OMB review and approval.
3060–1165	Sec. 74.605	03/31/15
3060–1166	FCC 180	04/30/15
3060–1167	Accessible Telecommunications and Advanced Communications Services and Equipment.	04/30/15
3060–1168	FCC 680	04/30/15
3060–1169	Part 11—Emergency Alert System (EAS), Fifth Report and Order, FCC 12–7	11/30/12
3060–1171	Secs. 73.682(e) and 76.607(a), Commercial Advertisement Loudness Mitigation (''CALM'') Act.	06/30/15

[77 FR 48090, Aug. 13, 2012, as amended at 80 FR 33438, June 12, 2015]

List of CFR Sections Affected

All changes in this volume of the Code of Federal Regulations (CFR) that were made by documents published in the FEDERAL REGISTER since January 1, 2010 are enumerated in the following list. Entries indicate the nature of the changes effected. Page numbers refer to FEDERAL REGISTER pages. The user should consult the entries for chapters, parts and subparts as well as sections for revisions.

For changes to this volume of the CFR prior to this listing, consult the annual edition of the monthly List of CFR Sections Affected (LSA). The LSA is available at *www.fdsys.gov*. For changes to this volume of the CFR prior to 2001, see the ''List of CFR Sections Affected, 1949–1963, 1964–1972, 1973–1985, and 1986–2000'' published in 11 separate volumes. The ''List of CFR Sections Affected 1986–2000'' is available at *www.fdsys.gov*.

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20.3 Amended 22276
20.12 (d) revised 22276
20.18 (h) revised (OMB number pending in part) 70613
20.19 (a)(3)(i) through (iv) and (e)(1) redesignated as (a)(3)(ii) through (v) and (e)(1)(i); new (a)(3)(i), (c)(1)(ii)(C), (e)(1)(ii), (iii) and (f)(3) added; (b) introductory text, (c)(1)(i), (d)(1) introductory text, (f)(2) and (k)(1) revised; eff. 10-8-10 (OMB number pending in part) 54522
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23 Removed 7974
24.232 Correctly revised; CFR correction 43088
25.121 (a) revised 45067
25.132 Regulation at 74 FR 57098 confirmed 1285
25.144 (d) revised; (e) added (OMB number pending in part) 45067
25.146 Regulation at 68 FR 43946 confirmed 14094
25.202 (a)(6) and (f) introductory text revised; (h) added 45068
(a)(5) revised 63031
25.214 Heading revised; (d) added 45068
25.221 Regulation at 74 FR 47102 confirmed in part 7975

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25.222 Regulation at 74 FR 47105 confirmed in part 7975
25.226 Regulation at 74 FR 57099 confirmed 1285
25.263 Added (OMB number pending in part) 45069
27 Technical correction 35989
27.5 (i)(1) revised 33731
27.14 (o) introductory text revised 33731
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27.50 (d) correctly revised; CFR correction 43088
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27.53 (a) introductory text, (1) through (5) and (10) revised; (a)(6) and (9) removed 45071
27.72 Added (OMB number pending in part) 45071
27.73 Added (OMB number pending in part) 45072
36.3 (a) through (e) amended; interim 30301
36.123 (a)(5) and (6) amended; interim 30301
36.124 (c) and (d) amended; interim 30301
36.125 (j) revised 17874
(h) and (i) amended; interim 30301
36.126 (b)(5), (c)(4), (e)(4) and (f)(2) amended; interim 30301
36.141 (c) amended; interim 30301

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36.142 (c) amended; interim 30301
36.152 (d) amended; interim 30301
36.154 (g) amended; interim 30301
36.155 (b) amended; interim 30301
36.156 (c) amended; interim 30301
36.157 (b) amended; interim 30301
36.191 (d) amended; interim 30301
36.212 (c) amended; interim 30301
36.214 (a) amended; interim 30301
36.372 Amended; interim 30301
36.374 (b) and (d) amended; interim 30301
36.375 (b)(4) and (4) amended; interim 30301
36.377 (a) introductory text, (1)(ix), (2)(vii), (3)(vii), (4)(vii), (5)(vii) and (6)(vii) amended; interim 30301
36.378 (b)(1) amended; interim 30301
36.379 (b)(1) and (2) amended; interim 30301
36.380 (d) and (e) amended; interim 30301
36.381 (c) and (d) amended; interim 30301
36.382 (a) amended; interim 30301

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20 Authority citation and heading revised 26220
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20.3 Amended 26220
20.11 (b) revised 73853
20.12 (a)(3) and (e) added (OMB number pending in part) 26220
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20.18 Regulation at 75 FR 70613 confirmed in part 23713
(h)(2)(iv) added (OMB number pending) 59921
20.19 Regulation at 73 FR 25587 confirmed in part 77415
25 Actions on petitions 14297, 49364
25.114 (d)(15)(iv) and (18) added (OMB number pending) 50431
Regulation at 76 FR 50431 confirmed 79110
25.144 Regulation at 75 FR 45067 confirmed in part 57923
25.149 (g) added 31260

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25.202 Regulation at 75 FR 45068 confirmed in part 67070
25.214 Regulation at 75 FR 45068 confirmed in part 67070
25.263 Regulation at 75 FR 45069 confirmed in part 57923
25.264 Added (OMB number pending in part) 50431
Regulation at 76 FR 50431 confirmed in part 79110
27.14 Regulation at 75 FR 45069 confirmed in part 67070
27.14 Regulation at 72 FR 48846 confirmed in part 71909
27.15 Regulation at 72 FR 48848 confirmed 71909
27.50 Regulation at 72 FR 48849 confirmed 71909
27.53 Regulation at 75 FR 45071 confirmed in part 67070
27.72 Regulation at 75 FR 45071 confirmed in part 67070
27.73 Regulation at 75 FR 45072 confirmed in part 67070
32.2000 Regulation at 64 FR 50007 confirmed 61279
36 Authority citation revised 73853
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36.3 (a) through (e) amended; interim 30841
36.4 Added 73853
36.123 (a)(5) and (6) amended; interim 30841
36.124 (c) and (d) amended; interim 30841
36.125 (h) and (i) amended; interim 30841
36.126 (b)(5), (c)(4), (e)(4) and (f)(2) amended; interim 30841
36.141 (c) amended; interim 30841
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36.152 (d) amended; interim 30841
36.154 (g) amended; interim 30841
36.155 (b) amended; interim 30841
36.156 (c) amended; interim 30841
36.157 (b) amended; interim 30841
36.191 (d) amended; interim 30841
36.212 (c) amended; interim 30841
36.214 (a) amended; interim 30841
36.372 Amended; interim 30841
36.374 (b) and (d) amended; interim 30841
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36.377 (a) introductory text, (1)(ix), (2)(vii), (3)(vii), (4)(vii), (5)(vii) and (6)(vii) amended; interim 30841
36.378 (b)(1) amended; interim 30841
36.379 (b)(1) and (2) amended; interim 30841
36.380 (d) and (e) amended; interim 30841
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36.382 (a) amended; interim 30841
36.601—36.631 (Subpart F) Revised 73853
36.601 (a) amended; (c) removed 73853
36.602 Removed 73853
36.603 Heading and (a) revised 73853
36.604 Revised 73853
36.605 (a), (b), (c) heading and (1) revised 73853
36.611 (h) amended 73854
36.612 (a) introductory text amended 73854
36.621 (a)(4) introductory text revised; (a)(4)(iii) and (5) added 73854
36.631 (c) introductory text and (d) introductory text revised 73854

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20.11 (e) revised 1640
20.18 Regulation at 76 FR 59921 confirmed 43536
20.19 (a)(1), (b)(1), (3), (c) introductory text, (d) introductory text and (f)(2)(i) revised; (b) introductory text and (5) removed; (b)(3), (f)(2) introductory text, (iii) and (l) added 41928
22 Policy statement 32033
22.143 (d)(4) revised (OMB number pending) 3954
Regulation at 77 FR 3954 confirmed 36177
24.2 (b) and (f) revised (OMB number pending) 3954
Regulation at 77 FR 3954 confirmed 36177
25 Policy statement 50628

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25.113 (a) revised (OMB number pending) 3954
Regulation at 77 FR 3954 confirmed 36177
25.115 (c)(2)(vi)(A)(*4*) revised (OMB number pending) 3954
Regulation at 77 FR 3954 confirmed 36177
25.221 (a)(3) through (12), (b)(3), (4) and (5) redesignated as (a)(4) through (13), (b)(4), (5) and (6); new (a)(3), new (b)(3) and (7) added; (a) introductory text, (1)(ii) introductory text, (iii) introductory text, (2) introductory text, (iii), new (12), (b) introductory text, (2) introductory text and (iv) revised 50050
25.222 (a) introductory text, (1)(ii) introductory text, (iii) introductory text, (2) introductory text, (iii), (b) introductory text, (2) introductory text and (iv) revised; (a)(3) through (7), (b)(3), (4) and (5) redesignated as (a)(4) through (8), (b)(4), (5) and (6); new (a)(3), new (b)(3) and (7) added 50051
27.1 (b)(2) revised 62462
27.3 (b) and (f) revised (OMB number pending) 3955
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27.4 Amended 62462
27.5 (b) revised 62462
27.1301—27.1340 (Subpart N) Removed 62462
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36.3 (a) through (e) amended 30411
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36.141 (c) amended 30411
36.142 (c) amended 30411
36.152 (d) amended 30411
36.154 (g) amended 30411
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36.156 (c) amended 30411
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36.214 (a) amended 30411

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36.372 Amended 30411
36.374 (b) and (d) amended 30411
36.375 (b)(4) and (5) amended 30411
36.377 (a), (1)(ix), (2)(vii), (3)(vii), (4)(vii), (5)(vii) and (6)(vii) amended 30411
36.378 (b)(1) amended 30411
36.379 (b)(1) and (2) amended 30411
36.380 (d) and (e) amended 30411
36.381 (c) and (d) amended 30411
36.382 (a) amended 30411

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20 Authority citation revised 21559, 32178
20.2 Added 21559
20.3 Amended (OMB number pending) 21559
Regulation at 78 FR 21559 eff. date confirmed 55648
20.18 (n) added 32178
(n)(7) revised 64407
20.21 Added (OMB number pending in part) 21560
Regulation at 78 FR 21560 eff. date confirmed in part 55648
22 Actions on petitions 19424
22.9 Added (OMB number pending) 21563
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22.165 (d)(2) removed 25174
22.371 Removed 66297
22.377 Revised 25174
22.401—22.413 (Subpart D) removed 25174
22.591 (a) revised 25174
22.599 Removed 25174
24 Actions on petitions 19424
24.9 Added (OMB number pending) 21564
Regulation at 78 FR 21564 eff. date confirmed 55648
25 Authority citation revised 8420, 9619, 41331
25.103 (a) through (f) removed 8420
25.105 Added 41331
25.109 Revised 8420
25.110 (a) and (c) revised (OMB number pending) 8420
Regulation at 78 FR 8420 confirmed 17604
25.111 (c) amended 8421

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25.113 (a) amended 8421
25.114 (d)(7) amended; (d)(12) revised 8421
25.115 (a)(2)(i) revised; (f) amended 8421
(a)(2)(iii) revised 14926
25.116 (e) amended 8421
25.117 (c) revised; (b) and (e) added 8421
25.119 (b)(2) revised 8421
25.130 (a) introductory text revised 14926
25.131 (b) amended 8421
25.132 (b)(3) revised (OMB number pending) 14926
Regulation at 78 FR 14926 eff. date confirmed 67309
25.133 (a)(1) amended; (a)(2) revised 8421
25.134 Heading and (h) revised; (d) removed 8421
25.136 Heading, introductory text, (c) and (e) amended; (d) introductory text revised 8421
25.137 (b), (c) introductory text, (1) and (e) revised (OMB number pending) 8422
Regulation at 78 FR 8422 confirmed 17604
25.140 Heading revised; (b) amended; (a) removed 8422
25.142 Heading and (a)(2) revised; (b)(2)(ii) amended 8422
25.143 (i) and (k) revised 8267
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25.145 Heading, (c)(1), (2) and (e) revised 8423
25.146 Heading, (1)(i), (iii), (2) introductory text, (i), (iii), (b) introductory text, (1)(i), (iii), (v), (c), (e), (h), (i)(2) and (3) revised; (a) introductory text and (b)(2) amended 8423
25.149 Heading, (a)(1) introductory text, (d) and (e) revised; (a)(2)(i), (b)(1)(i) and (5)(i) removed 8267
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25.150 Revised 8425
25.161 (b) revised 8425
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25.202 (a)(1) and (4)(iii)(A) 8426

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25.203 (g)(2), (4) and (j) revised 8427
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25.204 (f) amended; (g) revised 8427
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25.205 (d) added 14927
25.208 (g) introductory text, (h) introductory text; (i) introductory text, (j) introductory text, (k) introductory text, (l) introductory text, (m) introductory text, (n) introductory text and (s) introductory text revised 8427
25.209 Heading, (a) introductory text, (b) introductory text and (c)(1) revised 8427
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25.210 Heading, (f) and (k) revised; (d) removed 8428
25.211 (e) and (f) revised 8428
25.212 Heading, (c), (d)(2), (3) and (e) revised 8428
25.213 Heading and (a)(1)(vi) revised; (a)(1) introductory text amended 8428
25.214 Heading revised 8429
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25.218 (a) introductory text and (2) revised 8429
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25.220 (a)(1) revised 14927
25.221 (a) introductory text and (5) amended; (a)(7), (b) introductory text and (1)(ii) revised 8429
(a)(7), (8) and (b) introductory text correctly revised 29062
25.222 Heading, (b) introductory text and (1)(ii) revised; (a) introductory text and (5) amended 8429
25.226 Heading, (b) introductory text and (1)(ii) revised; (a) introductory text and (6) amended 8429
(a)(1)(ii) introductory text, (iii) introductory text, (3)(i), (9) and (b)(3)(i) revised; (a)(3)(iii) and (b)(3)(iii) removed; (b)(8) amended; (b)(9) added 9604
25.227 Added (OMB number pending in part) 14927

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Regulation at 78 FR 14927 eff. date confirmed 67309
25.251 (b) revised 8430
25.252 Removed 8267
25.254 Note revised; (c) amended 8430
25.255 Heading revised 8267
25.256 Amended 8430
25.257 (a) amended 8430
25.259 (a) revised 8430
25.260 (a) revised 8430
25.261 Heading revised 8430
25.263 (b) introductory text amended; (b)(1)(ii) and (e) revised; (b)(3) through (6) added (OMB number pending) 9619
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25.265 Added 8267
25.271 (c)(1) and (3) revised 8430
25.272 (a) revised 8431
25.273 (a)(2) revised 8431
25.274 (b) revised 8431
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25.278 Amended 8431
25.283 (a) revised 8431
25.284 Amended 8431
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25.701 (a)(2) amended 8431
27 Authority citation revised 9620, 50254
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27.1 (b)(10) added 8267
(b)(7) added 50254
27.2 (a) revised; (d) added 8267
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27.4 Amended 8267,50254
27.5 (j) added 8267
(k) added 50254
27.6 (i) added 8267
(j) added 50254
27.9 Added (OMB number pending) 21564
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27.12 Revised (OMB number pending) 50254
27.13 (i) added 8267
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27.14 (a) amended; (f) and (k) revised; (q) added (OMB number pending) 8268
(p)(1), (2), (3) and (5) revised 9620
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(a), (f) and (k) amended; (r) added 50254

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27.15 (d)(1)(i) and (2)(i) revised; (d)(1)(iii) and (2)(iii) added 8268
(d)(1)(i), (iii), (2)(i) and (iii) revised 50255
27.17 Added (OMB number pending) 8269
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27.50 (d) introductory text, (1) introductory text and (2) introductory text revised; (d)(7) and (8) added 8269
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(c)(7) revised; (c)(12) and (13) added 66316
27.53 (h) revised 8269
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(h)(1) revised; (h)(2)(iii) added 50256
27.55 (a)(1) revised 8270, 50256
27.57 (c) revised 8270, 50257
27.63 Removed 66298
27.64 (d) added 9621
27.65 Added 8270
27.72 Introductory text, (a), (b), (c)(2)(i), (3) and (e) revised (OMB number pending) 9622
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27.73 Introductory text, (a), (b) and (c) revised (OMB number pending) 9622
Regulation at 78 FR 9622 eff. date confirmed 70237
27.1001—27.1041 (Subpart K) Added 50257
27.1101—27.1190 (Subpart L) Heading revised 8270
27.1103 Added 8270
27.1104 Added 8270
27.1131 Revised (OMB number pending) 8270
Regulation at 78 FR 8270 eff. date confirmed 48621
27.1134 (e) added (OMB number pending) 8270
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27.1136 Added (OMB number pending) 8270
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27.1160 Amended 8270
27.1166 (a)(1), (b) introductory text, (2) and (f) revised (OMB number pending) 8270
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27.1168 (a) introductory text, (2), (3) introductory text, (ii) and (b) revised (OMB number pending) 8271
Regulation at 78 FR 8271 eff. date confirmed 48621
27.1170 Revised (OMB number pending) 8271
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27.1174 Revised 8271
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20.18 (n)(9), (10) and (11) added; eff. 10-16-14 (OMB number pending in part) 55381
Regulation at 79 FR 55381 confirmed in part 68132
20.21 (e)(8)(i)(A)(*1*), (H), (9)(i)(A)(*2*), (C)(*2*), (H) and (f)(1) revised (OMB number pending in part) 70795
20.22 Added 40002
22.99 Amended 72150
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22.143 (a) revised 72151
22.165 (e) revised (OMB number pending) 72151
22.228 Removed 72151
22.355 Table C-1 corrected; CFR correction 35290
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22.909 Introductory text revised 72151
22.911 (a) introductory text, (d) and (e) revised; (c) removed 72151
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22.929 Removed 72151
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22.948 Revised (OMB number pending) 72152
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22.950 (c) and (d) revised 72152
22.951 Removed 72152
22.953 Revised (OMB number pending) 72152
22.960 Revised 72153
22.961 Added 72153
22.969 Removed 72153
22.983 Added 72153
25 Authority citation revised 8311, 51264
25.103 Revised (OMB number pending) 8311
Amended 26868
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25.111 Heading and (b) revised; (d) added (OMB number pending) 8314
Regulation at 79 FR 8314 eff. date confirmed 52224
25.112 (a)(4) added (OMB number pending) 8314
Regulation at 79 FR 8314 eff. date confirmed 52224
25.113 Heading, (a), (f) and (h) revised; (b) added; (c), (d) and (e) removed (OMB number pending) 8314
(b) corrected (OMB number pending) 27503
Regulation at 79 FR 8314 eff. date confirmed 52224
25.114 (a), (c)(4) through (8), (10), (11), (13), (d)(1), (7), (10), (11), (12) and (13) revised; (c)(9), (12), (d)(2) through (5) and (e) removed; (d)(14)(v) added; (d)(14)(iv) amended (OMB number pending) 8314
Regulation at 79 FR 8314 eff. date confirmed 52224
25.115 (a)(2), (3) and (d) revised; (j) and (k) added (OMB number pending) 8316
Regulation at 79 FR 8316 eff. date confirmed 52224
25.118 (a)(2)(i), (e) heading, (5) and (8) revised; (f) added (OMB number pending) 8317

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Regulation at 79 FR 8317 eff. date confirmed 52224
25.119 (f) amended 51264
25.121 (d) revised (OMB number pending) 8317
Regulation at 79 FR 8317 eff. date confirmed 52224
25.129 (c) revised (OMB number pending) 8317
Regulation at 79 FR 8317 eff. date confirmed 52224
25.130 (e) removed; (g) added (OMB number pending) 8317
Regulation at 79 FR 8317 eff. date confirmed 52224
25.131 Heading, (a), (b), (d) and (j)(2) revised (OMB number pending) 8318
Regulation at 79 FR 8318 eff. date confirmed 52224
25.132 (a), (b)(1), (3) and (d) introductory text revised (OMB number pending) 8318
Regulation at 79 FR 8318 eff. date confirmed 52224
25.133 (a)(1) and (2) amended; (b)(1) introductory text and (v) revised (OMB number pending) 8318
Regulation at 79 FR 8318 eff. date confirmed 52224
25.134 (a)(1) removed; (b), (e), (f), (g) and (h) revised (OMB number pending) 8318
Regulation at 79 FR 8318 eff. date confirmed 52224
25.135 Heading and (c) revised; (b) and (d) removed (OMB number pending) 8319
Regulation at 79 FR 8319 eff. date confirmed 52224
25.136 Removed (OMB number pending) 8319
Regulation at 79 FR 8319 eff. date confirmed 52224
25.138 Heading, (a) introductory text, (b), (d), (e), (f) and (g) revised; (a)(5) removed (OMB number pending) 8319
Regulation at 79 FR 8319 eff. date confirmed 52224
25.140 Heading revised; (a) added; (b)(1) and (2) removed; (b)(3), (4)(i), (ii), (iii) and (5) amended (OMB number pending) 8319

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(b) introductory text correctly revised; (b)(1) and (2) correctly removed (OMB number pending) 44312
Regulation at 79 FR 8319 eff. date confirmed 52224
25.142 (c) and (e) removed (OMB number pending) 8320
Regulation at 79 FR 8320 eff. date confirmed 52224
25.143 (b)(1) revised; (d), (e), (i), (j) and (k) removed (OMB number pending) 8320
Regulation at 79 FR 8320 eff. date confirmed 52224
25.144 (a)(3)(iii) and (c) removed (OMB number pending) 8320
Regulation at 79 FR 8320 eff. date confirmed 52224
25.145 (a), (f)(1) and (i) removed; (g) revised (OMB number pending) 8320
Regulation at 79 FR 8320 eff. date confirmed 52224
25.146 Heading revised; (c), (k), (l) and (n) removed (OMB number pending) 8320
Regulation at 79 FR 8320 eff. date confirmed 52224
25.149 Heading and (a)(1) introductory text correctly revised 27502
25.153 (a) revised (OMB number pending) 8320
Regulation at 79 FR 8320 eff. date confirmed 52224
25.154 (d) and (e) revised (OMB number pending) 8320
Regulation at 79 FR 8320 eff. date confirmed 52224
25.161 (b) revised (OMB number pending) 8320
Regulation at 79 FR 8320 eff. date confirmed 52224
25.164 (a)(4), (b)(4) and (c) through (g) revised; (h) added (OMB number pending) 8320
Regulation at 79 FR 8320 eff. date confirmed 52224
25.170 Undesignated center heading and section added (OMB number pending) 8321
Regulation at 79 FR 8321 eff. date confirmed 52224
25.171 Added (OMB number pending) 8321
Regulation at 79 FR 8321 eff. date confirmed 52224
25.172 Added (OMB number pending) 8321
Regulation at 79 FR 8321 eff. date confirmed 52224
25.173 Added (OMB number pending) 8321
Regulation at 79 FR 8321 eff. date confirmed 52224
25.201 Removed (OMB number pending) 8321
Regulation at 79 FR 8321 eff. date confirmed 52224
25.202 Heading revised; (c) removed; (g) amended (OMB number pending) 8321
Regulation at 79 FR 8321 eff. date confirmed 52224
25.203 (f), (i) introductory text and (1) amended (OMB number pending) 8321
Regulation at 79 FR 8321 eff. date confirmed 52224
25.204 Heading, (e) and (f) revised; (g) removed (OMB number pending) 8322
Regulation at 79 FR 8322 eff. date confirmed 52224
25.206 Revised (OMB number pending) 8322
Regulation at 79 FR 8322 eff. date confirmed 52224
25.208 (w) introductory text revised; (w) note added (OMB number pending) 8322
Regulation at 79 FR 8322 eff. date confirmed 52224
25.209 (a) introductory text, (b) introductory text and (h)(1) revised; (a)(1) through (4) and (f) amended; (d) and (g) removed (OMB number pending) 8322
Regulation at 79 FR 8322 eff. date confirmed 52224
25.210 (b), (k) and (l) removed; (c) revised; (f) amended (OMB number pending) 8323
Regulation at 79 FR 8323 eff. date confirmed 52224
25.211 (d) and (e) revised; (f) removed (OMB number pending) 8323
Regulation at 79 FR 8323 eff. date confirmed 52224

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25.212 (c), (d) and (e) revised (OMB number pending) 8323
Regulation at 79 FR 8323 eff. date confirmed 52224
25.214 (a) removed; (c)(1) revised (OMB number pending) 8323
Regulation at 79 FR 8323 eff. date confirmed 52224
25.215 Removed (OMB number pending) 8323
Regulation at 79 FR 8323 eff. date confirmed 52224
25.217 (b)(1) and (c)(1) revised; (b)(3) amended (OMB number pending) 8323
Regulation at 79 FR 8323 eff. date confirmed 52224
25.218 Heading, (a) and (b) revised; (c)(1), (d)(1), (e)(1), (f)(1), (g)(1) and (h)(1) amended (OMB number pending) 8324
Regulation at 79 FR 8324 eff. date confirmed 52224
25.220 (a)(1) revised (OMB number pending) 8324
Regulation at 79 FR 8324 eff. date confirmed 52224
25.221 Heading revised; (a)(12), (b)(1)(i) introductory text, (b)(1)(i)(A), (B), (C) and (b)(7) amended (OMB number pending) 8324
Regulation at 79 FR 8324 eff. date confirmed 52224
25.222 (b)(1)(i) introductory text, (A), (B) and (C) amended (OMB number pending) 8324
Regulation at 79 FR 8324 eff. date confirmed 52224
25.223 Heading, (a) and (c) revised; (e) removed (OMB number pending) 8324
Regulation at 79 FR 8324 eff. date confirmed 52224
25.226 (b)(1)(i) introductory text, (A), (B), (C) and (b)(9) amended (OMB number pending) 8324
Regulation at 79 FR 8324 eff. date confirmed 52224
25.227 (a)(12) amended (OMB number pending) 8324
(a)(14), (b)(1)(iii)(A) and (2)(i) revised; (b)(3)(i) amended 26868
Regulation at 79 FR 8324 eff. date confirmed 52224

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25.259 (b) revised (OMB number pending) 8324
Regulation at 79 FR 8324 eff. date confirmed 52224
25.260 (b) revised (OMB number pending) 8325
Regulation at 79 FR 8325 eff. date confirmed 52224
25.271 (f) added (OMB number pending) 8325
Regulation at 79 FR 8325 eff. date confirmed 52224
25.272 (b) removed (OMB number pending) 8325
Regulation at 79 FR 8325 eff. date confirmed 52224
25.276 Revised (OMB number pending) 8325
Regulation at 79 FR 8325 eff. date confirmed 52224
25.281 Revised (OMB number pending) 8325
Regulation at 79 FR 8325 eff. date confirmed 52224
25.285 Added (OMB number pending) 8325
(a)(2) corrected 44140
Regulation at 79 FR 8325 eff. date confirmed 52224
25.286 Added (OMB number pending) 8326
Regulation at 79 FR 8326 eff. date confirmed 52224
25.287 Added (OMB number pending) 8326
Regulation at 79 FR 8326 eff. date confirmed 52224
27 Technical correction 9427
Authority citation revised; eff. 10-14-14 48536
Technical correction 76902
27.1 (b)(11), (12) and (13) added 32410
(b)(14) added; eff. 10-14-14 48536
27.4 Amended; eff. 10-14-14 48536
27.5 (h) revised 32410
(l) added; eff. 10-14-14 48536
27.6 (b) introductory text revised; (b)(3) removed 597
(k) added 32410
(l) added; eff. 10-14-14 48536
27.10 Regulation at 78 FR 50254 eff. date confirmed 3133
Regulation at 79 FR 3133 eff. date confirmed 7587
27.11 (c) introductory text revised; (c)(4) removed 597

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(j) added 32410
(k) added; eff. 10-14-14 48536
27.12 Regulation at 78 FR 50254 eff. date confirmed 3133
Regulation at 79 FR 3133 eff. date confirmed 7587
27.13 (b) amended 597
(k) added 32410
(l) added; eff. 10-14-14 48536
27.14 (a) and (e) amended; (m) and (n) removed 597
(a), (f), (k), (r)(1), (4) and (6)(i) revised; (q)(7) and (s) added (OMB number pending in part) 32411
(a), (f) and (k) amended; (t) added; eff. 10-14-14 (OMB number pending in part) 48536
27.15 (d)(1)(i) and (2)(i) amended 597
(d)(1)(i) and (2)(i) amended; (d)(1)(iii) and (2)(iii) revised 32412
(d)(1)(i) and (2)(i) amended; (d)(1)(iii) and (2)(iii) revised; eff. 10-14-14 48537
27.17 Regulation at 78 FR 50256 eff. date confirmed 3133
Regulation at 79 FR 3133 eff. date confirmed 7587
Revised (OMB number pending in part) 32412
Heading, (a) introductory text, (1), (b) and (c) revised; eff. 10-14-14 (OMB number pending in part) 48538
27.19 Added; eff. 10-14-14 (OMB number pending in part) 48538
27.20 (a) revised 597
27.50 (b) introductory text, (2) through (6), (7) introductory text, (i), (8), (9), (10), (12) and (c)(5)(i) revised; table 1 and 4 amended 597
(d)(1)(A), (B), (2)(A) and (B) correctly reinstated; CFR correction 17911
(d) revised (OMB number pending in part) 32413
(c) introductory text, (5) introductory text, (9), (10), Table 1 heading, Table 2 heading, Table 3 heading and Table 4 heading revised; eff. 10-14-14 48538
(d)(5) through (10) correctly added 59138

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27.53 (d) removed; (e) through (n) redesignated as (d) through (m); new (d) introductory text, new (1), new (2) and new (e) revised 598
(d) through (m) redesignated as (e) through (n); new (h)(1) revised 32413
(e)(6) tables amended 39338
(m)(4) and (6) revised 41453
(g) revised; eff. 10-14-14 48539
27.55 (c) revised 599
(a)(1) revised 32413
(a)(2) revised; eff. 10-14-14 48539
27.57 (b) revised 599
(c) revised 32413
(b) revised; eff. 10-14-14 48539
27.60 Introductory text, (a)(1)(iii), (b)(2)(ii) introductory text, (A) and (C) revised; (b) introductory text and (2)(i) amended 599
27.70 (a) introductory text, (b)(1) and (2) amended 599
27.75 Added 32413
(a)(2) added; eff. 10-14-14 48539
27.77 Added 32413
27.303 (a) introductory text revised 599
27.501 Revised 600
27.1101—27.1190 (Subpart L) Heading revised 32413
27.1105 Added 32413
27.1106 Added 32413
27.1111 Revised 32414
27.1131 Revised (OMB number pending) 32414
27.1132 Revised (OMB number pending) 32414
27.1134 (c) revised; (f) added (OMB number pending) 32414
27.1300—27.1301 (Subpart N) Added; eff. 10-14-14 48539
36.3 (a), (b), (c), (d) introductory text and (e) revised 36235
36.123 (a)(5) and (6) revised 36236
36.124 (c) and (d) revised 36236
36.125 (h), (i) and (j) revised 36236
36.126 (b)(6) added; (c)(4), (e)(4) and (f)(2) revised 36236
36.141 (c) revised 36237
36.142 (c) revised 36237
36.152 (d) revised 36237
36.154 (g) revised 36237
36.155 (b) revised 36237
36.156 (c) revised 36237

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36.157 (b) revised 36237
36.191 (d) revised 36237
36.212 (c) revised 36237
36.214 (a) revised 36237
36.372 Revised 36238
36.374 (b) and (d) revised 36238
36.375 (b)(4) and (5) revised 36238
36.377 (a) introductory text, (1)(ix), (2)(vii), (3)(vii), (4)(vii), (5)(vii) and (6)(vii) revised 36238
36.378 (b)(1) revised 36239
36.379 (b)(1) and (2) revised 36239
36.380 (d) and (e) revised 36239
36.381 (c) and (d) revised 36239
36.382 (a) revised 36239
36.601—36.631 (Subpart F) Removed 39188

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20 Authority citation revised 11838
20.3 Amended 19850
20.18 (i) through (n) redesignated as (l) through (q); new (i), (j) and (k) added; (h)(3) and new (m)(1) revised (OMB number pending in part) 11838
Regulation at 80 FR 11838 confirmed in part 45897

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20.21 Regulation at 79 FR 70795 confirmed in part 38653
22.165 Regulation at 79 FR 72151 confirmed 23452
22.948 Regulation at 79 FR 72152 confirmed 23452
22.953 Regulation at 79 FR 72152 confirmed 23452
25.202 (f) introductory text revised; (i) and (j) added 38908
27.14 Regulation at 79 FR 32411 confirmed in part 4515
Regulation at 79 FR 48536 confirmed in part 55795
27.17 Regulation at 79 FR 32412 confirmed in part 4515
Regulation at 79 FR 48538 confirmed in part 55795
27.19 Regulation at 79 FR 48538 confirmed in part 55795
27.50 Regulation at 79 FR 32413 confirmed in part 4515
27.53 (j) revised 38908
27.803 (b)(4) revised 38908
27.1002 (a) revised; eff. 11-17-15 56816
27.1104 (a) revised; eff. 11-17-15 56816
27.1106 (a) revised; eff. 11-17-15 56816
27.1131 Regulation at 79 FR 32414 confirmed 4515
27.1132 Regulation at 79 FR 32414 confirmed 4515
27.1134 Regulation at 79 FR 32414 confirmed 4515
27.1301 Revised; eff. 11-17-15 56817