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Title 47
Telecommunication

Parts 20 to 39

Revised as of October 1, 2024

Containing a codification of documents
of general applicability and future effect

As of October 1, 2024

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Table of Contents

	Page
Explanation	v
Title 47:	
Chapter I—Federal Communications Commission (Continued)	3
Finding Aids:	
Table of CFR Titles and Chapters	545
Alphabetical List of Agencies Appearing in the CFR	565
Table of OMB Control Numbers	575
List of CFR Sections Affected	577

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 17 through Title 27.....as of April 1
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OLIVER A. POTTS,
Director,
Office of the Federal Register
October 1, 2024

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. All five volumes contain 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, chapter III—National Telecommunications and Information Administration, Department of Commerce, chapter IV—National Telecommunications and Information Administration, Department of Commerce, and National Highway Traffic Safety Administration, Department of Transportation, and chapter V—The First Responder Network Authority. The contents of these volumes represent all current regulations codified under this title of the CFR as of October 1, 2024.

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

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, Christine Colaninno 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)

Part

CHAPTER I—Federal Communications Commission (Continued) 20

CHAPTER I—FEDERAL COMMUNICATIONS COMMISSION (CONTINUED)

SUBCHAPTER B—COMMON CARRIER SERVICES

Part		*Page*
20	Commercial mobile services	5
22	Public mobile services	35
24	Personal communications services	109
25	Satellite communications	144
26	Space launch services	284
27	Miscellaneous wireless communications services	292
30	Upper microwave flexible use service	428
32	Uniform system of accounts for telecommunications companies	440
36	Jurisdictional separations procedures; standard procedures for separating telecommunications property costs, revenues, expenses, taxes and reserves for telecommunications companies	504
37–39	[Reserved]	

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

Sec.
20.1 Purpose.
20.2 Other applicable rule parts.
20.3 Definitions.
20.5 Citizenship.
20.6 CMRS spectrum aggregation limit.
20.7–20.9 [Reserved]
20.11 Interconnection to facilities of local exchange carriers.
20.12 Resale and roaming.
20.13 State petitions for authority to regulate rates.
20.15 Requirements under Title II of the Communications Act.
20.18 [Reserved]
20.19 Hearing aid-compatible mobile handsets.
20.20 Conditions applicable to provision of CMRS service by incumbent Local Exchange Carriers.
20.21 Signal boosters.
20.22 Rules governing mobile spectrum holdings.
20.23 Contraband wireless devices in correctional facilities.

AUTHORITY: 47 U.S.C. 151, 152(a), 154(i), 155, 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, 610, 615, 615a, 615b, and 615c, unless otherwise noted.

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.

(c) *Part 9.* This part contains 911 and E911 requirements applicable to telecommunications carriers and commercial mobile radio service (CMRS) providers.

[78 FR 21559, Apr. 11, 2013, as amended at 84 FR 66779, Dec. 5, 2019]

§ 20.3 Definitions.

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.

CIS Operator. An operator of a CIS at a correctional facility, whether a CIS solutions provider, or a DCFO or responsible party that deploys its own CIS at a correctional facility.

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:

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

(ii) An interconnected service; and

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

(2) The functional equivalent of such a mobile service described in paragraph (1) of this definition, including a mobile broadband internet access service as defined in §8.1 of this chapter.

(3) A variety of factors may 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.

(4) Unlicensed radio frequency devices under part 15 of this chapter are excluded from this definition of *commercial mobile radio service.*

Consumer Signal Booster. A bi-directional signal booster that is marketed and sold for use without modification.

Contraband Interdiction System. A Contraband Interdiction System (CIS) is any system comprised of one or more stations that is used only at a permanent correctional facility that is authorized to operate such systems pursuant to this part and that is designed exclusively to prevent transmissions to or from contraband wireless devices within the boundaries of the facility and/or to obtain identifying information from such contraband wireless devices.

Designated Correctional Facility Official. A Designated Correctional Facility Official (DCFO) is an official of the state, local, or Federal government responsible for administration and oversight of the relevant correctional facility where a contraband wireless device is located.

(1) In government-run correctional facilities, this definition requires the DCFO to be, at a minimum, the official with responsibility for oversight of the relevant facility (*e.g.,* the warden) or higher ranking official.

(2) In privately-run correctional facilities, this definition requires the DCFO to be a government official with responsibility for oversight of the facility's performance through contract.

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

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:

(1) 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

(2) 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.

Managed Access System. A Managed Access System (MAS) is a Contraband Interdiction System whose operations require:

(1) One or more lease agreements with CMRS operators; and

(2) Real-time awareness of wireless provider spectrum use in the vicinity of the correctional facility where it is deployed.

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.

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 meets neither the paragraph (a) nor paragraph (b) definitions of commercial mobile radio service set forth in this section. A mobile service that does not meet the paragraph (a) definition of commercial mobile radio service in this section is presumed to be a private 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.

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.

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]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 20.3, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.govinfo.gov.

§ 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]

§§ 20.7–20.9 [Reserved]

§ 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), Specialized Mobile Radio Services in the 800 MHz and 900 MHz bands (included in part 90, subpart S of this chapter), and 900 MHz Broadband Service (included in part 27, subpart P 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; 85 FR 43134, July 16, 2020]

§ 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 are facilities-based providers of broadband service or facilities-based providers of mobile telephony service, as described in §1.7001(b)(1) and (3) of this chapter, are required to file reports pursuant to §§1.7000–1.7002 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; ; 85 FR 838, Jan. 8, 2020]

§ 20.18 [Reserved]

§ 20.19 Hearing aid-compatible mobile handsets.

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

2007 ANSI standard refers to the technical standard for hearing aid compatibility applicable to frequencies between 800 MHz and 3 GHz as set forth in ANSI C63.19–2007.

2011 ANSI standard refers to the technical standard for hearing aid compatibility applicable to frequencies between 698 MHz and 6 GHz as set forth in ANSI C63.19–2011.

2019 ANSI standard refers to the technical standard for hearing aid compatibility applicable to frequencies between 614 MHz and 6 GHz as set forth in ANSI C63.19–2019.

ANSI standard refers to the 2007, 2011, and 2019 ANSI standards as a group.

Any version of the ANSI standard previous to the 2019 ANSI standard refers to the 2007 and 2011 ANSI standards.

Digital mobile service refers to a terrestrial mobile service that enables two-way real-time voice communications among members of the public or a substantial portion of the public, including both interconnected and non-interconnected voice over internet protocol (VoIP) services, to the extent that such service is provided over frequencies specified in the 2007 ANSI standard, 2011 ANSI standard or the 2019 ANSI standard.

Handset refers to a device used in delivery of digital mobile service in the United States that contains a built-in speaker and is typically held to the ear in any of its ordinary uses.

Manufacturer refers to a manufacturer of handsets that are used in delivery of digital mobile service, as defined in this section, in the United States.

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.

Service provider refers to a provider of digital mobile service, as defined in this section, in the United States.

Tier I carrier refers to a CMRS provider that offers such service nationwide.

Volume control requirements refers to the technical standard established by ANSI/TIA–5050–2018.

(b) *Hearing aid compatibility; technical standards*—(1) *Handset compatibility on or after June 5, 2023.* In order to satisfy a manufacturer or service provider's obligations under paragraphs (c) and (d) of this section, a handset submitted for equipment certification or for a permissive change relating to hearing aid compatibility on or after June 5, 2023 must meet the 2019 ANSI standard.

(2) *Handset compatibility before June 5, 2023.* In order to satisfy a manufacturer or service provider's obligations under paragraphs (c) and (d) of this section, a handset submitted for equipment certification or for a permissive change relating to hearing aid compatibility before June 5, 2023 must meet either:

(i) At a minimum, the M3 and T3 ratings associated with the 2011 ANSI standard; or

(ii) The 2019 ANSI standard.

(3) *Handsets operating over multiple frequency bands or air interfaces.* (i) Beginning on June 5, 2023, a handset is hearing aid-compatible if it meets the 2019 ANSI standard for all frequency bands that are specified in the ANSI standard and all air interfaces over which it operates on those frequency bands, and the handset has been certified as compliant with the test requirements for the 2019 ANSI standard pursuant to § 2.1033(d) of this chapter.

(ii) Before June 5, 2023, a handset that uses only the frequencies specified in the 2011 ANSI standard is hearing aid-compatible with regard to radio frequency interference and inductive

coupling if it meets the 2011 ANSI standard 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 2011 ANSI standard pursuant to § 2.1033(d) of this chapter. Before June 5, 2023, a handset that incorporates operations outside the frequencies specified in the 2011 ANSI standard is hearing aid-compatible if the handset otherwise satisfies the requirements of this paragraph (b).

(4) *Factual questions.* All factual questions of whether a handset meets the technical standard(s) of this paragraph (b) shall be referred for resolution to the Chief, Office of Engineering and Technology, Federal Communications Commission, 45 L Street NE, Washington, DC 20554.

(5) *Certification.* A handset certified under any version of the ANSI standard previous to the 2019 ANSI standard remains hearing aid-compatible for purposes of this section.

(c) *Phase-in of hearing aid-compatibility requirements.* The following applies to each manufacturer and service provider that offers handsets used to deliver 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.

(1) *Manufacturers—Number of hearing aid-compatible handset models offered.* For each digital air interface for which it offers handsets in the United States or imported for use in the United States, each manufacturer must offer hearing aid compatible handsets as follows:

(i) Beginning October 3, 2018, at least sixty-six (66) percent of those handset models (rounded down to the nearest whole number) must be hearing aid-compatible under paragraph (b) of this section.

(ii) Beginning October 4, 2021, at least eighty-five (85) percent of those handset models (rounded down to the nearest whole number) must be hearing aid-compatible under paragraph (b) of this section.

(2) *Tier I carriers—Number of hearing aid-compatible handsets models offered.* For each digital air interface for which it offers handsets to customers, each Tier I carrier must:

(i) Beginning April 3, 2019, ensure that at least sixty-six (66) percent of the handset models it offers are hearing aid-compatible under paragraph (b) of this section, calculated based on the total number of unique handset models the carrier offers nationwide.

(ii) Beginning April 4, 2022, ensure that at least eighty-five (85) percent of the handset models it offers are hearing aid-compatible under paragraph (b) of this section, calculated based on the total number of unique handset models the carrier offers nationwide.

(3) *Service providers other than Tier I carriers—Number of hearing aid-compatible handsets models offered.* For each digital air interface for which it offers handsets to customers, each service provider other than a Tier I carrier must:

(i) Beginning April 3, 2020, ensure that at least sixty-six (66) percent of the handset models it offers are hearing aid-compatible under paragraph (b) of this section, calculated based on the total number of unique handset models the carrier offers.

(ii) Beginning April 3, 2023, ensure that at least eighty-five (85) percent of the handset models it offers are hearing aid-compatible under paragraph (b) of this section, calculated based on the total number of unique handset models the carrier offers.

(4) *In-store testing.* All service providers must make available for consumers to test, in each retail store owned or operated by the service provider, all of its handset models that are hearing aid-compatible under paragraph (b) of this section.

(d) [Reserved]

(e) *De minimis exception.* (1)(i) Manufacturers or service providers that offer two or fewer 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 and certification requirements in paragraph (i) of this section. Service providers that obtain handsets only from manufacturers that offer two or fewer 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, 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 handsets in that air interface in the United States must offer at least one handset model that is hearing aid-compatible under paragraph (b) of this section in that air interface. Service providers that obtain handsets only from manufacturers that offer one or two 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 that is hearing aid-compatible under paragraph (b) of this section. For purposes of this paragraph (e)(1)(ii), 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 (e)(1)(ii) must also comply with all other requirements of this section.

(2) Manufacturers or service providers that offer three handset models in an air interface must offer at least one handset model that is hearing aid-compatible under paragraph (b) of this section in that air interface. Service providers that obtain handsets only from manufacturers that offer three handset models in an air interface in the United States are required to offer at least one handset model in that air interface that is hearing aid-compatible under paragraph (b) of this section.

(3) Manufacturers that offer four or five handset models in an air interface must offer at least two handset models that are hearing aid-compatible under paragraph (b) of this section in that air interface. Tier I carriers who offer four handset models in an air interface must offer at least two handsets that are hearing aid-compatible under paragraph (b) of this section in that air interface and Tier I carriers who offer five handset models in an air interface must offer at least three handsets that are hearing aid-compatible under paragraph (b) of this section in that air interface. Service providers, other than Tier I carriers, who offer four handset models in an air interface must offer at least two handset models that are hearing aid-compatible under paragraph (b) of this section in that air interface and service providers, other than Tier I carriers, who offer five handset models in an air interface must offer at least three handsets that are hearing aid-compatible under paragraph (b) of this section in that air interface.

(f) *Labeling and disclosure requirements for hearing aid-compatible handsets*—(1) *Package label.* For all handset models certified to be hearing aid-compatible, manufacturers and service providers shall ensure that the handset's package label states that the handset is hearing aid-compatible and the handset's actual conversational gain with and without a hearing aid if certified using a technical standard with volume control requirements. The actual conversational gain displayed for use with a hearing aid shall be the lowest rating assigned to the handset for any covered air interface or frequency band.

(2) *Package insert or handset manual.* For all handset models certified to be hearing aid-compatible, manufacturers and service providers shall disclose to consumers through the use of a package insert or in the handset's user manual:

(i) That the handset is hearing aid-compatible;

(ii) The ANSI standard used to determine the hearing aid compatibility of the handset model's air interfaces and frequency bands;

(iii) If using the 2011 ANSI standard or an earlier version of the standard, the lowest hearing aid compatibility rating assigned to any of the covered air interfaces or frequency bands;

(iv) The air interfaces or frequency bands on the handset that are not certified to be hearing aid-compatible, if applicable, or have been determined to be hearing aid-compatible under special testing circumstances;

(v) Any handset model certified to be hearing aid-compatible for some but not all of the air interfaces or frequency bands covered by the model must include the following disclosure language:

> This phone has been tested and certified 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.

(vi) An explanation of the ANSI rating system, which includes an explanation that the 2019 ANSI standard does not use the rating system that older versions of the standard used;

(vii) An explanation of a handset model's volume control capabilities, including its conversational gain both with and without hearing aids, if the handset is certified using a technical standard that includes volume control requirements; and

(viii) An explanation of special testing circumstances, if a handset model has air interfaces that have been certified as hearing aid-compatible under such circumstances, and how these circumstances affect the use and operation of the handset.

(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 the 2011 ANSI standard or an earlier version of the standard, the altered handset must be given a model designation distinct from that of the handset prior to its alteration.

(h) *Website and record retention requirements.* (1) Each manufacturer and service provider that operates a publicly-accessible website must make available on its website a list of all hearing aid-compatible models currently offered, the ANSI standard used to evaluate hearing aid compatibility, the ratings of those models under the relevant ANSI standard, if applicable, and an explanation of the rating system. Each service provider must also include on its website: A list of all non-hearing aid-compatible models currently offered, as well as a link to the current FCC web page containing information about the wireless hearing aid compatibility rules and service providers' obligations. Each service provider must also include the marketing model name/number(s) and FCC ID number of each hearing aid-compatible and non-hearing aid-compatible model currently offered.

(2) Service providers must maintain on their website either:

(i) A link to a third-party website as designated by the Commission or Wireless Telecommunications Bureau with information regarding hearing aid-compatible and non-hearing aid-compatible handset models; or

(ii) A clearly marked list of hearing aid-compatible handset models that are no longer offered if the calendar month/year that model was last offered is within 24 months of the current calendar month/year along with the information listed in paragraph (h)(1) of this section for each hearing aid-compatible handset.

(3) If the Wireless Telecommunications Bureau determines that the third-party website has been eliminated or is not updated in a timely manner, it may select another website or require service providers to comply with paragraph (h)(2)(ii) of this section.

(4) The information on the website must be updated within 30 days of any relevant changes, and any website pages containing information so updated must indicate the day on which the update occurred.

(5) Service providers must maintain internal records including the ratings, if applicable, of all hearing aid-compatible and non-hearing aid-compatible models no longer offered (if the calendar month/year that model was last offered is within 24 months of the current calendar month/year); for models no longer offered (if the calendar month/year that model was last offered is within 24 months of the current calendar month/year), the calendar months and years each hearing aid-

compatible and non-hearing aid-compatible model was first and last offered; and the marketing model name/number(s) and FCC ID number of each hearing aid-compatible and non-hearing aid-compatible model no longer offered (if the calendar month/year that model was last offered is within 24 months of the current calendar month/year).

(i) *Reporting requirements*—(1) *Reporting and certification dates.* Service providers shall submit Form 855 certifications on their compliance with the requirements of this section by January 31 of each year. Manufacturers shall submit Form 655 reports on their compliance with the requirements of this section by July 31 of each year. Information in each certification and report must be up-to-date as of the last day of the calendar month preceding the due date of each certification and report.

(2) *Content of service provider certifications.* Certifications filed by service providers must include:

(i) The name of the signing executive and contact information;

(ii) The company(ies) covered by the certification;

(iii) The FCC Registration Number (FRN);

(iv) If the service provider is subject to paragraph (h) of this section, the website address of the page(s) containing the required information regarding handset models;

(v) The percentage of handsets offered that are hearing aid-compatible (providers will derive this percentage by determining the number of hearing aid-compatible handsets offered across all air interfaces during the year divided by the total number of handsets offered during the year); and

(vi) The following language:

I am a knowledgeable executive [of company x] regarding compliance with the Federal Communications Commission's wireless hearing aid compatibility requirements at a wireless service provider covered by those requirements.

I certify that the provider was [(in full compliance/not in full compliance)] [choose one] at all times during the applicable time period with the Commission's wireless hearing aid compatibility deployment benchmarks and all other relevant wireless hearing aid compatibility requirements.

The company represents and warrants, and I certify by this declaration under penalty of perjury pursuant to 47 CFR 1.16 that the above certification is consistent with 47 CFR 1.17, which requires truthful and accurate statements to the Commission. The company also acknowledges that false statements and misrepresentations to the Commission are punishable under Title 18 of the U.S. Code and may subject it to enforcement action pursuant to Sections 501 and 503 of the Act.

(vii) If the company selected that it was not in full compliance with this section, an explanation of which wireless hearing aid compatibility requirements it was not in compliance with, when the non-compliance began and (if applicable) ended with respect to each requirement.

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

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

(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 the ANSI standard (if applicable), the ANSI standard 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 website, the website address of the page(s) containing the information regarding hearing aid-compatible handset models required by paragraph (h) of this section.

(4) *Format.* The Wireless Telecommunications Bureau is delegated authority to approve or prescribe forms, formats, and methods for submission of the reports and certifications in addition to or instead of those required by this section. Any format that the Bureau may approve or prescribe shall be made available on the Bureau's website.

(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 to issue, consistent with any applicable requirements of 5 U.S.C. 553, 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, inductive coupling, or volume control adopted subsequently to the 2007 ANSI standard 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 standards 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 the technical standards to establish hearing aid compatibility.

(l) *Incorporation by reference.* 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. All approved incorporation by reference (IBR) material is available for inspection at the Federal Communications Commission (FCC) and the National Archives and Records Administration (NARA). Contact the FCC through the Federal Communications Commission's Reference

Information Center, phone: (202) 418–0270. For information on the availability of this material at NARA, visit *www.archives.gov/federal-register/cfr/ibr-locations.html* or email *fr.inspection@nara.gov*. The material may be obtained from the following sources in this paragraph (l):

(1) IEEE Standards Association (IEEE–SA), 445 Hoes Lane, Piscataway, NJ 08854–4141, (732) 981–0060, *stds-info@ieee.org*, *https://standards.ieee.org/*.

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

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

(iii) ANSI C63.19–2019, American National Standard Methods of Measurement of Compatibility Between Wireless Communication Devices and Hearing Aids, approved August 19, 2019.

(2) Telecommunications Industry Association (TIA), 1320 North Courthouse Road, Suite 200, Arlington, VA 22201, (703) 907–7700, *global@ihs.com*, *https://global.ihs.com/csf_home.cfm?&csf=TIA*.

(i) ANSI/TIA–5050–2018, Telecommunications—Communications Products—Receive Volume Control Requirements for Wireless (Mobile) Devices, approved January 17, 2018.

(ii) [Reserved]

[73 FR 25587, May 7, 2008, as amended at 75 FR 54522, Sept. 8, 2010; 77 FR 41928, July 17, 2012; 81 FR 183, Jan. 5, 2016; 81 FR 60633, Sept. 2, 2016; 83 FR 8631, Feb. 28, 2018; 83 FR 63105, Dec. 7, 2018; 84 FR 37592, Aug. 1, 2019; 86 FR 23625, 23627, May 4, 2021; 88 FR 21439, Apr. 10, 2023]

§ 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 under the authorization held by the licensee providing service to the subscriber provided that the subscriber complies with paragraphs (a)(1) through (7) of this section. 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;

(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; and

(7) If operating a Wideband Consumer Signal Booster, the subscriber operates it only for personal 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 (as defined in § 2.803 of this chapter) 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. Wideband 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; 83 FR 17090, Apr. 18, 2018]

§ 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 non-

voting 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.

(5) The following interests shall be attributable to holders, except to lessees and sublessees for the purpose of qualifying to bid on reserved licenses offered in the Incentive Auction, discussed in paragraph (c) of this section, on the basis of status as a non-nationwide provider:

(i) 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.

(ii) [Reserved]

(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, as amended at 80 FR 61970, Oct. 14, 2015]

§ 20.23 Contraband wireless devices in correctional facilities.

(a) *Good faith negotiations.* CMRS licensees must negotiate in good faith with entities seeking to deploy a Contraband Interdiction System (CIS) in a correctional facility. Upon receipt of a good faith request by an entity seeking to deploy a CIS in a correctional facility, a CMRS licensee must negotiate toward a lease agreement. If, after a 45 day period, there is no agreement, CIS providers seeking Special Temporary Authority (STA) to operate in the absence of CMRS licensee consent may file a request for STA with the Wireless Telecommunications Bureau (WTB), accompanied by evidence demonstrating its good faith, and the unreasonableness of the CMRS licensee's actions, in negotiating an agreement. The request must be served on the CMRS licensee no later than the filing of the STA request, and the CMRS licensee may file a response with WTB, with a copy served on the CIS provider at that time, within 10 days of the filing of the STA request. If WTB determines that the CIS provider has negotiated in good faith, yet the CMRS licensee has not negotiated in good faith, WTB may issue STA to the entity seeking to deploy the CIS, notwithstanding lack of accompanying CMRS licensee consent.

(b) *Contraband Interdiction System (CIS) authorization process.* The provisions in this section apply to any person seeking certification of a CIS authorized for use in the submission of qualifying disabling requests, whether operating a system that requires a license and is regulated as CMRS or private mobile radio service (PMRS), or operating a passive system that does not require a license. The Wireless Telecommunications Bureau (Bureau) will establish, via public notice, the form and procedure for: CIS operators to file CIS certification applications, self-certifications, and periodic re-certification; CIS operators to serve on wireless providers notice of testing and copies of self-certification; and wireless providers to file objections to self-certifications, including required service on CIS operators and DCFOs.

(1) *Application requirements.* To obtain CIS certification, an applicant must submit an application to the Bureau for review and approval that:

(i) Demonstrates that all radio transmitters used as part of the CIS have appropriate equipment authorizations pursuant to Commission rules in part 2 of this chapter;

(ii) Demonstrates that the CIS is designed and will be configured to locate devices solely within a correctional facility;

(iii) Describes the methodology to be used in analyzing data collected by the CIS and demonstrates that such methodology is adequately robust to ensure that the particular wireless device is in fact located within a correctional facility and includes specific data analysis benchmarks designed to ensure successful detection, such as rate of detection of contraband versus non-contraband devices and relevant sample size (*e.g.* number of devices observed and length of observation period);

(iv) Demonstrates that the CIS will secure and protect all information or data collected as part of its intended use;

(v) Demonstrates that the CIS will not interfere with emergency 911 calls;

(vi) Describes whether the CIS requires a spectrum or network access agreement (*e.g.*, a spectrum leasing arrangement or roaming agreement) to be authorized to operate; and

(vii) Includes a proposed test plan for subsequent site-based testing of each CIS, that must include detailed descriptions and technical specifications to facilitate Commission review of whether the system satisfies its legal requirements and technically functions as anticipated.

(2) *Marketing and sales.* CIS that are certified for use in qualifying requests for disabling of contraband devices may be marketed or sold only to correctional facilities or entities that will provide contraband interdiction services to such facilities.

(3) *Site-based testing and self-certification requirements*—(i) *Site-based testing.* A CIS operator seeking to use the CIS to submit qualifying requests for disabling must test a certified CIS at each location where it intends to operate. Thereafter, the CIS operator must file with the Bureau a self-certification that complies with paragraph (b)(3)(ii) of this section, confirming that the testing at that specific correctional facility is complete and successful. The CIS operator must serve notice of the testing on all relevant wireless providers prior to testing and provide such wireless providers a reasonable opportunity to participate in the tests. Relevant wireless providers include any wireless provider holding a spectrum license that:

(A) Authorizes operation on the frequencies on which the CIS seeks to detect contraband use; and

(B) Authorizes service in the geographic area (*e.g.*, census tract, county, Partial Economic Area (PEA), Economic Area (EA), Cellular Market Area (CMA), Regional Economic Area Grouping (REAG)) within which the correctional facility is located.

(ii) *Self-certification.* Following the testing, and to be eligible for use in conjunction with qualifying requests for disabling, a CIS operator must file a self-certification with the Bureau that:

(A) Identifies the correctional facility where it seeks to deploy;

(B) Attests that applicable Federal or state criminal statutes prohibit the possession or operation of contraband devices within the correctional facility (and includes the applicable Federal or state criminal statutory provision);

(C) Describes the results of on-site tests of the certified CIS conducted at the correctional facility;

(D) Attests that the on-site testing was performed consistent with the approved test plans for the certified CIS and that the CIS deployment minimizes the risk of disabling a non-contraband device;

(E) Identifies whether any relevant wireless providers participated in the testing, and provides proof that the relevant wireless providers were given notice regarding the testing and a reasonable opportunity to participate;

(F) Includes proof of any spectrum and/or network access agreement (*e.g.*, a spectrum leasing arrangement and/or roaming agreement) required to be authorized to operate and/or for the system to function effectively;

(G) Includes proof that the self-certification was served via electronic means on all relevant wireless providers; and

(H) Includes an attestation from the DCFO verifying that all information contained in the self-certification is true and accurate.

(I) The self-certification must be filed in accordance with part 1, subpart F, of this chapter.

(4) *Submitting objections.* Wireless providers may submit objections to the Bureau within five business days from the certification filing date. Any such objections must be served on the DCFO and the CIS operator.

(5) *Recertification.* At least every three years after the initial self-certification, CIS operators seeking to maintain the ability to submit qualifying requests through a DCFO for contraband device disabling must retest their systems and recertify them for continued CIS accuracy. Recertifications must comply with the same rules and filing instructions that apply to the initial self-certification.

(6) *Suspension of CIS eligibility.* The Bureau may suspend CIS certification generally or at a particular facility if subsequent credible information calls into question a system's reliability.

(7) *Records maintenance.* To ensure the integrity and proper operation of CISs, a CIS operator must retain records of all information supporting each request for disabling and the basis for disabling each device, including copies of all documents submitted in the qualifying request, for at least five years following the date of submission of the relevant disabling request. CIS operators of systems that have been tested and approved for use in qualifying requests must make available all records upon request from the Bureau.

(c) *Disabling contraband wireless devices.* A DCFO may request that a CMRS licensee disable a contraband wireless device that has been detected in a correctional facility by a CIS that has been certified in accordance with paragraph (b) of this section. Absent objections from a wireless provider, as described under paragraph (b)(4) of this section, the DCFO may submit a qualifying request to a wireless provider beginning on the sixth business day after the later of the self-certification filing or actual service, as described under paragraph (b)(3)(ii) of this section.

(1) *DCFO list.* The Commission will maintain a publicly available list of DCFOs that are authorized to transmit qualifying disabling requests. Authorized DCFOs that seek to be recognized on the Commission's DCFO list must send a letter to the Commission's Contraband Ombudsperson, signed by the relevant state attorney general or the relevant Bureau of Prisons Regional Director and providing:

(i) The individual's name;

(ii) The individual's official government position; and

(iii) A list of correctional facilities over which the individual has oversight and management authority.

(2) *Qualifying request.* A qualifying request must be made in writing, contain the certifications in paragraph (c)(2)(i) of this section and the device and correctional facility identifying information in paragraph (c)(2)(ii) of this section, and be signed by the appropriate DCFO. The DCFO must transmit a qualifying request to a CMRS licensee using a secure communication means that will provide certainty regarding the identity of both the sending and receiving parties. A CMRS licensee must adopt a method, or use an existing method, for receiving secured and verified qualifying requests.

(i) *Certifications.* A qualifying request must include the following certifications by the DCFO:

(A) A CIS that has been certified in accordance with paragraph (b) of this section was used to gather the contraband subscriber and device information populated in the qualifying request;

(B) The certified CIS was used to identify contraband wireless devices operating in a correctional facility where the CIS has been tested and self-certified for operational readiness and for use in qualifying requests, and the identification of contraband wireless devices occurred within 30 days immediately prior to the date of the qualifying request submission;

(C) The DCFO has reviewed the list of contraband wireless devices and attests that it is accurate; and

(D) It is a violation of applicable state or Federal criminal statutes to possess or operate a contraband device in the correctional facility.

(ii) *Device and correctional facility identifying information.* The qualifying request must identify the contraband wireless device to be disabled and the correctional facility by providing the following information:

(A) Identifiers sufficient to:

(*1*) Identify the applicable wireless service provider;

(*2*) Uniquely describe each of the contraband wireless devices in question at the subscription level; and

(*3*) Uniquely describe each of the contraband wireless devices in question at the device-level;

(B) Name of the correctional facility at which the contraband wireless device(s) were identified; and

(C) Street address of the correctional facility at which the contraband wireless device(s) were identified.

(3) *Licensee actions upon receipt of a qualifying request.* Upon receiving a request from a DCFO to disable a contraband wireless device, a licensee providing CMRS service must verify that the request contains the required information for a qualifying request, as defined in paragraph (c)(2) of this section.

(i) *Disabling upon receipt of a qualifying request and timing.* If the qualifying request contains the required information, and does not contain an error in the device identifying information preventing the licensee from being able to disable the device, a licensee must, within two business days of receipt of the qualifying request, disable the contraband wireless device from using the wireless provider's network at both the device and subscriber level and take reasonable and practical steps to prevent the contraband wireless device from being used on another wireless provider's network.

(ii) *Rejection of a qualifying request and timing.* A licensee may reject a qualifying request within two business days of receipt of a qualifying request if it does not include the information required for a qualifying request or, with respect to a relevant device, the request contains an error in the device-identifying information preventing the licensee from being able to disable the device.

(iii) *Customer outreach.* A licensee may immediately disable a contraband wireless device without any customer outreach, or a licensee may contact the customer of record through any available means to notify them that the device will be disabled, but any such notice does not modify the licensee's obligation to comply with paragraphs (c)(3)(i) and (ii) of this section.

(iv) *Notification to the Designated Correctional Facility Official.* Within two business days of receiving a qualifying request from a DCFO, a licensee must inform the DCFO whether the request has been granted or rejected.

(4) *Reversals.* A licensee may reverse a disabled wireless device if it determines that the wireless device was identified erroneously as contraband. The licensee must promptly inform the DCFO of the erroneously identified wireless device.

(i) *DCFO involvement.* Prior to reversing a disabling action, a wireless provider that determines that a device may have been erroneously identified as contraband may request that the DCFO review and confirm the information provided in a qualifying request pursuant to which the device was previously disabled. To trigger DCFO involvement, the wireless provider must provide the DCFO with:

(A) The date of the qualifying request;

(B) The identifying information provided for the device; and

(C) Any evidence supporting the wireless provider's belief that the device was erroneously identified.

(ii) *DCFO response.* Upon receipt of a request from a wireless provider, the DCFO should review the qualifying request and determine whether the device in question was erroneously identified and either confirm the validity of the identifying information contained in the qualifying request or acknowledge the error and direct the carrier to restore service to the device.

(iii) *Restoration of service.* In the event the DCFO directs the wireless provider to reverse the disabling, the wireless provider must, within two business days, restore service to the device and reverse any actions taken to prevent the device from accessing other wireless provider networks.

(iv) *Wireless provider action in absence of timely DCFO response.* In the event the DCFO does not respond to a request from a wireless provider for review of a qualifying request within two business days, the wireless provider may proceed with reversing the disabling action.

(v) *Notice of reversals.* The DCFO must provide notice to the Contraband Ombudsperson of the number of erroneously disabled devices on a quarterly basis at the end of any quarter during which a device disabling was reversed.

(d) *Notification to Managed Access System (MAS) operators of wireless provider technical changes*—(1) *Notification requirements.* CMRS licensees leasing spectrum to MAS operators must provide 90 days' advance notice to MAS operators of the following network changes occurring within 15 miles of the correctional facility, unless parties modify notification arrangements through mutual agreement:

(i) Adding a new frequency band to service offerings;

(ii) Deploying a new air interface technology or changing an existing air interface technology; and/or

(iii) Adding, relocating, or removing a site.

(2) *Good faith negotiations.* CMRS licensee lessors and MAS operator lessees must negotiate in good faith to reach an agreement for notification for other types of network adjustments not covered by the notice requirement set forth in paragraph (d)(1) of this section and for the parties' treatment of confidential information contained in notifications required pursuant to this section and/or negotiated between the parties.

(3) *Emergency network changes exception.* CMRS licensees leasing spectrum to managed access systems (MAS) operators are not required to provide 90 days' advance notice to MAS operators of network technical changes occurring within 15 miles of the correctional facility that are required due to emergency and disaster preparedness. CMRS licensees must provide notice of these technical changes immediately after the exigency.

[82 FR 22761, May 18, 2017, as amended at 86 FR 44638, Aug. 13, 2021]

PART 22—PUBLIC MOBILE SERVICES

Subpart A—Scope and Authority

Sec.
22.1 Basis and purpose.
22.3 [Reserved]
22.5 Citizenship.
22.7 General eligibility.
22.9 Operation of certificated signal boosters.
22.99 Definitions.

Subpart B—Licensing Requirements and Procedures

APPLICATIONS AND NOTIFICATIONS

22.107 General application requirements.
22.131 Procedures for mutually exclusive applications.
22.143 Construction prior to grant of application.
22.150 Standard pre-filing technical coordination procedure.
22.165 Additional transmitters for existing systems.
22.169 International coordination.

COMPETITIVE BIDDING PROCEDURES

22.201 Paging geographic area authorizations are subject to competitive bidding.
22.203–22.211 [Reserved]
22.213 Filing of Long-form applications.
22.215 [Reserved]
22.217 Bidding credits for small businesses.
22.221 Eligibility for partitioned licenses.
22.223 Designated entities.
22.225 Certifications, disclosures, records maintenance, and definitions.

22.227 Petitions to deny and limitations on settlements.
22.229 Designated entities.

Subpart C—Operational and Technical Requirements

OPERATIONAL REQUIREMENTS

22.301 [Reserved]
22.303 [Reserved]
22.305 Operator and maintenance requirements.
22.307 Operation during emergency.
22.313 Station identification.
22.321 [Reserved]
22.325 [Reserved]

TECHNICAL REQUIREMENTS

22.351 Channel assignment policy.
22.352 Protection from interference.
22.353 Blanketing interference.
22.355 Frequency tolerance.
22.357 Emission types.
22.359 Emission limitations.
22.365 Antenna structures; air navigation safety.
22.377 Certification of transmitters.
22.379 RF exposure.
22.383 In-building radiation systems.

Subpart D [Reserved]

Subpart E—Paging and Radiotelephone Service

22.501 Scope.
22.503 Paging geographic area authorizations.
22.507 Number of transmitters per station.
22.509 Procedures for mutually exclusive applications in the Paging and Radiotelephone Service.
22.511 Construction period for the Paging and Radiotelephone Service.
22.513 Partitioning and disaggregation.
22.515 Permissible communications paths.
22.527 Signal boosters.
22.529 Application requirements for the Paging and Radiotelephone Service.

PAGING OPERATION

22.531 Channels for paging operation.
22.535 Effective radiated power limits.
22.537 Technical channel assignment criteria.
22.559 Paging application requirements.

ONE-WAY OR TWO-WAY MOBILE OPERATION

22.561 Channels for one-way or two-way mobile operation.
22.565 Transmitting power limits.
22.567 Technical channel assignment criteria.
22.571 Responsibility for mobile stations.
22.573 Use of base transmitters as repeaters.
22.575 Use of mobile channel for remote control of station functions.
22.579 Operation of mobile transmitters across U.S.-Canada border.
22.589 One-way or two-way application requirements.

POINT-TO-POINT OPERATION

22.591 Channels for point-to-point operation.
22.593 Effective radiated power limits.
22.601 Existing microwave stations licensed under this part.
22.602 Transition of the 2110–2130 and 2160–2180 MHz channels to emerging technologies.
22.603 488–494 MHz fixed service in Hawaii.

POINT-TO-MULTIPOINT OPERATION

22.621 Channels for point-to-multipoint operation.
22.623 System configuration.
22.625 Transmitter locations.
22.627 Effective radiated power limits.

470–512 MHZ TRUNKED MOBILE OPERATION

22.651 470–512 MHz channels for trunked mobile operation.
22.653 Eligibility.
22.657 Transmitter locations.
22.659 Effective radiated power limits.

Subpart F—Rural Radiotelephone Service

22.701 Scope.
22.702 Eligibility.
22.703 Separate rural subscriber station authorization not required.
22.705 Rural radiotelephone system configuration.
22.709 Rural radiotelephone service application requirements.
22.711 Provision of information to applicants.
22.713 Construction period for rural radiotelephone stations.
22.715 Technical channel assignment criteria for rural radiotelephone stations.
22.717 Procedure for mutually exclusive applications in the Rural Radiotelephone Service.
22.719 Additional channel policy for rural radiotelephone stations.

CONVENTIONAL RURAL RADIOTELEPHONE STATIONS

22.721 Geographic area authorizations.
22.723 Secondary site-by-site authorizations.
22.725 Channels for conventional rural radiotelephone stations and basic exchange telephone radio systems.
22.727 Power limits for conventional rural radiotelephone transmitters.
22.731 Emission limitations.
22.733 Priority of service.

22.737 Temporary fixed stations.

BASIC EXCHANGE TELEPHONE RADIO SYSTEMS

22.757 Channels for basic exchange telephone radio systems.
22.759 Power limit for BETRS.

Subpart G—Air-Ground Radiotelephone Service

22.801 Scope.

GENERAL AVIATION AIR-GROUND STATIONS

22.805 Channels for general aviation air-ground service.
22.807 General aviation air-ground station application requirements.
22.809 Transmitting power limits.
22.813 Technical channel pair assignment criteria.
22.815 Construction period for general aviation ground stations.
22.817 Additional channel policies.

COMMERCIAL AVIATION AIR-GROUND SYSTEMS

22.853 Eligibility to hold interest in licenses limited to 3 MHz of spectrum.
22.857 Frequency bands.
22.859 Incumbent commercial aviation air-ground systems.
22.861 Emission limitations.
22.863 Frequency stability.
22.867 Effective radiated power limits.
22.873 Construction requirements for commercial aviation air-ground systems.
22.877 Unacceptable interference to part 90 non-cellular 800 MHz licensees from commercial aviation air-ground systems.
22.878 Obligation to abate unacceptable interference.
22.879 Interference resolution procedures.
22.880 Information exchange.
22.881 Air-Ground Radiotelephone Service subject to competitive bidding.
22.882 Designated entities.

Subpart H—Cellular Radiotelephone Service

22.900 Scope.
22.901 Cellular service requirements and limitations.
22.905 Channels for cellular service.
22.907 Coordination of channel usage.
22.909 Cellular markets.
22.911 Cellular geographic service area.
22.912 Service area boundary extensions.
22.913 Effective radiated power limits.
22.917 Emission limitations for cellular equipment.
22.921 [Reserved]
22.923 Cellular system configuration.
22.925 Prohibition on airborne operation of cellular telephones.
22.927–22.943 [Reserved]
22.946 Construction period for Unserved Area authorizations.
22.948 Geographic partitioning and spectrum disaggregation; spectrum leasing.
22.949 Unserved Area licensing; minimum coverage requirements.
22.950 Provision of service in the Gulf of Mexico Service Area (GMSA).
22.951 [Reserved]
22.953 Content and form of applications for Cellular Unserved Area authorizations.
22.955–22.957 [Reserved]
22.959 Rules governing processing of applications for initial systems.
22.960 Cellular operations in the Chambers, TX CMA (CMA672–A).
22.961 Cellular licenses subject to competitive bidding.
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.
22.971 Obligation to abate unacceptable interference.
22.972 Interference resolution procedures.
22.973 Information exchange.
22.983 Field strength limit.

Subpart I—Offshore Radiotelephone Service

22.1001 Scope.
22.1003 Eligibility.
22.1005 Priority of service.
22.1007 Channels for offshore radiotelephone systems.
22.1009 Transmitter locations.
22.1011 Antenna height limitations.
22.1013 Effective radiated power limitations.
22.1015 Repeater operation.
22.1025 Permissible communications.
22.1031 Temporary fixed stations.
22.1035 Construction period.
22.1037 Application requirements for offshore stations.

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 [Reserved]

§ 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 automatic hand-off between base stations of communications in progress to enable channels to be re-used at relatively short distances.

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.

Power spectral density (PSD). The power of an emission in the frequency domain, such as in terms of ERP or EIRP, stated per unit bandwidth, *e.g.*, watts/MHz.

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; 82 FR 17581, Apr. 12, 2017]

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) *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).

(2) *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.

(3) *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 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.

(ii) 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 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.

(ii) *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.

(iii) *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; 82 FR 41547, Sept. 1, 2017]

§ 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.

Operation of systems and 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.

[82 FR 17582, Apr. 12, 2017]

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 [Reserved]

§ 22.303 [Reserved]

§ 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]

§ 22.321 [Reserved]

§ 22.325 [Reserved]

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]

§ 22.379 RF exposure.

Licensees and manufacturers shall ensure compliance with the Commission's radio frequency exposure requirements 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. Technical information showing the basis for this statement must be submitted to the Commission upon request.

[85 FR 18150, Apr. 1, 2020]

§ 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.
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.

MEAs	EAs
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.

[64 FR 33784, June 24, 1999, as amended at 82 FR 41547, Sept. 1, 2017]

§ 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)
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)

Control transmitter frequency range	Protected TV station location	TV channel
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 AMSL in meters (feet)	ERP (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)

Control transmitter frequency range	Protected TV station location	TV channel
	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
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

TABLE E–11—MAXIMUM ERP (WATTS) FOR BASE TRANSMITTERS (HAAT MORE THAN 152 METERS)—Continued

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)	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
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

Central office	Rural subscriber	Central office	Rural subscriber
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:

$ERP_w = 557{,}418 \div h_m 2$

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 other applicants, except those with mutually exclusive applications. Licensees utilizing systems employing a frequency re-use factor of 1 (universal re-use) are exempt from this requirement.

(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; 82 FR 17582, Apr. 12, 2017]

§ 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 and is the area within which cellular systems are entitled to protection and adverse effects for the purpose of determining whether a petitioner has standing are recognized. 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). Licensees that use power spectral density (PSD) at cell sites within their licensed geographic area are subject to paragraph (c) of this section; all other licensees are subject to paragraph (a) (or, as applicable, paragraph (b)) of this section. If the calculation under paragraph (a), (b), or (c) of this section (as applicable) yields an SAB extension comprising at least 130 contiguous square kilometers (50 contiguous square miles), the licensee must submit an application for major modification of the CGSA using FCC Form 601. *See also* §§ 22.912, 22.949, and 22.953.

(a) *CGSA determination (non-PSD).* For the purpose of calculating the SABs for cell sites and determining CGSA expansion areas for Cellular base stations that do not operate using PSD (as permitted under § 22.913), 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 (non-PSD).* 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 dBμV/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 must be representative of the coverage within the eight cardinal radials, 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) *CGSA determination (PSD).* (1) For the purpose of calculating the SABs for cell sites and determining CGSA expansion areas for Cellular base stations that operate using PSD (as permitted under § 22.913), the licensee must use a predictive propagation model that is appropriate for the service provided, taking into account terrain and local conditions. The SAB and CGSA boundary must be defined in terms of distances from the cell site to the 32 dBμV/m contour along the eight cardinal radials, with points in other azimuthal directions determined by the method set forth in paragraph (a)(6) of this section. The distances used must be representative of the coverage within the eight cardinal radials.

(2) An application for major modification of the CGSA under this paragraph (c) must include, as an exhibit, a depiction of the CGSA 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.

(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 (*see* § 22.983). 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) [Reserved]

[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; 82 FR 17582, Apr. 12, 2017]

§ 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.

Licensees in the Cellular Radiotelephone Service are subject to the effective radiated power (ERP) limits and other requirements in this Section. *See also* § 22.169.

(a) *Maximum ERP.* The ERP of transmitters in the Cellular Radiotelephone Service must not exceed the limits in this section.

(1) Except as described in paragraphs (a)(2), (3), and (4) of this section, the ERP of base stations and repeaters must not exceed—

(i) 500 watts per emission; or

(ii) 400 watts/MHz (PSD) per sector.

(2) Except as described in paragraphs (a)(3) and (4) of this section, for systems operating in areas more than 72 kilometers (45 miles) from international borders that:

(i) 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

(ii) Extend coverage into Unserved Area on a secondary basis (*see* § 22.949), the ERP of base transmitters and repeaters must not exceed—

(A) 1000 watts per emission; or

(B) 800 watts/MHz (PSD) per sector.

(3) Provided that they also comply with paragraphs (b) and (c) of this section, licensees are permitted to operate their base transmitters and repeaters with an ERP greater than 400 watts/MHz (PSD) per sector, up to a maximum ERP of 1000 watts/MHz (PSD) per sector unless they meet the conditions in paragraph (a)(4) of this section.

(4) Provided that they also comply with paragraphs (b) and (c) of this section, licensees of systems operating in areas more than 72 kilometers (45 miles) from international borders that:

(i) 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

(ii) Extend coverage into Unserved Area on a secondary basis (*see* § 22.949), are permitted to operate base transmitters and repeaters with an ERP greater than 800 watts/MHz (PSD) per sector, up to a maximum of 2000 watts/MHz (PSD) per sector.

(5) The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

(b) *Power flux density (PFD).* Until May 12, 2024, each Cellular base station that operates at the higher ERP limits permitted under paragraphs (a)(3) and (4) of this section must be designed and deployed so as not to exceed a modeled PFD of 3000 microwatts/m^2/MHz over at least 98% of the area within 1 km of the base station antenna, at 1.6 meters above ground level. To ensure its compliance with this requirement, the licensee must perform predictive modeling of the PFD values within at least 1 km of each base station antenna prior to commencing such operations and, thereafter, prior to making any site modifications that may increase the PFD levels around the base station. The modeling tools must take into consideration terrain and other local conditions and must use good engineering practices for the 800 MHz band.

(c) *Advance notification requirement.* At least 30 days but not more than 90 days prior to activating a base station at the higher ERP limits permitted under paragraphs (a)(3) and (4) of this section, the Cellular licensee must provide written advance notice to any public safety licensee authorized in the frequency range 806–816 MHz/851–861 MHz with a base station located within a radius of 113 km of the Cellular base station to be deployed. The written notice shall be required only one time for each such cell site and is for informational purposes only; the public safety licensees are not afforded the right to accept or reject the activation or to unilaterally require changes in the operating parameters. The written notification must include the base station's location, ERP level, height of the transmitting antenna's center of radiation above ground level, and the timeframe for activation, as well as the Cellular licensee's contact information. Additional information shall be provided by the Cellular licensee upon request of a public safety licensee required to be notified under this paragraph (c). *See also* §§ 22.970 through 22.973.

(d) *Power measurement.* Measurement of the ERP of Cellular base transmitters and repeaters must be made using

an average power measurement technique. The peak-to-average ratio (PAR) of the transmission must not exceed 13 dB. Power measurements for base transmitters and repeaters must be made in accordance with either of the following:

(1) A Commission-approved average power technique (*see* FCC Laboratory's Knowledge Database); or

(2) For purposes of this section, peak transmit power must be measured over an 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.

(e) *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.

(f) *Exemptions from height-power limit.* Licensees need not comply with the height-power limit in paragraph (e) of this section if either of the following conditions is met:

(1) 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; or

(2) The licensee's base transmitter or repeater is operated at the ERP limits (W/MHz) specified above in paragraph (a)(1)(ii), (a)(2)(ii), (a)(3), or (a)(4) of this section.

[82 FR 17582, Apr. 12, 2017]

§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 reference bandwidth as follows:

(1) In the spectrum below 1 GHz, instrumentation should employ a reference 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 that the measured power is integrated over the full required reference 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.

(2) In the spectrum above 1 GHz, instrumentation should employ a reference bandwidth of 1 MHz.

(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, as amended at 82 FR 17583, Apr. 12, 2017]

§ 22.921 [Reserved]

§ 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.''

§§ 22.927–22.943 [Reserved]

§ 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]

§ 22.948 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, provided, however, that a resulting reduction in coverage within the CGSA is not subject to this requirement. *See* §1.947(b). *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) and 22.950.

[79 FR 72152, Dec. 5, 2014, as amended at 82 FR 17584, Apr. 12, 2017]

§§ 22.955–22.957 [Reserved]

§ 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

Central	Subscriber	Central	Subscriber
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
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.

PART 24—PERSONAL COMMUNICATIONS SERVICES

Subpart A—General Information

Sec.

24.1 Basis and purpose.
24.2 Other applicable rule parts.
24.3 Permissible communications.
24.5 Terms and definitions.
24.9 Operation of certificated signal boosters.

Subpart B—Applications and Licenses

GENERAL FILING REQUIREMENTS

24.10 Scope.
24.11 Initial authorization.
24.12 Eligibility.
24.15 License period.

Subpart C—Technical Standards

24.50 Scope.
24.51 Equipment authorization.
24.52 RF exposure.
24.53 Calculation of height above average terrain (HAAT).
24.55 Antenna structures; air navigation safety.

Subpart D—Narrowband PCS

24.100 Scope.
24.101 [Reserved]
24.102 Service areas.
24.103 Construction requirements.
24.104 Partitioning and disaggregation.
24.129 Frequencies.
24.130 [Reserved]
24.131 Authorized bandwidth.
24.132 Power and antenna height limits.
24.133 Emission limits.
24.134 Co-channel separation criteria.
24.135 Frequency stability.

Subpart E—Broadband PCS

24.200 Scope.

24.202 Service areas.
24.203 Construction requirements.
24.229 Frequencies.
24.232 Power and antenna height limits.
24.235 Frequency stability.
24.236 Field strength limits.
24.237 Interference protection.
24.238 Emission limitations for Broadband PCS equipment.

POLICIES GOVERNING MICROWAVE RELOCATION FROM THE 1850–1990 MHZ BAND

24.239 Cost-sharing requirements for broadband PCS.
24.241 Administration of the Cost-Sharing Plan.
24.243 The cost-sharing formula.
24.245 Reimbursement under the Cost-Sharing Plan.
24.247 Triggering a reimbursement obligation.
24.249 Payment issues.
24.251 Dispute resolution under the Cost-Sharing Plan.
24.253 Termination of cost-sharing obligations.

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)

Subpart F—Competitive Bidding Procedures for Narrowband PCS

24.301 Narrowband PCS subject to competitive bidding.
24.302–24.309 [Reserved]
24.320 [Reserved]
24.321 Designated entities.

Subpart G—Interim Application, Licensing and Processing Rules for Narrowband PCS

24.403 Authorization required.
24.404 Eligibility.
24.405–24.414 [Reserved]
24.415 Technical content of applications; maintenance of list of station locations.
24.416–24.429 [Reserved]
24.430 Opposition to applications.
24.431 Mutually exclusive applications.
24.432–24.444 [Reserved]

Subpart H—Competitive Bidding Procedures for Broadband PCS

24.701 Broadband PCS subject to competitive bidding.
24.702–24.708 [Reserved]
24.709 Eligibility for licenses for frequency Blocks C and F.
24.710 [Reserved]
24.711 Installment payments for licenses for frequency Block C.
24.712 Bidding credits for licenses won for frequency Block C.
24.713 [Reserved]
24.714 Partitioned licenses and disaggregated spectrum.
24.716 Installment payments for licenses for frequency Block F.
24.717 Bidding credits for licenses for frequency Block F.
24.720 Definitions.

Subpart I—Interim Application, Licensing, and Processing Rules for Broadband PCS

24.801–24.803 [Reserved]
24.804 Eligibility.
24.805–24.814 [Reserved]
24.815 Technical content of applications; maintenance of list of station locations.
24.816–24.829 [Reserved]
24.830 Opposition to applications.
24.831 Mutually exclusive applications.
24.832 [Reserved]
24.833 Post-auction divestitures.
24.834–24.838 [Reserved]
24.839 Transfer of control or assignment of license.
24.840–24.844 [Reserved]

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, 2005]

§ 24.15 License period.

Licenses for service areas will be granted for ten year terms from the date of original issuance or renewal.

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.

[58 FR 59183, Nov. 8, 1993. Redesignated at 59 FR 18499, Apr. 19, 1994, as amended at 63 FR 36604, July 7, 1998; 85 FR 18150, Apr. 1, 2020]

§ 24.52 RF exposure.

Licensees and manufacturers shall ensure compliance with the Commission's radio frequency exposure requirements 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. Technical information showing the basis for this statement must be submitted to the Commission upon request.

[85 FR 18150, Apr. 1, 2020]

§ 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 on the FCC's website at *www.fcc.gov/auctions* through the ''Maps'' submenu.

(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; 85 FR 64407, Oct. 13, 2020]

§ 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.

[65 FR 35853, June 6, 2000, as amended at 82 FR 41547, Sept. 1, 2017]

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 is available on the FCC's website at *www.fcc.gov/auctions* through the ''Maps'' submenu.

(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; 85 FR 64407, Oct. 13, 2020]

§ 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.

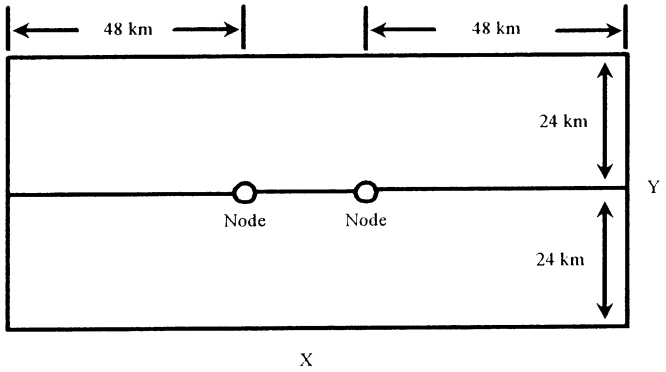
(a) *Licensed PCS.* The clearinghouse will apply the following test to determine if a PCS entity preparing to initiate operations must pay a PCS relocator or a voluntarily relocating microwave incumbent in accordance with the formula detailed in §24.243:

(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.

[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; 82 FR 41547, Sept. 1, 2017]

§ 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]

PART 25—SATELLITE COMMUNICATIONS

Subpart A—General

Sec.

25.101 Basis and scope.
25.102 Station authorization required.
25.103 Definitions.
25.104 Preemption of local zoning of earth stations.
25.105 Citizenship.
25.106–25.107 [Reserved]
25.108 Incorporation by reference.
25.109 Cross-reference.

Subpart B—Applications and Licenses

GENERAL APPLICATION FILING REQUIREMENTS

25.110 Filing of applications, fees, and number of copies.
25.111 Additional information, ITU filings, and ITU cost recovery.
25.112 Dismissal and return of applications.
25.113 Station construction, deployment approval, and operation of spare satellites.
25.114 Applications for space station authorizations.
25.115 Applications for earth station authorizations.
25.116 Amendments to applications.
25.117 Modification of station license.
25.118 Modifications not requiring prior authorization.
25.119 Assignment or transfer of control of station authorization.
25.120 Application for special temporary authorization.
25.121 License term and renewals.
25.122 Applications for streamlined small space station authorization.
25.123 Applications for streamlined small spacecraft authorization.
25.124 Unified space station and earth station authorization.
25.125 Applications for supplemental coverage from space (SCS).
25.129 Equipment authorization for portable earth-station transceivers.

EARTH STATIONS

25.130–25.131 [Reserved]
25.132 Verification of earth station antenna performance.
25.133 Period of construction; certification of commencement of operation.
25.134 [Reserved]
25.135 Licensing provisions for earth station networks in the non-voice, non-geostationary Mobile-Satellite Service.
25.136 Earth Stations in the 24.75–25.25 GHz, 27.5–28.35 GHz, 37.5–40 GHz, 47.2–48.2, GHz and 50.4–51.4 GHz bands.

25.137 Requests for U.S. market access through non-U.S.-licensed space stations.
25.138 Earth Stations in the 3.7–4.2 GHz band.
25.139 NGSO FSS coordination and information sharing between MVDDS licensees in the 12.2 GHz to 12.7 GHz band.

SPACE STATIONS

25.140 Further requirements for license applications for GSO space station operation in the FSS and the 17/24 GHz BSS.
25.142 Licensing provisions for the non-voice, non-geostationary Mobile-Satellite Service.
25.143 Licensing provisions for the 1.6/2.4 GHz Mobile-Satellite Service and 2 GHz Mobile-Satellite Service.
25.144 Licensing provisions for the 2.3 GHz satellite digital audio radio service.
25.146 Licensing and operating provisions for NGSO FSS space stations.
25.147 Space Stations in the 3.7–4.2 GHz band.
25.148 Licensing provisions for the Direct Broadcast Satellite Service.
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.

PROCESSING OF APPLICATIONS

25.150 Receipt of applications.
25.151 Public notice.
25.152 [Reserved]
25.153 Repetitious applications.
25.154 Opposition to applications and other pleadings.
25.155 Mutually exclusive applications.
25.156 Consideration of applications.
25.157 Consideration of applications for NGSO-like satellite operation.
25.158 Consideration of applications for GSO-like satellite operation.
25.159 Limits on pending applications and unbuilt satellite systems.

FORFEITURE, TERMINATION, AND REINSTATEMENT OF STATION AUTHORIZATION

25.160 Administrative sanctions.
25.161 Automatic termination of station authorization.
25.162 Cause for termination of interference protection.
25.163 Reinstatement.
25.164 Milestones.
25.165 Surety bonds.

REPORTING REQUIREMENTS FOR SPACE STATION OPERATORS

25.171 Space station point of contact reporting requirements.
25.172 Requirements for reporting space station control arrangements.
25.173 Results of in-orbit testing.

Subpart C—Technical Standards

25.201 [Reserved]
25.202 Frequencies, frequency tolerance, and emission limits.
25.203 Choice of sites and frequencies.
25.204 Power and out-of-band emission limits for earth stations.
25.205 Minimum antenna elevation angle.
25.206 Station identification.
25.207 Cessation of emissions.
25.208 Power flux-density and in-band field strength limits.
25.209 Earth station antenna performance standards.
25.210 Technical requirements for space stations in the Fixed-Satellite Service.
25.211 Analog video transmissions in the FSS.
25.212 Narrowband analog transmissions and digital transmissions in the GSO FSS.
25.213 Inter-Service coordination requirements for the 1.6/2.4 GHz Mobile-Satellite Service.
25.214 Technical requirements for space stations in the Satellite Digital Audio Radio Service and associated terrestrial repeaters.
25.215 [Reserved]
25.216 Limits on emissions from mobile earth stations for protection of aeronautical radionavigation-satellite service.
25.217 Default service rules.
25.218 Off-axis EIRP density envelopes for FSS earth stations transmitting in certain frequency bands.
25.219 [Reserved]
25.220 Non-routine transmit/receive earth station operations.
25.221–25.223 [Reserved]
25.224 Protection of receive-only earth stations in the 17/24 GHz BSS.
25.225 Geographic Service Requirements for 17/24 GHz Broadcasting Satellite Service.
25.226–25.227 [Reserved]
25.228 Operating and coordination requirements for earth stations in motion (ESIMs).
25.229–25.249 [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.
25.251 Special requirements for coordination.
25.252 [Reserved]
25.253 Special requirements for ancillary terrestrial components operating in the 1626.5–1660.5 MHz/1525–1559 MHz bands.
25.254 Special requirements for ancillary terrestrial components operating in the 1610–1626.5 MHz/2483.5–2500 MHz bands.
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.

25.256 Special Requirements for operations in the 3.65–3.7 GHz band.
25.257 Special requirements for NGSO MSS operations in the 29.1–29.25 GHz band regarding LMDS.
25.258 Sharing between NGSO MSS feeder-link stations and GSO FSS services in the 29.25–29.5 GHz band.
25.259 Time sharing between NOAA meteorological satellite systems and non-voice, non-geostationary satellite systems in the 137–138 MHz band.
25.260 Time sharing between DoD meteorological satellite systems and non-voice, non-geostationary satellite systems in the 400.15–401 MHz band.
25.261 Sharing among NGSO FSS space stations.
25.262 Licensing and domestic coordination requirements for 17/24 GHz BSS space stations and FSS space stations transmitting in the 17.3–17.8 GHz band.
25.263 Information sharing requirements for SDARS terrestrial repeater operators.
25.264 Requirements to facilitate reverse-band operation in the 17.3–17.8 GHz band.
25.265 Acceptance of interference in 2000–2020 MHz.

Subpart D—Technical Operations

25.271 Control of transmitting stations.
25.272 General inter-system coordination procedures.
25.273 Duties regarding space communications transmissions.
25.274 Procedures to be followed in the event of harmful interference.
25.275 Particulars of operation.
25.276 Points of communication.
25.277 Temporary fixed earth station operations.
25.278 Additional coordination obligation for non-geostationary and geostationary satellite systems in frequencies allocated to the fixed-satellite service.
25.279 Inter-satellite service.
25.280 Inclined orbit operations.
25.281 Transmitter identification requirements for video uplink transmissions.
25.282 Orbit raising maneuvers.
25.283 End-of-life disposal.
25.284 [Reserved]
25.285 Operation of MSS and ATC transmitters or transceivers on board civil aircraft.
25.286 Antenna painting and lighting.
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.
25.288 Obligation to remedy interference caused by NGSO MSS feeder downlinks in the 6700–6875 MHz band.
25.289 Protection of GSO networks by NGSO systems.
25.290 Responsibility of licensee for blanket-licensed earth station operation.

Subpart E—Miscellaneous

25.301 Satellite Emergency Notification Devices (SENDs).

Subpart F—Competitive Bidding Procedures for DARS

25.401 Satellite DARS applications subject to competitive bidding.
25.402 [Reserved]
25.403 Bidding application and certification procedures.
25.404 Submission of down payment and filing of long-form applications.
25.405–25.406 [Reserved]

Subparts G–H [Reserved]

Subpart I—Equal Employment Opportunities

25.601 Equal employment opportunities.

Subpart J—Public Interest Obligations

25.701 Other DBS Public interest obligations.
25.702 Other SDARS Public interest obligations.

AUTHORITY: 47 U.S.C. 154, 301, 302, 303, 307, 309, 310, 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.

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.

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:

(1) Multiple earth stations in the FSS or MSS, or for SDARS terrestrial repeaters, that may be operated anywhere within a geographic area specified in the license; or

(2) For multiple space stations in non-geostationary-orbit.

Contiguous United States (CONUS). For purposes of subparts B and C of this part, the contiguous United States consists of the contiguous 48 states and the District of Columbia as defined by Partial Economic Areas Nos. 1–41, 43–211, 213–263, 265–297, 299–359, and 361–411, which includes areas within 12 nautical miles of the U.S. Gulf coastline. In this context, the rest of the United States includes the Honolulu, Anchorage, Kodiak, Fairbanks, Juneau, Puerto Rico, Guam-Northern Mariana Islands, U.S. Virgin Islands, American Samoa, and the Gulf of Mexico PEAs (Nos. 42, 212, 264, 298, 360, 412–416). *See* § 27.6(m) of this chapter.

Conventional C-band. The 3700–4200 MHz (space-to-Earth) and 5925–6425 MHz (Earth-to-space) FSS frequency bands.

Conventional Ka-band. 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) frequency bands, which the Commission has designated as primary for GSO FSS operation.

Conventional Ku-band. The 11.7–12.2 GHz (space-to-Earth) and 14.0–14.5 GHz (Earth-to-space) FSS frequency 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 Aboard Aircraft (ESAA). An earth station operating aboard an aircraft that receives from and transmits to Fixed-Satellite Service space stations.

Earth Station in Motion (ESIM). A term that collectively designates ESV, VMES and ESAA earth stations, as defined in this section.

Earth Station on Vessel (ESV). An earth station onboard a craft designed for traveling on water, receiving from and transmitting to Fixed-Satellite Service space stations.

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/m^2) 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 C-band. The 3600–3700 MHz (space-to-Earth), 5850–5925 MHz (Earth-to-space), and 6425–6725 MHz (Earth-to-space) FSS frequency bands.

Extended Ka-band. The 17.3–18.3 GHz (space-to-Earth), 18.8–19.4 GHz (space-to-Earth), 19.6–19.7 GHz (space-to-Earth), 27.5–28.35 GHz (Earth-to-space), and 28.6–29.1 GHz (Earth-to-space) FSS frequency bands.

Extended Ku-band. The 10.95–11.2 GHz (space-to-Earth), 11.45–11.7 GHz (space-to-Earth), and 13.75–14.0 GHz bands (Earth-to-space) FSS frequency 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)

Geographically independent area (GIA). Any of the following six areas:

(1) CONUS;

(2) Alaska;

(3) Hawaii;

(4) American Samoa;

(5) Puerto Rico/U.S. Virgin Islands; and

(6) Guam/Northern Mariana Islands.

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)

Network Control and Monitoring Center (NCMC). An NCMC, as used in Part 25, is a facility that has the capability to remotely control earth stations operating as part of a satellite network or system.

NGSO. Non-geostationary orbit.

NGSO FSS gateway earth station. An earth station or complex of multiple earth station antennas that supports the routing and switching functions of an NGSO FSS system and that does not originate or terminate communication traffic. An NGSO FSS gateway earth station may also be used for telemetry, tracking, and command transmissions and is not for the exclusive use of any customer.

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.

Plane perpendicular to the GSO arc. The plane that is perpendicular to the ''plane tangent to the GSO arc,'' as defined below, and includes a line between the earth station in question and the GSO space station that it is communicating with.

Plane tangent to the GSO arc. The plane defined by the location of an earth station's transmitting antenna and a line in the equatorial plane that is tangent to the GSO arc at the location of the GSO space station that the earth station is communicating with.

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 where U.S. Department of Defense meteorological satellite systems or National Oceanic and Atmospheric Administration meteorological satellite systems, or both such systems, receive signals from low earth orbiting satellites. Also, areas around NGSO MSS feeder-link 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 earth stations in the FSS communicating with GSO space stations that satisfy the criteria in § 25.211(d), § 25.212(c) through (f), or § 25.218, 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)(3).

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)

SCS earth stations. Any earth station used for the provision of supplemental coverage from space consistent with § 25.115(q).

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.

Skew angle. The angle between the minor axis of an axially asymmetric antenna beam and the plane tangent to the GSO arc.

Small satellite. An NGSO space station eligible for authorization under the application process described in § 25.122.

Small spacecraft. An NGSO space station operating beyond Earth's orbit that is eligible for authorization under the application process described in § 25.123.

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)

Supplemental coverage from space (SCS). The provision of coverage to terrestrial wireless subscribers through an arrangement or agreement (see § 1.9047 of this chapter) between one or more NGSO or GSO operator(s) and one or more terrestrial wireless licensee(s), involving transmissions between space stations and SCS earth stations. NGSO and GSO operators and terrestrial wireless service licensees seeking to provide SCS must be authorized in compliance with § 25.125.

Terrestrial radiocommunication. Any radiocommunication other than space radiocommunication or radio astronomy. (RR)

Terrestrial station. A station effecting terrestrial radiocommunication.

Two-degree-compliant space station. A GSO FSS space station operating in the conventional or extended C-bands, the conventional or extended Ku-bands, the 24.75–25.25 GHz band, or the conventional or extended Ka-bands within the limits on downlink equivalent isotropically radiated power (EIRP) density or PFD specified in § 25.140(a)(3) or (b)(3) and communicating only with earth stations operating in conformance with routine uplink parameters specified in § 25.211(d), § 25.212(c), (d), or (f), or § 25.218.

Vehicle-Mounted Earth Station (VMES). An earth station, operating from a motorized vehicle that travels primarily on land, that receives from and transmits to Fixed-Satellite Service space stations and operates within the United States.

[79 FR 8311, Feb. 12, 2014, as amended at 79 FR 26868, May 12, 2014; 81 FR 55324, Aug. 18, 2016; 83 FR 34489, July 20, 2018; 84 FR 53651, Oct. 8, 2019; 84 FR 66779, Dec. 5, 2019; 85 FR 22864, Apr. 23, 2020; 85 FR 44786, July 24, 2020; 85 FR 43733, July 20, 2020; 87 FR 72403, Nov. 25, 2022; 89 FR 34166, Apr. 30, 2024]

§ 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 §§ 1.5000 through 1.5004 of this chapter.

[81 FR 86613, Dec. 1, 2016]

§§ 25.106–25.107 [Reserved]

§ 25.108 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. All approved incorporation by reference (IBR) material is available for inspection at the FCC and the National Archives and Records Administration (NARA). Contact FCC through the Federal Communications Commission's Reference Information Center, phone: (202) 418–0270. For information on the availability of this material at NARA, visit *www.archives.gov/federal-register/cfr/ibr-locations.html* or email *fr.inspection@nara.gov* or go to. The material may be obtained from the sources in the following paragraphs of this section.

(b) European Telecommunications Standards Institute (ETSI), 650 Route des Lucioles, 06921 Sophia-Antipolis Cedex, France; *http://www.etsi.org;* Voice: +33 (0)4 92 94 42 00; Fax: +33 (0)4 93 65 47 16; email: *webstore@etsi.org*.

(1) ETSI TS 103 129 V1.1.2 (2014–03), ''Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation of a carrier identification system (DVB–CID) for satellite transmission,'' Version 1.1.2, March 2014. Incorporation by reference approved for § 25.281(b).

(2) [Reserved]

(c) International Telecommunication Union (ITU), Place des Nations, 1211 Geneva 20 Switzerland; *www.itu.int;* Voice: +41 22 730 5111; Fax: +41 22 733 7256; email: *itumail@itu.int*.

(1) ITU Radio Regulations, Volume 1: Articles, Article 9, ''Procedure for effecting coordination with or obtaining agreement of other administrations,'' Section II, ''Procedure for effecting coordination,'' Edition of 2012, *http://www.itu.int/pub/R–REG–RR–2012*. Incorporation by reference approved for § 25.111(e).

(2) ITU Radio Regulations, Volume 1: Articles, Article 21, ''Terrestrial and space services sharing frequency bands above 1 GHz,'' Section V, ''Limits of power flux-density from space stations,'' Edition of 2016, copyright 2016, *http://www.itu.int/pub/R-REG-RR-2016*. Incorporation by reference approved for § 25.146(a).

(3) ITU Radio Regulations, Volume 1: Articles, Article 22, ''Space services,'' Section II, ''Control of interference to geostationary-satellite systems,'' Edition of 2016, copyright 2016, *http://www.itu.int/pub/R-REG-RR-2016*. Incorporation by reference approved for §§ 25.146(a), 25.289.

(4) ITU Radio Regulations, Volume 2: Appendices, Appendix 7, ''Methods for the determination of the coordination areas around an earth station in the frequency bands between 100 MHz and 105 GHz,'' Edition of 2012, *http://www.itu.int/pub/R-REG-RR-2012*. Incorporation by reference approved for § 25.203(m).

(5) ITU Radio Regulations, Volume 2: Appendices, Appendix 30, ''Provisions for all services and associated Plans and List for the broadcasting-satellite service in the frequency bands 11.7–12.2 GHz (in Region 3), 11.7–12.5 GHz (in Region 1) and 12.2–12.7 GHz (in Region 2),'' Edition of 2012, *http://www.itu.int/pub/R–REG–RR–2012*. Incorporation by reference approved for §§ 25.110(b), 25.117(h), 25.118(e), and 25.140(b).

(6) ITU Radio Regulations, Volume 2: Appendices, Appendix 30A, ''Provisions and associated Plans and List for feeder links for the broadcasting-satellite service (11.7–12.5 GHz in Region 1, 12.2–12.7 GHz in Region 2 and 11.7–12.2 GHz in Region 3) in the frequency bands 14.5–14.8 GHz and 17.3–18.1 GHz in Regions 1 and 3, and 17.3–17.8 GHz in Region 2,'' Edition of 2012, *http://www.itu.int/pub/R-REG-RR-2012*. Incorporation by reference approved for

§§ 25.110(b), 25.117(h), 25.118(e), and 25.140(b).

(7) ITU Radio Regulations, Volume 2: Appendices, Appendix 30B, ''Provisions and associated Plan for the fixed-satellite service in the frequency bands 4 500–4 800 MHz, 6 725–7 025 MHz, 10.70–10.95 GHz, 11.2–11.45 GHz and 12.75–13.25 GHz,'' Edition of 2012, *http://www.itu.int/pub/R-REG-RR-2012*. Incorporation by reference approved for §§ 25.110(b) and 25.140(a).

(8) ITU Radio Regulations, Volume 3: Resolutions and Recommendations, Resolution 76 (Rev.WRC-15), ''Protection of geostationary fixed-satellite service and geostationary broadcasting-satellite service networks from the maximum aggregate equivalent power flux-density produced by multiple non-geostationary fixed-satellite service systems in frequency bands where equivalent power flux-density limits have been adopted,'' Edition of 2016, copyright 2016, *http://www.itu.int/pub/R-REG-RR-2016*. Incorporation by reference approved for § 25.146(a).

(9) ITU Radio Regulations, Volume 3: Resolutions and Recommendations, Resolution 85 (WRC–03), ''Application of Article 22 of the Radio Regulations to the protection of geostationary fixed-satellite service and broadcasting-satellite service networks from non-geostationary fixed-satellite service systems,'' Edition of 2016, copyright 2016, *http://www.itu.int/pub/R-REG-RR-2016*. Incorporation by reference approved for § 25.146(c).

(10) 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). Incorporation by reference approved for § 25.254(c).

(d) Radio Technical Commission for Maritime Services (RTCM). 1611 N. Kent St., Suite 605, Arlington, VA 22209; email: *info@rtcm.org*; website: *www.rtcm.org*.

(1) RTCM 12800.0, ''Satellite Emergency Notification Devices (SENDs),'' dated August 1, 2011. Incorporation by reference approved for § 25.301.

(2) [Reserved]

[81 FR 55324, Aug. 18, 2016, as amended at 82 FR 37029, Aug. 8, 2017; 82 FR 40494, Aug. 25, 2017; 82 FR 59984, Dec. 18, 2017; 85 FR 64407, Oct. 13, 2020; 86 FR 49488, Sept. 3, 2021; 88 FR 21439, Apr. 10, 2023; 86 FR 49488, Sept. 3, 2021; 89 FR 58072, July 17, 2024]

§ 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.

(e) Space and earth stations in the 3700–4200 MHz band may be subject to transition rules in part 27 of this chapter.

(f) Space and SCS earth stations providing SCS are subject to technical rules in parts 2, 22, 24, and 27 of this chapter where applicable.

[78 FR 8420, Feb. 6, 2013, as amended at 85 FR 22864, Apr. 23, 2020; 89 FR 34166, Apr. 30, 2024]

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) *Filing.* Applications may be filed by going online at *https://www.fcc.gov/icfs* and submitting the application through the International Communications Filing System (ICFS).

(b) *Submitting your application.* (1) All earth station license applications must be filed electronically on FCC Form 312 in accordance with the applicable provisions of part 1, subpart Y of this chapter.

(2) Except as provided in paragraph (b)(3) of this section, applications for space station licenses must be filed electronically on FCC Form 312 in accordance with the applicable provisions of part 1, subpart Y of this chapter and include all information required by § 25.114.

(b)(3) A license application for 17/24 GHz BSS space station operation, for GSO FSS space station operation, or for GSO space station operation subject to the provisions in Appendices 30 and 30A of the ITU Radio Regulations (incorporated by reference, see § 25.108) may be submitted in two steps, as follows:

(i) An application for 17/24 GHz BSS space station operation or for GSO FSS space station operation not subject to the provisions in Appendix 30B of the ITU Radio Regulations (incorporated by reference, *see* § 25.108) may be initiated by filing with the Commission, in accordance with the applicable provisions of part 1, subpart Y of this chapter, a draft Coordination Request and simplified Form 312 for the proposed operation and a declaration of acceptance of ITU cost-recovery responsibility in accordance with § 25.111(d). The simplified Form 312, Main Form submission must include the information required by items 1–17, 43, 45, and 46.

(ii) An application for GSO FSS space station operation subject to the provisions in Appendix 30B of the ITU Radio Regulations (incorporated by reference, *see* § 25.108) may be initiated by submitting to the Commission, in accordance with the applicable provisions of part 1, subpart Y of this chapter, a draft ITU filing to convert an allotment into an assignment, to introduce an additional system, or to modify an assignment in the Appendix 30B List accompanied by a simplified Form 312 and a declaration of acceptance of ITU cost-recovery responsibility in accordance with § 25.111(d). The simplified Form 312, Main Form submission must include the information required by items 1–17, 43, 45, and 46. In addition, the applicant must submit the results of an analysis demonstrating that no U.S. filing under Appendix 30B would be deemed affected by the proposed operation under the relevant ITU criteria or, for any affected filings, a letter signed by the affected operator that it consents to the new filing.

(iii) An application for GSO space station operation subject to the provisions in Appendices 30 and 30A of the ITU Radio Regulations (incorporated by reference, see § 25.108) may be initiated by submitting to the Commission, in accordance with the applicable provisions of part 1, subpart Y of this chapter, a draft ITU filing to: modify an existing frequency assignment in the Region 2 Plan; to include a new frequency assignment in the Region 2 Plan; or to include a new or modified frequency assignment in the List of the Regions 1 and 3 Plan, accompanied by a simplified Form 312 and a declaration of acceptance of ITU cost-recovery responsibility in accordance with § 25.111(d). The simplified Form 312, Main Form submission must include the information required by items 1–17, 43, 45, and 46. In addition, the applicant must submit the results of an analysis demonstrating that no U.S. filing under Appendix 30 and 30A would be deemed affected by the proposed operation under the relevant ITU criteria or, for any affected filings, a letter signed by the affected operator that it consents to the new filing.

(iv) An application initiated pursuant to paragraphs (b)(3)(i), (ii), or (iii) of this section will be considered completed by the filing of an FCC Form 312 and the remaining information required in a complete license application, including the information required by § 25.114, within two years of the date of submission of the initial application materials.

(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 ICFS. 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) An applicant must pay the appropriate filing fee in accordance with part 1, subpart G of this chapter, at the time when it files a FCC Form 312.

[69 FR 47793, Aug. 6, 2004, as amended at 78 FR 8420, Feb. 6, 2013; 81 FR 55325, Aug. 18, 2016; 86 FR 49488, Sept. 3, 2021; 88 FR 21440, Apr. 10, 2023]

§ 25.111 Additional information, ITU filings, 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 filings to the ITU on behalf of an applicant, licensee, or other requesting party only after the party has filed a signed declaration of unconditional acceptance of all consequent ITU cost-recovery responsibility. Applicants and licensees must file the declaration electronically in the application file in the International Communications Filing System (ICFS). In addition, applicants and licensees must reference the call sign and name of the satellite network in the declaration. All cost-recovery declarations must include the name(s), address(es), email address(es), and telephone 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, licensee, or other party 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.

(e) The Commission will process and forward to the ITU up to five Advance Publication filings by an entity that are not accompanied by a complete

space station license application or by an application pursuant to §25.110(b)(3)(i) or (b)(3)(ii). Such Advance Publication filing requests not contained in an application must be accompanied by a letter request and a signed ITU cost-recovery declaration pursuant to paragraph (d) of this section. A request for filing of Advance Publication information will be attributed to an entity in the same manner as a space station license application under the criteria set forth in §25.159(c).

NOTE TO PARAGRAPH (e): After June 30, 2016, the Commission will not forward Advance Publication information for satellite networks or systems subject to Article 9, Section II of the ITU Radio Regulations (incorporated by reference, *see* §25.108).

[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; 81 FR 55325, Aug. 18, 2016; 86 FR 54399, Oct. 1, 2021; 88 FR 21440, Apr. 10, 2023]

§25.112 Dismissal and return of 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) [Reserved]

(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)(4) of this section will not be considered. Applications for authority found defective under paragraph (a)(1) or (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) 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.

(d) An application will be dismissed without prejudice as a matter of right if the applicant requests its dismissal prior to final Commission action.

[56 FR 24016, May 28, 1991, as amended at 68 FR 51502, Aug. 27, 2003; 79 FR 8314, Feb. 12, 2014; 81 FR 55326, Aug. 18, 2016; 85 FR 43733, July 20, 2020; 88 FR 84753, Dec. 6, 2023]

§25.113 Station construction, deployment approval, 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 Communications 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.

(g) Except as set forth in paragraphs (h) and (i) of this section, approval for orbital deployment and a station license (*i.e.,* operating authority) must be applied for and granted before a space station may be deployed and operated in orbit. Approval for orbital deployment may be requested in an application for a space station license. However, an application for authority to deploy and operate an on-ground spare satellite will be considered pursuant to the following procedures:

(1) Applications for deployment and operation of an on-ground spare NGSO-like satellite will be considered pursuant to the procedures set forth in § 25.157, except as provided in paragraph (g)(3) of this section.

(2) Applications for deployment and operation of an on-ground spare GSO-like satellite will be considered pursuant to the procedures set forth in § 25.158, except as provided 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 deployed 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) An operator of NGSO space stations under a blanket license granted by the Commission, except for those granted pursuant to the application process in § 25.122 or § 25.123, need not apply for license modification to operate technically identical in-orbit spare satellites in an authorized orbit. However, the licensee must notify the Commission within 30 days of bringing an in-orbit spare into service and certify that its activation has not exceeded the number of space stations authorized to provide service and that the licensee has determined by measurement that the activated spare is operating within the terms of the license.

(i) An operator of NGSO space stations under a blanket license granted by the Commission, except for those granted pursuant to the application process in § 25.122 or § 25.123, need not apply for license modification to deploy and operate technically identical replacement satellites in an authorized orbit within the term of the system authorization. However, the licensee must notify the Commission of the intended launch at least 30 days in advance and certify that its operation of the additional space station(s) will not increase the number of space stations providing service above the maximum number specified in 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; 81 FR 55326, Aug. 18, 2016; 85 FR 43733, July 20, 2020; 88 FR 21440, Apr. 10, 2023]

§ 25.114 Applications for space station authorizations.

(a)(1) A license application filed pursuant to § 25.110(b)(2) for a GSO space station or NGSO space station or

space-station constellation must comprise a comprehensive proposal and must be submitted on FCC Form 312, Main Form and Schedule S, with attached exhibits required by paragraph (d) of this section.

(2) An application for blanket authority for an NGSO constellation 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 station in the constellation.

(3) For an application filed pursuant to the two-step procedure in §25.110(b)(3), the filing pursuant to §25.110(b)(3)(iv) must be submitted on FCC Form 312, Main Form and Schedule S, with attached exhibits as required by paragraph (d) of this section, and must constitute a comprehensive proposal.

(4) For an application filed pursuant to the SCS procedure in §25.125, the filing must be submitted on FCC Form 312, Main Form and Schedule S, with attached exhibits as required by paragraph (d) of this section, and must constitute a comprehensive proposal.

(b) Each application for a new or modified space station authorization must contain the formal waiver required by 47 U.S.C. 304.

(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 intersatellite 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 a space station with steerable beams that are not shapeable, specify the applicable contours, as defined in paragraph (c)(4)(vi)(A) or (c)(4)(vi)(B) of this section, with a description of a proposed coverage area for each steerable beam or provide the contour information described in paragraph (c)(4)(vi)(C) of this section for each steerable beam.

(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, except for an NGSO FSS applicant certifying compliance with PFD limits under § 25.146(a)(1);

(9) [Reserved]

(10) Estimated operational lifetime;

(11) Whether the space station is to be operated on a common carrier basis;

(12) [Reserved]

(13) And the polarization information necessary to determine compliance with § 25.210(i).

(d) The following information in narrative form shall be contained in each application, except space station applications filed pursuant to § 25.122 or § 25.123:

(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, including applicants proposing feeder links for space stations operating in the 17/24 GHz Broadcasting-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 or applicants seeking authorization for FSS space stations transmitting in the 17.3–17.8 GHz band (space-to-Earth), must also include the information specified in § 25.140(b);

(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) An application for space station authorization in the 1.6/2.4 GHz or 2 GHz Mobile-Satellite Service must include 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) The information required by § 25.146, if the application is for an NGSO FSS system authorization within the 10.7–30 GHz band.

(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. Where applicable, this statement must include an orbital debris mitigation disclosure for any separate deployment devices, distinct from the space station launch vehicle, that may become a source of orbital debris;

(ii) A statement indicating whether the space station operator has assessed and limited the probability that the space station(s) will become a source of debris by collision with small debris or meteoroids that would cause loss of control and prevent disposal. The statement must indicate whether this

probability for an individual space station is 0.01 (1 in 100) or less, as calculated using the NASA Debris Assessment Software or a higher fidelity assessment tool;

(iii) A statement that the space station operator has assessed and limited the probability, during and after completion of mission operations, of accidental explosions or of release of liquids that will persist in droplet form. 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;

(iv) A statement that the space station operator has assessed and limited the probability of the space station(s) becoming a source of debris by collisions with large debris or other operational space stations.

(A) Where the application is for an NGSO space station or system, the following information must also be included:

(*1*) A demonstration that the space station operator has assessed and limited the probability of collision between any space station of the system and other large objects (10 cm or larger in diameter) during the total orbital lifetime of the space station, including any de-orbit phases, to less than 0.001 (1 in 1,000). The probability shall be calculated using the NASA Debris Assessment Software or a higher fidelity assessment tool. The collision risk may be assumed zero for a space station during any period in which the space station will be maneuvered effectively to avoid colliding with large objects.

(*2*) The statement must identify characteristics of the space station(s)' orbits that may present a collision risk, including any planned and/or operational space stations in those orbits, and indicate what steps, if any, have been taken to coordinate with the other spacecraft or system, or what other measures the operator plans to use to avoid collision.

(*3*) If at any time during the space station(s)' mission or de-orbit phase the space station(s) will transit through the orbits used by any inhabitable spacecraft, including the International Space Station, the statement must describe the design and operational strategies, if any, that will be used to minimize the risk of collision and avoid posing any operational constraints to the inhabitable spacecraft.

(*4*) The statement must disclose the accuracy, if any, with which orbital parameters 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, *e.g.*, its propulsion system will not be used for orbital maintenance, that fact must 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. All systems must describe the extent of satellite maneuverability, whether or not the space station design includes a propulsion system.

(*5*) The space station operator must certify that upon receipt of a space situational awareness conjunction warning, the operator will review and take all possible steps to assess the collision risk, and will mitigate the collision risk if necessary. As appropriate, steps to assess and mitigate the collision risk should include, but are not limited to: Contacting the operator of any active spacecraft involved in such a warning; sharing ephemeris data and other appropriate operational information with any such operator; and modifying space station attitude and/or operations.

(B) Where a space station requests the assignment of a geostationary 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 or touch. If so, the statement must include a statement as to the identities of those satellites and the measures that will be taken to prevent collisions;

(v) A statement addressing the trackability of the space station(s). Space station(s) operating in low-Earth orbit will be presumed trackable if each individual space station is 10 cm or larger in its smallest dimension, excluding deployable components. Where the application is for an NGSO space station or system, the statement shall also disclose the following:

(A) How the operator plans to identify the space station(s) following deployment and whether space station tracking will be active or passive;

(B) Whether, prior to deployment, the space station(s) will be registered with the 18th Space Control Squadron or successor entity; and

(C) The extent to which the space station operator plans to share information regarding initial deployment, ephemeris, and/or planned maneuvers with the 18th Space Control Squadron or successor entity, other entities that engage in space situational awareness or space traffic management functions, and/or other operators.

(vi) A statement disclosing planned proximity operations, if any, and addressing debris generation that will or may result from the proposed operations, including any planned release of debris, the risk of accidental explosions, the risk of accidental collision, and measures taken to mitigate those risks.

(vii) A statement detailing the disposal plans for the space station, including the quantity of fuel—if any—that will be reserved for disposal maneuvers. In addition, the following specific provisions apply:

(A) For geostationary orbit space stations, the statement must disclose the altitude selected for a disposal orbit and the calculations that are used in deriving the disposal altitude.

(B) For space stations terminating operations in an orbit in or passing through the low-Earth orbit region below 2,000 km altitude, the statement must disclose whether the spacecraft will be disposed of through atmospheric re-entry, specifying if direct retrieval of the spacecraft will be used. The statement must also disclose the expected time in orbit for the space station following the completion of the mission.

(C) For space stations not covered by either paragraph (d)(14)(vii)(A) or (B) of this section, the statement must indicate whether disposal will involve use of a storage orbit or long-term atmospheric re-entry and rationale for the selected disposal plan.

(D) For all space stations under paragraph (d)(14)(vii) (B) or (C) of this section, the following additional specific provisions apply:

(*1*) The statement must include a demonstration that the probability of success of the chosen disposal method will be 0.9 or greater for any individual space station. For space station systems consisting of multiple space stations, the demonstration should include additional information regarding efforts to achieve a higher probability of success, with a goal, for large systems, of a probability of success for any individual space station of 0.99 or better. For space stations under paragraph (d)(14)(vii)(B) of this section ending their mission in or passing through the low-Earth orbit region below 2000 km altitude, successful disposal is defined, for the purposes of this paragraph (d)(14)(vii)(D)(*1*), as atmospheric re-entry of the spacecraft as soon as practicable, but no later than five years following completion of the mission. For all other space stations under paragraphs (d)(14)(vii)(B) and (C) of this section, successful disposal will be assessed on a case-by-case basis.

(*2*) If planned disposal is by atmospheric re-entry, the statement must also include:

(*i*) A disclosure indicating whether the atmospheric re-entry will be an uncontrolled re-entry or a controlled targeted reentry.

(*ii*) An assessment as to whether portions of any individual spacecraft will survive atmospheric re-entry and impact the surface of the Earth with a kinetic energy in excess of 15 joules, and demonstration that the calculated casualty risk for an individual spacecraft using the NASA Debris Assessment

Software or a higher fidelity assessment tool is less than 0.0001 (1 in 10,000).

(E) 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.

(viii) 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 or the FSS transmitting in the 17.3–17.8 GHz band, shall include the following information as an attachment to its application:

(i) If the applicant proposes to operate in the 17.3–17.8 GHz band, a demonstration that the proposed space station will comply with the applicable power flux density limits in §25.140(a)(3)(iii) or (b)(3) unless the applicant provides a certification under paragraph (d)(15)(ii) of this section.

(ii) In cases where the proposed space station will not comply with the applicable power flux density limits set forth in §25.140(a)(3)(iii) or (b)(3), 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 or FSS satellite networks with space stations transmitting in the 17.3–17.8 GHz band that are located up to ±6° away. Excesses of more than 3 dB above the applicable power flux density levels specified in §25.140(a)(3)(iii) or (b)(3), must also be coordinated with 17/24 GHz BSS satellite networks located up to ±10° away.

(iii) Any information required by §25.264(a)(6), (b)(4), or (d).

(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) [Reserved]

(18) For space stations in the Direct Broadcast Satellite service, the 17/24 GHz Broadcasting-Satellite Service, or FSS space stations transmitting in the 17.3–17.8 GHz band, 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; 81 FR 55326, Aug. 18, 2016; 82 FR 59984, Dec. 18, 2017; 83 FR 34489, July 20, 2018; 85 FR 43733, July 20, 2020; 89 FR 34166, Apr. 30, 2024; 86 FR 49489, Sept. 3, 2021; 87 FR 72403, Nov. 25, 2022; 89 FR 58072, July 17, 2024; 85 FR 52450, Aug. 25, 2020; 89 FR 65217, 65223, Aug. 9, 2024]

§25.115 Applications for earth station authorizations.

(a)(1)(i) *Transmitting earth stations.* Commission authorization must be obtained for authority to operate a transmitting earth station. Applications must be filed electronically on FCC Form 312, Main Form and Schedule B, and include the information specified in this section, except as set forth in paragraphs (a)(1)(ii) and (a)(2) of this section.

(ii) *Certification of compliance with space station authorization.* An earth station applicant certifying that it will comply with the applicable terms and conditions of the authorization of any space station with which it communicates need not provide technical

demonstrations or other information that is duplicative or unnecessary due to the certification. This provision does not apply to FSS operation in bands below 10 GHz or in bands subject to § 25.136.

(2) Applicants for licenses for transmitting earth stations in the FSS 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 application meets all relevant criteria in § 25.211 or § 25.212 or includes information filed pursuant to paragraph (g)(1) of this section indicating that off-axis EIRP density from the proposed earth stations will not exceed relevant levels specified in § 25.218; and

(iv) Operation of the proposed station has been successfully coordinated with terrestrial systems, if the station would transmit in the 5925–6425 MHz band;

(v) The application includes an environmental impact statement pursuant to § 1.1311 of this chapter, if required;

(vi) The applicant does not propose to communicate via non-U.S.-licensed space stations not on the Permitted Space Station List; and

(vii) If the proposed station(s) will receive in the 18.3–18.8 GHz and/or 19.7–20.2 GHz bands, the applicant proposes 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) [Reserved]

(5) Applicants that are not permitted to submit applications under paragraph (a)(2) of this section on Form 312EZ, must submit, as an attachment to their application, the following information to be used as an ''informative'' in the public notice issued under § 25.151:

(i) 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.

(ii) The diameter or equivalent diameter of the antenna.

(iii) Proposed power and power density levels.

(iv) Identification of any random access technique, if applicable.

(v) Identification of a specific rule or rules for which a waiver is requested.

(6)(i) Applicants for earth stations transmitting in frequency bands shared with equal rights between terrestrial and space services must provide a frequency coordination analysis in accordance with § 25.203(b) and must include any notification or demonstration required by any other relevant provision in § 25.203.

(ii) Applicants for user transceiver units associated with the NVNG MSS must provide the information required by § 25.135.

(iii) Applicants for 1.6/2.4 GHz MSS user transceivers must demonstrate that the transceivers will operate in compliance with relevant requirements in § 25.213.

(iv) Applicants for earth stations licensed in accordance with § 25.136 must demonstrate that the transmitting earth stations will meet the relevant criteria specified in that section, including any showings required under § 25.136(a)(4), (c), (d)(4), and/or (e)(4).

(7) 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.

(8) 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.

(9) 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.

(10) With the exception of applications for blanket-licensed earth station networks filed pursuant to §25.115(c) or §25.218; applications for conventional Ka-band hub stations filed pursuant to §25.115(e); applications for NGSO FSS gateway earth stations filed pursuant to §25.115(f); applications for individually licensed earth stations filed pursuant to §25.136; applications for ESIMs filed pursuant to §25.115(l), §25.115(m), or §25.115(n); or applications for 29 GHz NGSO MSS feeder-link stations in a complex as defined in §25.257, parties may apply, either in an initial application or an application for modification of license, for operating authority for multiple transmitting FSS earth stations that are not eligible for blanket or network licensing under another section of this part in the following circumstances:

(i) 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.

(ii) 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.

(b) *Receive-only earth stations.* Except as provided in paragraphs (b)(1) and (8) of this section, applications for licenses for receive-only earth stations must be submitted on FCC Form 312, Main Form and Schedule B, accompanied by any required exhibits and the information described in paragraphs (a)(5)(i) through (v) of this section. Such applications must be filed electronically through the International Communications Filing System (ICFS) in accordance with the applicable provisions of part 1, subpart Y, of this chapter.

(1) Receive-only earth stations in the FSS that operate with U.S.-licensed space stations, or with non-U.S.-licensed space stations that have been duly approved for U.S. market access, 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(c).

(2) 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.

(3) Applications for registration must be accompanied by the coordination exhibit required by §25.203 and any other required exhibits.

(4) 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.

(5) 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.

(6) 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.

(7) 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.

(8) Applications for modification of license or registration of receive-only earth stations must 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.

(9)(i) Except as set forth in paragraph (b)(9)(ii) of this section, receive-only earth stations operating with non-U.S. licensed space stations must file an FCC Form 312 requesting a license or modification to operate such station.

(ii) Operators of receive-only earth stations need not apply for a license to receive transmissions from non-U.S.-licensed space stations that have been duly approved for U.S. market access, provided the space station operator and earth station operator comply with all applicable rules in this chapter and with applicable conditions in the Permitted Space Station List or market-access grant.

(c)(1) *GSO FSS earth stations in 10.7–12.2 GHz or 14–14.5 GHz.* A blanket license application for operation in the 10.7–12.2 GHz or 14–14.5 GHz bands may be filed on FCC Form 312 or Form 312EZ, with a Schedule B for each large (5 meters or larger) hub station antenna and each representative type of small antenna (less than 5 meters) operating within the network; however, blanket licensing in the 10.7–11.7 GHz band is on an unprotected basis with respect to the fixed service.

(i) Applications to license networks of earth stations operating in the 11.7–12.2 GHz and 14.0–14.5 GHz bands under blanket operating authority that meet the requirements of § 25.212(c) or § 25.218(e) or (f) will be routinely processed.

(ii) Applications to license networks of earth stations operating in the 11.7–12.2 GHz and 14.0–14.5 GHz bands under blanket operating authority that do not meet the requirements of § 25.212(c) or § 25.218(e) or (f) must comply with the requirements in § 25.220 and must be filed on FCC Form 312 with a Schedule B for each large (5 meters or larger) hub station antenna and each representative type of small antenna (less than 5 meters) operating within the network.

(2) *Networks of earth stations operating in the 3700–4200 MHz and 5925–6425 MHz bands.* Applications to license networks of earth stations operating in the 3700–4200 MHz and 5925–6425 MHz bands must be filed electronically on FCC Form 312, Main Form and Schedule B. Applications will be routinely processed provided that frequency coordination has been satisfactorily completed and that the proposed earth stations comply with the applicable provisions in § 25.211(d) or § 25.212(d). Alternatively, applicants that have satisfactorily completed frequency coordination may be routinely processed if the proposed earth stations comply with the applicable off-axis EIRP density limits in § 25.218(c) or (d).

(i) For earth station antennas operating with power levels not consistent with the applicable provisions in § 25.211(d) or § 25.212(d), or with EIRP density levels not consistent with those specified in § 25.218(c) or (d), the applicant must file an initial lead application providing a detailed overview of the complete network. Such lead applications must fully identify the scope and nature of the service to be provided, as well as the complete technical details of each representative type of antenna that will operate within the network. Such lead applications for a single system must identify:

(A) No more than three 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 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 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 terminal authorization.

(v) Each 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 radio station or modification of an existing 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 manmade 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.

(3) Networks of earth stations operating in the 18.3–18.8 GHz, 19.7–20.2 GHz, 28.35–28.6 GHz, and 29.25–30 GHz bands with U.S.-licensed or non-U.S.-licensed satellites for domestic or international services.

(i) Applications to license networks of earth stations that will transmit digitally modulated signals to GSO space stations in the 28.35–28.6 GHz and/or 29.25–30.0 GHz bands under blanket operating authority must be filed on FCC Form 312, or Form 312EZ if available, with a Schedule B for each large (5 meters or larger) hub station antenna and each representative type of small antenna (less than 5 meters) operating within the network and may be routinely processed if the criteria in paragraphs (c)(3)(i)(A) and (B) of this section are met:

(A) The applicant certifies pursuant to § 25.132(a)(1) that the off-axis gain of transmitting antennas in the network will not exceed the relevant levels specified in § 25.209(a) and (b) and the power spectral density of any digitally modulated carrier into any transmitting earth station antenna in the proposed network will not exceed 3.5 dBW/MHz as specified in § 25.212(e).

(B) The application includes information filed pursuant to paragraph (g)(1) of this section indicating that off-axis EIRP density from the proposed earth stations will not exceed relevant routine levels specified in § 25.218(i).

(ii) Applications to license networks of earth stations operating in the 28.35–28.6 GHz and/or 29.25–30.0 GHz bands under blanket operating authority that do not meet the requirements of § 25.212(e) or § 25.218(i) must comply with the requirements in § 25.220 and must be filed on FCC Form 312 with a Schedule B for each large (5 meters or larger) hub station antenna and each representative type of small antenna (less than 5 meters) operating within the network.

(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) *GSO FSS earth stations in 17.3–30 GHz.* (1) An application for a GSO FSS earth station license in the 17.3–19.4 GHz, 19.6–20.2 GHz, 27.5–29.1 GHz, or 29.25–30 GHz bands not filed on FCC Form 312EZ pursuant to paragraph (a)(2) of this section must be filed on FCC Form 312, Main Form and Schedule B, and must include any information required by paragraphs (a)(5) through (10) or paragraph (g) or (j) of this section.

(2) Individual or blanket license applications may be filed for operation in

the 17.3–17.8 GHz band; however, blanket licensed earth stations shall operate on an unprotected basis with respect to DBS feeder link earth stations. All receiving FSS earth stations shall operate on an unprotected basis with respect to the Fixed Service in the 17.7–17.8 GHz band.

(f) *NGSO FSS earth stations in 10.7–30.0 GHz.* (1) An application for an NGSO FSS earth station license in the 10.7–30.0 GHz band must include the certification described in § 25.146(a)(2).

(2) Individual or blanket license applications may be filed for operation in the 10.7–12.7 GHz, 14–14.5 GHz, 17.8–18.6 GHz, 18.8–19.4 GHz, 19.6–20.2 GHz, 28.35–29.1 GHz, or 29.5–30.0 GHz bands; however, ESIMs cannot operate in the 28.35–28.4 GHz band and blanket licensing in the 10.7–11.7 GHz, 17.8–18.3 GHz, 19.3–19.4 GHz, and 19.6–19.7 GHz bands is on an unprotected basis with respect to current and future systems operating in the fixed service.

(3) Individual license applications only may be filed for operation in the 12.75–13.15 GHz, 13.2125–13.25 GHz, 13.75–14 GHz, or 27.5–28.35 GHz bands.

(g) *Additional requirements for certain GSO earth stations.* Applications for earth stations that will transmit to GSO space stations in any portion of the 5850–6725 MHz, 13.75–14.5 GHz, 24.75–25.25 GHz, 27.5–29.1 GHz, or 29.25–30.0 GHz bands must include, in addition to the particulars of operation identified on FCC Form 312 and associated Schedule B, the information specified in either paragraph (g)(1) or (2) of this section for each earth station antenna type.

(1) Specification of off-axis EIRP density calculated from measurements made consistent with the requirements in § 25.132(b)(1), in accordance with the following requirements. For purposes of this rule, the ''off-axis angle'' is the angle in degrees from a line between an earth station antenna and the target satellite.

(i) A plot of maximum co-polarized EIRP density in the plane tangent to the GSO arc at off-axis angles from minus 180° to plus 180°;

(ii) A plot of maximum co-polarized EIRP density in the plane tangent to the GSO arc at off-axis angles from minus 10° to plus 10°;

(iii) A plot of maximum co-polarized EIRP density in the plane perpendicular to the GSO arc at off-axis angles from 0° to plus 30°;

(iv) A plot of maximum cross-polarized EIRP density in the plane tangent to the GSO arc at off-axis angles from minus 7° to plus 7°;

(v) A plot of maximum cross-polarized EIRP density in the plane perpendicular to the GSO arc at off-axis angles from minus 7° to plus 7°;

(vi) For antennas for which gain measurements are made pursuant to § 25.132(b)(1)(iv), the EIRP density plots specified in paragraphs (g)(1)(i) through (v) of this section must be provided over the specified angular ranges in two orthogonal planes, one of which is tangent to the GSO arc and with the antenna operating at its maximum skew angle, which the applicant must specify.

(vii) The relevant off-axis EIRP density envelopes in § 25.218 must be superimposed on plots submitted pursuant to paragraphs (g)(1)(i) through (vi) of this section.

(viii) The showing must include a supplemental table for each off-axis angular range in which the relevant EIRP density envelope will be exceeded, specifying angular coordinates in degrees off-axis and corresponding calculated off-axis EIRP density at 0.2° increments over the angular range in which the routine envelope will be exceeded and one degree on each side of that range.

(2) An applicant that certifies pursuant to § 25.132(a)(1) that a proposed antenna's measured gain pattern conforms to relevant standards in § 25.209(a) and (b) and that input power density to the antenna will not exceed the relevant limit in § 25.211 or § 25.212 need not provide a showing pursuant to paragraph (g)(1) of this section for operation with that antenna.

(h) [Reserved]

(i) An earth station applicant filing an application for a blanket-licensed earth station network made up of FSS earth stations and planning to use a contention protocol must include in its application a certification that its contention protocol usage will be reasonable.

(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) *Permitted Space Station List.* (1) Applicants for FSS earth stations that qualify for routine processing in the conventional or extended C-bands, the conventional or extended Ku-bands, the conventional or extended Ka-bands, or the 24.75–25.25 GHz band, including ESV applications filed pursuant to paragraph (m)(1) or (n)(1) of this section, VMES applications filed pursuant to paragraph (m)(1) or (n)(1) of this section, and ESAA applications filed pursuant to paragraph (m)(1) or (n)(1) of this section, 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 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, an earth station that would receive signals in the 17.7–20.2 GHz band may not communicate with a space station on the Permitted Space Station List in that band until the space station operator has completed coordination under Footnote US334 to § 2.106 of this chapter.

(l) The requirements of this paragraph apply to applications for ESV operation in the 5925–6425 MHz (Earth-to-space) band with GSO satellites in the Fixed-Satellite Service, in addition to the requirements in paragraphs (a)(1), (5), (6), and (i) of this section:

(1) Applications where any necessary frequency coordination has been satisfactorily completed, and the proposed earth station transmissions comport with the applicable provisions in § 25.212(d) or the applicable off-axis EIRP density limits in § 25.218(d) will be routinely processed. Such applications must include the relevant information specified by paragraph (g) of this section. Applicants for ESIMs operating in a network using variable power density control of earth stations transmitting simultaneously in shared frequencies to the same target satellite receiving beam must also provide the certification required by § 25.212(g) or § 25.218(d)(4), whichever is applicable.

(2) Applications where the proposed earth station transmissions do not comport with the applicable provisions in § 25.212(d) or the applicable off-axis EIRP density limits in § 25.218(d) must include the information specified by paragraph (g)(1) of this section, and are subject to the requirements of § 25.220.

(3) Applications must include the following information:

(i) ESIM applicants that meet the relevant off-axis EIRP density mask must certify that an ESIM system is self-monitoring and capable of automatically ceasing or reducing emissions within 100 milliseconds if the ESIM transmitter exceeds the relevant off-axis EIRP density limits. ESIM applicants that do not meet the relevant off-axis EIRP density mask must provide a detailed showing that an ESIM system is self-monitoring and capable of automatically ceasing or reducing emissions within 100 milliseconds if the ESIM transmitter exceeds the relevant off-axis EIRP density limits. Variable-power ESIM applicants must certify that one or more transmitters are capable of automatically ceasing or reducing emissions within 100 milliseconds of receiving a command to do so from the system's network control and monitoring center, if the aggregate

off axis EIRP densities of the transmitter or transmitters exceed the relevant off-axis EIRP density limits.

(ii) An exhibit describing the geographic area(s) in which the ESVs will operate.

(iii) The point of contact information referred to in § 25.228(e)(2).

(iv) Applicants for ESVs that will exceed the guidelines in § 1.1310 of this chapter for radio frequency radiation exposure must provide, with their environmental assessment, a plan for mitigation of radiation exposure to the extent required to meet those guidelines.

(m) The requirements of this paragraph apply to applications for ESIM operation in the 14.0–14.5 GHz (Earth-to-space) band with GSO satellites in the Fixed-Satellite Service, in addition to the requirements in paragraphs (a)(1) and (5) and (i) of this section:

(1) Applications where any necessary frequency coordination has been satisfactorily completed, and the proposed earth station transmissions comport with the applicable provisions in § 25.212(c)(2) or the applicable off-axis EIRP density limits in § 25.218(f) will be routinely processed. Such applications must include the relevant information specified by paragraph (g) of this section. Applicants for ESIMs operating in a network using variable power density control of earth stations transmitting simultaneously in shared frequencies to the same target satellite receiving beam must also provide the certification required by § 25.212(g) or § 25.218(f)(4), whichever is applicable.

(2) Applications where the proposed earth station transmissions do not comport with the applicable provisions in § 25.212(c)(2) or the applicable off-axis EIRP density limits in § 25.218(f) must include the information specified by paragraph (g)(1) of this section, and are subject to the requirements of § 25.220.

(3) Applications must include the following information:

(i) ESIM applicants that meet the relevant off-axis EIRP density mask must certify that an ESIM system is self-monitoring and capable of automatically ceasing or reducing emissions within 100 milliseconds if the ESIM transmitter exceeds the relevant off-axis EIRP density limits. ESIM applicants that do not meet the relevant off-axis EIRP density mask must provide a detailed showing that an ESIM system is self-monitoring and capable of automatically ceasing or reducing emissions within 100 milliseconds if the ESIM transmitter exceeds the relevant off-axis EIRP density limits. Variable-power ESIM applicants must certify that one or more transmitters are capable of automatically ceasing or reducing emissions within 100 milliseconds of receiving a command to do so from the system's network control and monitoring center, if the aggregate off axis EIRP densities of the transmitter or transmitters exceed the relevant off-axis EIRP density limits.

(ii) An exhibit describing the geographic area(s) in which the ESIMs will operate.

(iii) The point of contact information referred to in § 25.228(e)(2), (f), or (g)(1) as appropriate.

(iv) Applicants for ESIMs that will exceed the guidelines in § 1.1310 of this chapter for radio frequency radiation exposure must provide, with their environmental assessment, a plan for mitigation of radiation exposure to the extent required to meet those guidelines.

(n) The requirements of this paragraph apply to applications for ESIM operation in the 28.35–28.6 GHz or 29.25–30.0 GHz (Earth-to-space) band with GSO satellites in the Fixed-Satellite Service, in addition to the requirements in paragraphs (a)(1) and (5) and (i) of this section:

(1) Applications where any necessary frequency coordination has been satisfactorily completed, and the proposed earth station transmissions comport with the applicable provisions in § 25.212(e) or the applicable off-axis EIRP density limits in § 25.218(i) will be routinely processed. Such applications must include the relevant information specified by paragraph (g) of this section. Applicants for ESIMs operating in a network using variable power density control of earth stations transmitting simultaneously in shared frequencies to the same target satellite receiving beam must also provide the certification required by § 25.212(g) or § 25.218(i)(5), whichever is applicable.

(2) Applications where the proposed earth station transmissions do not comport with the applicable provisions

in § 25.212(e) or the applicable off-axis EIRP density limits in § 25.218(i) must include the information specified by paragraph (g)(1) of this section, and are subject to the requirements of § 25.220.

(3) Applications must include the following information:

(i) ESIM applicants that meet the relevant off-axis EIRP density mask must certify that an ESIM system is self-monitoring and capable of automatically ceasing or reducing emissions within 100 milliseconds if the ESIM transmitter exceeds the relevant off-axis EIRP density limits. ESIM applicants that do not meet the relevant off-axis EIRP density mask must provide a detailed showing that an ESIM system is self-monitoring and capable of automatically ceasing or reducing emissions within 100 milliseconds if the ESIM transmitter exceeds the relevant off-axis EIRP density limits. Variable-power ESIM applicants must certify that one or more transmitters are capable of automatically ceasing or reducing emissions within 100 milliseconds of receiving a command to do so from the system's network control and monitoring center, if the aggregate off axis EIRP densities of the transmitter or transmitters exceed the relevant off-axis EIRP density limits.

(ii) An exhibit describing the geographic area(s) in which the ESIMs will operate.

(iii) The point of contact information referred to in § 25.228(e)(2), (f), or (g)(1) as appropriate.

(iv) Applicants for ESIMs that will exceed the guidelines in § 1.1310 of this chapter for radio frequency radiation exposure must provide, with their environmental assessment, a plan for mitigation of radiation exposure to the extent required to meet those guidelines.

(o) The requirements in this paragraph apply to applications for ESIMs operation with NGSO satellites in the Fixed-Satellite Service, in addition to the requirements in paragraphs (a)(1), (a)(5), and (i) of this section:

(1) An exhibit describing the geographic area(s) in which the ESIMs will operate and the location of hub and/or gateway stations.

(2) The point of contact information referred to in § 25.228(e)(2), (f), or (g)(1) as appropriate.

(3) Applicants for ESIMs that will exceed the guidelines in § 1.1310 of this chapter for radio frequency radiation exposure must provide, with their environmental assessment, a plan for mitigation of radiation exposure to the extent required to meet those guidelines.

(p) The licensee and grantees shall ensure compliance with the Commission's radio frequency exposure requirements in §§ 1.1307(b), 2.1091, and 2.1093 of this chapter, as appropriate. An Environmental Assessment may be required if RF radiation from the proposed facilities would, in combination with radiation from other sources, cause RF power density or field strength in an accessible area to exceed the applicable limits specified in § 1.1310 of this chapter. *See* § 1.1307(b)(5)(ii).

(q) *SCS earth stations.* An applicant seeking to use SCS earth stations to provide SCS must comply with § 25.125.

(1) A satellite operator licensed under § 25.125 to provide SCS is permitted to communicate with all terrestrial wireless licensee(s)-associated SCS earth stations that have been approved for such use under part 2 of this chapter.

(i) Such earth stations must show compliance with this part and at least one of either part 22, 24, or 27 of this chapter to provide SCS within the technical parameters and provisions associated with the device certification.

(ii) The device certification must show compliance with the licensed parameters of the terrestrial wireless license(s) and at least one of either part 22, 24, or 27 of this chapter, as applicable.

(2) An earth station may be used for the provision of SCS when:

(i) The satellite operator licensed under § 25.125 is a party to a valid and approved spectrum leasing arrangement or agreement pursuant to § 1.9047 of this chapter with at least one terrestrial wireless licensee(s) licensed under one of either part 22, 24, or 27 of this chapter; and

(ii) That terrestrial wireless licensee(s) has met and operates within all conditions associated with the relevant terrestrial wireless license(s).

(3) A satellite operator authorized to provide SCS under § 25.125 is authorized

under paragraph (q)(1) of this section to communicate with SCS earth stations for any period during which each of the following apply:

(i) The service is provided during the valid duration of any spectrum leasing arrangement or agreement pursuant to §1.9047 of this chapter between the terrestrial wireless licensee(s) and satellite operator;

(ii) The devices to which service is provided are certified under part 2 of this chapter; and

(iii) The terrestrial wireless licensee(s) is a valid licensee(s) under part 22, 24, or 27 of this chapter.

(4) A satellite operator with SCS authorization via a market access grant can avail itself of the provisions of this paragraph (q) but, in addition to the parameters established in paragraphs (q)(1) and (2) of this section, must also comply with any additional parameters included in the satellite operator's space station market access grant.

(5) A satellite operator operating in conformance with the parameters established in this part does not need a separate earth station authorization for the provision of SCS under this part.

[62 FR 5928, Feb. 10, 1997]

EDITORIAL NOTES: 1. 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.govinfo.gov*.

2. At 84 FR 53651, Oct. 8, 2019, §25.115 was amended in part by revising paragraph (c)(1); however, the amendment could not be incorporated because no new text was set out for paragraph (c)(1).

§ 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 Communications Filing System (ICFS) 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; 88 FR 21440, Apr. 10, 2023]

§ 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 Communications Filing System (ICFS) 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 and/or § 25.122 or § 25.123, as applicable, but only those items of information listed in § 25.114 and/or § 25.122 or § 25.123 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 operator of a space station transmitting in the 17.3–17.8 GHz band, whose license is conditioned to operate at less than the power level otherwise permitted by § 25.140(a)(3)(iii) and/or (b)(3), 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.

(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) The licensee and grantees shall ensure compliance with the Commission's radio frequency exposure requirements in §§1.1307(b), 2.1091, and 2.1093 of this chapter, as appropriate. An Environmental Assessment may be required if RF radiation from the proposed facilities would, in combination with radiation from other sources, cause RF power density or field strength in an accessible area to exceed the applicable limits specified in §1.1310 of this chapter. *See* §1.1307(b)(5)(iii).

(h) Unless otherwise ordered by the Commission, an application for any of the following kinds of modification of the operation of a GSO space station 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 notice period and the application does not propose a change that would be inconsistent with a Commission rule or require modification of the BSS plan in Appendix 30 or the associated feeder-link Plan in Appendix 30A of the ITU Radio Regulations (both incorporated by reference, *see* §25.108).

(1) Relocation of a DBS or GSO FSS space station by no more than 0.15° from the initially authorized orbital location, provided the application includes a signed certification that:

(i) The space station operator has assessed and limited the probability of the satellite becoming a source of debris as a result of collisions with large debris or other operational satellites at the new orbital location; and

(ii) The proposed station-keeping volume of the satellite following relocation will not overlap a station-keeping volume reasonably expected to be occupied by any other satellite, including those authorized by the Commission, applied for and pending before the Commission, or otherwise the subject of an ITU filing and either in orbit or progressing towards launch.

(2) Repositioning one or more antenna beams by no more than 0.3 angular degrees from a line between the space station and the initially authorized boresight location(s).

(i) Unless otherwise ordered by the Commission, an application to add a space station point of communication to an earth station authorization will be deemed granted 35 days after the date of the public notice that the application has been accepted for filing, provided:

(1) The license modification is only to add one or more points of communication;

(2) The modification will not cause the earth station transmissions to exceed the highest EIRP, EIRP density, and bandwidth prescribed for any already authorized emission; and

(3) The new space station point of communication will operate with the earth station only in frequency bands that are not shared with Federal or terrestrial wireless users and are not subject to coordination requirements with other non-Federal satellite services.

(j) An application for modification of a space station authorization to provide SCS must comply with § 25.125.

[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; 81 FR 55328, Aug. 18, 2016; 85 FR 18150, Apr. 1, 2020; 85 FR 43733, July 20, 2020; 88 FR 21440, Apr. 10, 2023; 88 FR 84754, Dec. 6, 2023; 89 FR 34166, Apr. 30, 2024; 87 FR 72404, Nov. 25, 2022; 89 FR 58072, July 17, 2024]

§ 25.118 Modifications not requiring prior authorization.

(a) *Earth station modifications, notification required.* Earth station licensees may make the following modifications without prior Commission authorization, provided they notify the Commission, using FCC Form 312 and Schedule B, within 30 days of the modification. The notification must be filed electronically through the International Communications Filing System (ICFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter.

(1) Blanket-licensed earth station operators may add remote terminals operating on a primary basis without prior authorization, provided they have complied with all applicable frequency coordination procedures in accordance with § 25.251.

(2) 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 FCC Form 312 within 30 days after the completed change to common carrier status.

(3) An earth station operator may change a point of communication without prior authorization, provided the operator does not repoint the earth station's antenna beyond any coordinated range; and

(i) The change results from a space station relocation described in paragraph (e) of this section, or

(ii) The new point of communication is a replacement GSO space station within ±0.15° of orbital longitude of the same location, with authority to serve the U.S., and the change does not entail any increase in the earth station's EIRP or EIRP density.

(4) An earth station licensee may additionally:

(i) Decrease antenna height; or

(ii) Increase or decrease the earth station's PFD contour, provided the modification does not involve a change listed in paragraph (b)(2) of this section.

(b) *Earth station modifications, notification not required.* Notwithstanding paragraph (a) of this section:

(1) 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.

(2) Licensees may make other changes to their authorized earth stations, including the addition of new transceiver/antenna combinations, without notifying the Commission, provided the modification does not involve:

(i) An increase in EIRP or EIRP density (either main lobe or off-axis);

(ii) Additional operating frequencies;

(iii) A change in polarization;

(iv) An increase in antenna height;

(v) Antenna repointing beyond any coordinated range; or

(vi) A change from the originally authorized coordinates of more than 1 second of latitude or longitude for stations operating in frequency bands shared with terrestrial systems or more than 10 seconds of latitude or longitude for stations operating in frequency bands not shared with terrestrial systems.

(c)–(d) [Reserved]

(e) *Relocation of GSO space stations.* A space station licensee may relocate a GSO space station 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. The notification must be filed electronically on FCC Form 312 through the International Communications Filing System (ICFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter:

(1) The space station will be relocated to a position within ±0.15° of an orbital location assigned to the same licensee.

(2) The licensee certifies that the space station will operate after the relocation within the technical parameters authorized and coordinated for the space station previously assigned to that location.

(3) The licensee certifies that it will comply with all the conditions of its license for operation at the changed location.

(4) The licensee certifies that it will limit operations of the space station to tracking, telemetry, and command functions during the relocation and satellite drift transition period.

(5) The licensee certifies that:

(i) It has assessed and limited the probability of the satellite becoming a source of debris as a result of collisions with large debris or other operational satellites at the new orbital location; and

(ii) The proposed station-keeping volume of the satellite following relocation will not overlap a station-keeping volume reasonably expected to be occupied by any other satellite, including those authorized by the Commission, applied for and pending before the Commission, or otherwise the subject of an ITU filing and either in orbit or progressing towards launch.

(6) The licensee certifies that the relocation will not result in a lapse of service for any current customer.

(7) If the space station to be relocated is a DBS space station, the licensee certifies 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 Plan and/or the Appendix 30A feeder-link Plan (both incorporated by reference, *see* §25.108) to the ITU Radiocommunication Bureau. A DBS licensee that meets this certification requirement is not subject to the requirements in paragraph (e)(2) of this section.

(8) If the space station to be relocated is a DBS space station, the licensee certifies that it will meet the geographic service requirements in §25.148(c) after the relocation.

(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 Communications 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; 81 FR 55329, Aug. 18, 2016; 86 FR 11887, Mar. 1, 2021; 88 FR 21440, Apr. 10, 2023]

§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 construction permit or station license, or accompanying rights, except as provided in paragraph (h) of this section. 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 ICFS.

(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 ICFS. 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.

(h) *Pro forma transactions involving a telecommunications carrier.* You do not need prior Commission approval for a non-substantial (*pro forma*) transfer of control or assignment of license involving a telecommunications carrier, as defined in 47 U.S.C. 153(51). However, the *pro forma* transferee or assignee must file a notification with the Commission no later than 30 days after the transfer or assignment is completed. The notification must be filed on FCC Form 312, Main Form and Schedule A and must contain a certification that the transfer of control or assignment was *pro forma* and that, together with all previous *pro forma* transactions, it did not result in a change in the actual controlling party.

(i) *Pro forma transactions not involving a telecommunications carrier.* A complete application for Commission approval of a non-substantial (*pro forma*) transfer of control or assignment of license not involving a telecommunications carrier, as defined in 47 U.S.C. 153(51), will be deemed granted one business day after filing, provided that:

(1) Approval does not require a waiver of, or a declaratory ruling pertaining to, any applicable Commission rule; and

(2) The application includes a certification that the proposed transfer of control or assignment is *pro forma* and that, together with all previous *pro forma* transactions, it would not result in a change in the actual controlling party.

(j) *Receive-only earth station registrations.* You do not need prior Commission approval for a transfer of control or assignment of a receive-only earth station registration. For all such transactions other than non-substantial (*pro forma*) transfers of control, the transferee or assignee must file a notification with the Commission on FCC Form 312, Main Form and Schedule A no later than 30 days after the transfer

or assignment is completed. No notification is required for a *pro forma* transfer of control of a receive-only earth station registrant.

[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; 81 FR 55329, Aug. 18, 2016; 88 FR 21440, Apr. 10, 2023]

§ 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 SDARS space stations and terrestrial repeaters, DBS and 17/24 GHz BSS space stations licensed as broadcast facilities, and licenses for which the application was filed pursuant to §§ 25.122 and 25.123, 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.

(3) Licenses for which the application was filed pursuant to § 25.122 or § 25.123 will be issued for a period of 6 years, without the possibility of extension or replacement authorization.

(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, except for those granted under § 25.122 or § 25.123, 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.

(3) For non-geostationary orbit space stations granted under § 25.122 or § 25.123, 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 and has begun operating. 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.

(f) *Geostationary Satellite License Term Extensions.* (1) For geostationary space stations issued an initial license term for a period of 15 years, licensees may apply for a modification to extend the license term in increments of five years or less.

(2) Geostationary space station licensees seeking a license term extension through a license modification application must provide a statement that includes the following:

(i) The requested duration of the license extension;

(ii) The estimated total remaining space station lifetime;

(iii) A description of any single points of failure or other malfunctions, defects, or anomalies during the space station operation that could affect its ability to conduct end-of-life procedures as planned, and an assessment of the associated risk;

(iv) A certification that remaining fuel reserves are adequate to complete de-orbit as planned; and

(v) A certification that telemetry, tracking, and command links are fully functional.

[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; 85 FR 43733, July 20, 2020; 86 FR 49489, Sept. 3, 2021; 85 FR 52451, Aug. 25, 2020; 89 FR 65217, Aug. 9, 2024]

§ 25.122 Applications for streamlined small space station authorization.

(a) This section shall only apply to applicants for NGSO systems that are able to certify compliance with the certifications set forth in paragraph (c) of this section. For applicants seeking to be authorized under this section, a comprehensive proposal for Commission evaluation must be submitted for each space station in the proposed system on FCC Form 312, Main Form and Schedule S, as described in §25.114(a) through (c), together with the certifications described in paragraph (c) of this section and the narrative requirements described in paragraph (d) of this section.

(b) Applications for NGSO systems may be filed under this section, provided that the total number of space stations requested in the application is ten or fewer.

(1) To the extent that space stations in the satellite system will be technically identical, the applicant may submit an application for blanket-licensed space stations.

(2) Where the space stations in the satellite system are not technically identical, the applicant must certify that each space station satisfies the criteria in paragraph (c) of this section, and submit technical information for each type of space station.

(c) Applicants filing for authorization under the streamlined procedure described in this section must include with their applications certifications that the following criteria will be met for all space stations to be operated under the license:

(1) The space station(s) will operate only in non-geostationary orbit;

(2) The total in-orbit lifetime for any individual space station will be six years or less;

(3) The space station(s):

(i) Will be deployed at an orbital altitude of 600 km or below; or

(ii) Will maintain a propulsion system and have the ability to make collision avoidance and deorbit maneuvers using propulsion;

(4) Each space station will be identifiable by a unique signal-based telemetry marker distinguishing it from other space stations or space objects;

(5) The space station(s) will release no operational debris;

(6) The space station operator has assessed and limited the probability of accidental explosions, including those resulting from the conversion of energy sources on board the space station(s) into energy that fragments the spacecraft;

(7) The probability of a collision between each space station and any other large object (10 centimeters or larger) during the orbital lifetime of the space station is 0.001 or less as calculated using current National Aeronautics and Space Administration (NASA) software or other higher fidelity model;

(8) The space station(s) will be disposed of post-mission through atmospheric re-entry. The probability of human casualty from portions of the spacecraft surviving re-entry and reaching the surface of the Earth is zero as calculated using current NASA software or higher fidelity models;

(9) Operation of the space station(s) will be compatible with existing operations in the authorized frequency band(s). Operations will not materially constrain future space station entrants from using the authorized frequency band(s);

(10) The space station(s) can be commanded by command originating from the ground to immediately cease transmissions and the licensee will have the capability to eliminate harmful interference when required under the terms of the license or other applicable regulations;

(11) Each space station is 10 cm or larger in its smallest dimension;

(12) Each space station will have a mass of 180 kg or less, including any propellant;

(13) The probability that any individual space station will become a source of debris by collision with small debris or meteoroids that would cause loss of control and prevent disposal is 0.01 (1 in 100) or less; and

(14) Upon receipt of a space situational awareness conjunction warning, the licensee or operator will review and take all possible steps to assess the collision risk, and will mitigate the collision risk if necessary. As appropriate, steps to assess and mitigate the collision risk should include, but are not

limited to: Contacting the operator of any active spacecraft involved in such a warning; sharing ephemeris data and other appropriate operational information with any such operator; and modifying space station attitude and/or operations.

(d) The following information in narrative form shall be contained in each application:

(1) An overall description of system facilities, operations, and services and an explanation of how uplink frequency bands would be connected to downlink frequency bands;

(2) Public interest considerations in support of grant;

(3) A description of means by which requested spectrum could be shared with both current and future operators, (*e.g.*, how ephemeris data will be shared, antenna design, earth station geographic locations) thereby not materially constraining other operations in the requested frequency band(s);

(4) If at any time during the space station(s)' mission or de-orbit phase the space station(s) will transit through the orbits used by any inhabitable spacecraft, including the International Space Station, a description of the design and operational strategies, if any, that will be used to minimize the risk of collision and avoid posing any operational constraints to the inhabitable spacecraft shall be furnished at the time of application;

(5) A statement identifying characteristics of the space station(s)' orbits that may present a collision risk, including any planned and/or operational space stations in those orbits, and indicating what steps, if any, have been taken to coordinate with the other spacecraft or system, or what other measures the licensee plans to use to avoid collision;

(6) A statement disclosing how the licensee or operator plans to identify the space station(s) following deployment and whether space station tracking will be active or passive; whether the space station(s) will be registered with the 18th Space Control Squadron or successor entity prior to deployment; and the extent to which the space station licensee or operator plans to share information regarding initial deployment, ephemeris, and/or planned maneuvers with the 18th Space Control Squadron or successor entity, other entities that engage in space situational awareness or space traffic management functions, and/or other operators;

(7) A description of the design and operation of maneuverability and deorbit systems, if any, and a description of the anticipated evolution over time of the orbit of the proposed satellite or satellites;

(8) If there are planned proximity operations, a statement disclosing those planned operations, and addressing debris generation that will or may result from the proposed operations, including any planned release of debris, the risk of accidental explosions, the risk of accidental collision, and measures taken to mitigate those risks;

(9) A demonstration that the probability of success of disposal is 0.9 or greater for any individual space station. Space stations deployed to orbits in which atmospheric drag will, in the event of a space station failure, limit the lifetime of the space station to less than 25 years do not need to provide this additional demonstration; and

(10) A list of the FCC file numbers or call signs for any known applications or Commission grants related to the proposed operations (*e.g.*, experimental license grants, other space station or earth station applications or grants).

[85 FR 43734, July 20, 2020, as amended at 85 FR 52452, Aug. 25, 2020; 89 FR 65217, Aug. 9, 2024]

§ 25.123 Applications for streamlined small spacecraft authorization.

(a) This section shall only apply to applicants for space stations that will operate beyond Earth's orbit and that are able to certify compliance with the certifications set forth in paragraph (b) of this section. For applicants seeking to be authorized under this section, a comprehensive proposal for Commission evaluation must be submitted for each space station in the proposed system on FCC Form 312, Main Form and Schedule S, as described in § 25.114(a) through (c), together with the certifications described in paragraph (b) of this section and the requirements described in paragraph (c) of this section.

(b) Applicants filing for authorization under the streamlined procedure

described in this section must include with their applications certifications that the following criteria will be met for all space stations to be operated under the license:

(1) The space station(s) will operate and be disposed of beyond Earth's orbit;

(2) The total lifetime from deployment to spacecraft end-of-life for any individual space station will be six years or less;

(3) Each space station will be identifiable by a unique signal-based telemetry marker distinguishing it from other space stations or space objects;

(4) The space station(s) will release no operational debris;

(5) No debris will be generated in an accidental explosion resulting from the conversion of energy sources on board the space station(s) into energy that fragments the spacecraft;

(6) The probability of a collision between each space station and any other large object (10 centimeters or larger) during the lifetime of the space station is 0.001 or less as calculated using current NASA software or higher fidelity models;

(7) Operation of the space station(s) will be compatible with existing operations in the authorized frequency band(s). Operations will not materially constrain future space station entrants from using the authorized frequency band(s);

(8) The space station(s) can be commanded by command originating from the ground to immediately cease transmissions and the licensee will have the capability to eliminate harmful interference when required under the terms of the license or other applicable regulations;

(9) Each space station is 10 cm or larger in its smallest dimension; and

(10) Each space station will have a mass of 500 kg or less, including any propellant.

(11) Upon receipt of a space situational awareness conjunction warning, the operator will review and take all possible steps to assess the collision risk, and will mitigate the collision risk if necessary. As appropriate, steps to assess and mitigate the collision risk should include, but are not limited to: Contacting the operator of any active spacecraft involved in such a warning; sharing ephemeris data and other appropriate operational information with any such operator; and modifying space station attitude and/or operations.

(c) Applicants must also provide the information specified in §25.122(d) in narrative form.

[85 FR 43734, July 20, 2020, as amended at 85 FR 52452, Aug. 25, 2020; 89 FR 65217, Aug. 9, 2024]

§25.124 Unified space station and earth station authorization.

(a) A single authorization may be issued for the operations of a GSO space station or NGSO space station(s) and the blanket-licensed earth stations that will operate within that satellite system, excluding GSO FSS and NGSO FSS satellite systems operating in bands below 10 GHz and bands subject to §25.136. The available frequency bands are:

(1) Non-Voice, Non-Geostationary MSS: 137–138 MHz, 148–150.05 MHz, 399.9–400.05 MHz, and 400.15–401 MHz;

(2) 1.5/1.6 GHz MSS: 1525–1559 MHz and 1626.5–1660.5 MHz;

(3) 1.6/2.4 GHz MSS: 1610–1626.5 MHz and 2483.5–2500 MHz;

(4) 2 GHz MSS: 2000–2020 MHz and 2180–2200 MHz;

(5) GSO FSS: 10.7–12.2 GHz, 14–14.5 GHz, 18.3–18.8 GHz, 19.7–20.2 GHz, 28.35–28.6 GHz, 29.25–30 GHz, 40–42 GHz, and 48.2–50.2 GHz;

(6) NGSO FSS: 10.7–12.7 GHz, 14–14.5 GHz, 17.8–18.6 GHz, 18.8–19.4 GHz, 19.6–20.2 GHz, 28.35–29.1 GHz, 29.5–30 GHz, 40–42 GHz, and 48.2–50.2 GHz; and

(7) GSO and NGSO MSS: 19.7–20.2 GHz and 29.5–30 GHz.

(b) An application for a satellite system license described in paragraph (a) must contain:

(1) The information required by §25.114 or, for a non-U.S.-licensed space station, §25.137;

(2) A certification that earth station operations under the satellite system license will comply with part 1, subpart I and part 17 of this chapter; and

(3) Any additional information required under this part, including under

§ 25.115, for operation of the blanket-licensed earth stations that is not duplicative or unnecessary due to the information provided for the space station operation.

[86 FR 11887, Mar. 1, 2021]

§ 25.125 Applications for supplemental coverage from space (SCS).

(a) *SCS entry criteria.* This section applies only to applicants seeking to provide SCS. An applicant for SCS space station authorization must hold either an existing NGSO or GSO license or grant of U.S. market access under this part, or must be seeking a NGSO or GSO license or grant of U.S. market access under this part, and must have a lease arrangement(s) or agreement pursuant to §1.9047 of this chapter with one or more terrestrial wireless licensee(s) that hold, collectively or individually, all co-channel licenses throughout a GIA in a band identified in § 2.106(d)(33)(i) of this chapter. Applicants for SCS space stations must comply with the requirements set forth in paragraph (b) of this section.

(b) *SCS space station application requirements.* An applicant seeking a space station authorization to provide SCS must either submit an application requesting modification of a current NGSO or GSO license or grant of U.S. market access under this part, or an application seeking a new NGSO or GSO license or grant of U.S. market access under this part.

(1)–(2) [Reserved]

(3) Applications to modify an authorization under this part to provide SCS and applications seeking to provide SCS in the bands identified in § 2.106(d)(33)(i) of this chapter will not be subject to the processing round procedures or first-come, first-served procedures in §§ 25.137, 25.157, and 25.158.

(c) [Reserved]

(d) *Effective date and continued operation of SCS authorization.* SCS authorization will be deemed effective in the Commission's records and for purposes of the application of the rules set forth in this section after each of the following requirements is satisfied:

(1) Grant of:

(i) A modification application under this part or request for modification of a grant of market access; or

(ii) An application to launch and operate or market access;

(2) Approval of a leasing arrangement(s) or agreement(s) under part 1 of this chapter (*see* §1.9047 of this chapter); and

(3) Grant of a valid SCS earth station equipment certification under part 2 of this chapter.

(e) *SCS earth station equipment certification requirements.* Applicants for certification for SCS earth stations for use with a satellite system must meet all requirements for equipment certification and equipment test data necessary to demonstrate compliance with pertinent standards under part 22, 24, or 27 of this chapter as applicable.

[89 FR 34166, Apr. 30, 2024]

EFFECTIVE DATE NOTE: At 89 FR 34167, Apr. 30, 2024, § 25.125 was amended by adding paragraphs (b)(1) and (2) and (c), and the date of effectiveness is delayed indefinitely. For the convenience of the user, the added text is set forth as follows:

§ 25.125 Applications for supplemental coverage from space (SCS).

* * * * *

(b) * * *

(1) The application must include a certification that:

(i) A lease notification(s) or application(s), pursuant to §1.9047 of this chapter, where a single terrestrial wireless licensee holds or multiple co-channel licensees collectively hold all co-channel licenses within the relevant GIA in the bands identified in § 2.106(d)(33)(i) of this chapter, or as it pertains to FirstNet, an agreement, is on file with the Commission;

(ii) The current space station licensee under this part or grantee of market access for NGSO or GSO satellite operation under this part seeks modification of authority to provide SCS in the same geographic areas covered in the relevant GIA, or the applicant for a space station license under this part or grant of market access for NGSO or GSO satellite operation under this part seeks to provide SCS in the same geographic areas covered in the relevant GIA; and

(iii) SCS earth stations will qualify as ''licensed by rule'' earth stations under § 25.115(q).

(2) The application must include a comprehensive proposal for the prospective SCS system on FCC Form 312, Main Form and Schedule S, as described in § 25.114, together with the certification described in paragraph (b)(1) of this section and include a list of the file and identification numbers associated

with the relevant leasing notification(s) under part 1 of this chapter, application(s), and FCC Form 601(s), with a brief description of the coverage areas that will be served, domestically and internationally.

* * * * *

(c) *Equipment authorization for SCS earth stations.* Each SCS earth station used to provide SCS under this section must meet the equipment authorization requirements under paragraph (e) of this section and all equipment authorization requirements for all intended uses of the device pursuant to the procedures specified in part 2 of this chapter and the requirements of at least one of part 22, 24, or 27 of this chapter.

* * * * *

§ 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 § 2.1033(c) of this chapter, applicants for certification required by this section shall submit any additional equipment test data necessary to demonstrate compliance with pertinent standards for transmitter performance prescribed in §§ 25.138, 25.202(f), 25.204, 25.209, and 25.216, must demonstrate compliance with the labeling requirement in § 25.285(b), and shall ensure compliance with the Commission's radio frequency exposure requirements in §§ 1.1307(b), 2.1091, and 2.1093 of this chapter, as appropriate. An Environmental Assessment may be required if RF radiation from the proposed facilities would, in combination with radiation from other sources, cause RF power density or field strength in an accessible area to exceed the applicable limits specified in § 1.1310 of this chapter. Applications for equipment authorization of mobile or portable devices operating under this section must contain a statement confirming compliance with these requirements. Technical information showing the basis for this statement must be submitted to the Commission upon request.

(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; 81 FR 55330, Aug. 18, 2016; 84 FR 53654, Oct. 8, 2019; 85 FR 18150, Apr. 1, 2020]

EARTH STATIONS

§§ 25.130–25.131 [Reserved]

§ 25.132 Verification of earth station antenna performance.

(a)(1) Except as provided in paragraph (a)(2) of this section, applications for transmitting earth stations in the FSS, including feeder-link stations, must include a 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 relevant off-axis gain standards in § 25.209, measured in accordance with paragraph (b)(1) of this section. Applicants and licensees must be prepared to submit the radiation pattern measurements to the Commission on request.

(2) Applicants that specify off-axis EIRP density pursuant to § 25.115(g)(1) are exempt from the certification requirement in paragraph (a)(1) of this section.

(b)(1) For purposes of paragraph (a)(1) of this section and § 25.115(g)(1), the following measurements on a production

antenna performed on calibrated antenna range must be made at the top and bottom of each frequency band assigned for uplink transmission:

(i)(A) Co-polarized gain in the azimuth plane must be measured across a range extending to 180° on each side of the main-lobe axis, and the measurements must be represented in two plots: one across the entire angular range of ±180° from the main-lobe axis and the other across ±10° from the main-lobe axis.

(B) Co-polarized gain must be measured from 0° to 30° from beam peak in the elevation plane.

(ii) Cross-polarization gain must be measured across a range of plus and minus 7° from beam peak in the azimuth and elevation planes.

(iii) Main beam gain.

(iv) For antennas with asymmetric apertures or beams, where the minor axis of the antenna beam (major axis of the antenna aperture) will not always be aligned parallel to the plane tangent to the GSO arc, the measurements in paragraphs (b)(1)(i) through (iii) of this section must be made over the angular ranges specified in paragraphs (b)(1)(i)(A) and (B) of this section in two orthogonal planes, with the antenna oriented at the maximum skew angle at which it will operate.

(2) The relevant envelope specified in §25.209 must be superimposed on each measured pattern.

(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, 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 cooperating 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; 81 FR 55330, Aug. 18, 2016; 84 FR 53654, Oct. 8, 2019]

§25.133 Period of construction; certification of commencement of operation.

(a) An earth station, or network of blanket-licensed earth stations, must be brought into operation within the longest of the time periods below, unless the Commission determines otherwise:

(1) For an earth station authorized to communicate with a GSO FSS space station in the 3600–4200 MHz band (space-to-Earth) operating outside of

CONUS, or in the 5850–6725 MHz band (Earth-to-space), within one year from the date of the license grant;

(2) For any other earth station or network of earth stations, within one year from the date of the license grant or six months after the bringing into operation of a GSO space station, or NGSO system under §25.164(b)(1), with which the earth station or earth station network was authorized to communicate when it was licensed, as notified under §25.173(b).

(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 authorized gain patterns or off-axis EIRP density levels; and

(vi) The date when the earth station became operational.

(vii) A statement that the station will remain operational during the license period unless the license is submitted for cancellation.

(2) For FSS earth stations authorized under a blanket license, the licensee must notify the Commission when the earth station network commences operation. The notification should include the information described in paragraphs (b)(1)(i) through (iv) of this section and a certification that each hub antenna, and a type of antenna used in remote stations in the network, has been tested and found to perform within authorized gain patterns or off-axis EIRP density levels. For any type of antenna whose performance was not certified when the network commenced operation, the licensee must submit the information and certification stated above for the antenna type when it is first deployed.

(c) [Reserved]

(d) Each receiving earth station licensed or registered pursuant to §25.115(b) 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; 81 FR 55330, Aug. 18, 2016; 84 FR 53654, Oct. 8, 2019; 86 FR 11887, Mar. 1, 2021]

§25.134 [Reserved]

§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 Earth Stations in the 24.75–25.25 GHz, 27.5–28.35 GHz, 37.5–40 GHz, 47.2–48.2, GHz and 50.4–51.4 GHz bands.

(a) FSS is secondary to the Upper Microwave Flexible Use Service in the 27.5–28.35 GHz band. Notwithstanding that secondary status, an applicant for

a license for a transmitting earth station in the 27.5–28.35 GHz band that meets one of the following criteria may be authorized to operate without providing interference protection to stations in the Upper Microwave Flexible Use Service:

(1) The FSS licensee also holds the relevant Upper Microwave Flexible Use Service license(s) for the area in which the earth station generates a power flux density (PFD), at 10 meters above ground level, of greater than or equal to −77.6 dBm/m^2/MHz;

(2) The FSS earth station was authorized prior to July 14, 2016; or

(3) The application for the FSS earth station was filed prior to July 14, 2016 and has been subsequently granted; or

(4) The applicant demonstrates compliance with all of the following criteria in its application:

(i) There are no more than two other authorized earth stations operating in the 27.5–28.35 GHz band within the county where the proposed earth station is located that meet the criteria contained in either paragraph (a)(1), (2), (3), or (4) of this section. For purposes of this requirement, multiple earth stations that are collocated with or at a location contiguous to each other shall be considered as one earth station;

(ii) The area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to −77.6 dBm/m2/MHz, together with the similar area of any other earth station authorized pursuant to paragraph (a) of this section, does not cover, in the aggregate, more than the amount of population of the UMFUS license area within which the earth station is located as noted in table 1 to this paragraph (a)(4)(ii):

TABLE 1 TO PARAGRAPH (a)(4)(ii)

Population within UMFUS license area	Maximum permitted aggregate population within −77.6 dBm/m^2/MHz PFD contour of earth stations
Greater than 450,000	0.1 percent of population in UMFUS license area.
Between 6,000 and 450,000	450 people.
Fewer than 6,000	7.5 percent of population in UMFUS license area.

(iii) The area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to −77.6 dBm/m^2/MHz does not contain any major event venue, urban mass transit route, passenger railroad, or cruise ship port. In addition, the area mentioned in paragraph (a)(4)(ii) of this section shall not cross any of the following types of roads, as defined in functional classification guidelines issued by the Federal Highway Administration pursuant to 23 CFR 470.105(b): Interstate, Other Freeways and Expressways, or Other Principal Arterial. The Federal Highway Administration Office of Planning, Environment, and Realty Executive Geographic Information System (HEPGIS) map contains information on the classification of roads. For purposes of this rule, an urban area shall be an Adjusted Urban Area as defined in section 101(a)(37) of Title 21 of the United States Code.

(iv) The applicant has successfully completed frequency coordination with the UMFUS licensees within the area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to −77.6 dBm/m^2/MHz with respect to existing facilities constructed and in operation by the UMFUS licensee. In coordinating with UMFUS licensees, the applicant shall use the applicable processes contained in § 101.103(d) of this chapter.

(b) Applications for earth stations in the 37.5–40 GHz band shall provide an exhibit describing the zone within which the earth station will require protection from transmissions of Upper Microwave Flexible Use Service licensees. For purposes of this rule, the protection zone shall consist of the area where UMFUS licensees may not locate facilities without the consent of the earth station licensee. The earth station applicant shall demonstrate in its application, using reasonable engineering methods, that the requested protection zone is necessary in order to protect its proposed earth station.

(c) The protection zone (as defined in paragraph (b) of this section) shall comply with the following criteria. The applicant must demonstrate compliance with all of the following criteria in its application:

(1) There are no more than two other authorized earth stations operating in the 37.5–40 GHz band within the county

within which the proposed earth station is located that meet the criteria contained in paragraph (c) of this section, and there are no more than 14 other authorized earth stations operating in the 37.5–40 GHz band within the PEA within which the proposed earth station is located that meet the criteria contained in paragraph (c) of this section. For purposes of this requirement, multiple earth stations that are collocated with or at a location contiguous to each other shall be considered as one earth station;

(2) The protection zone, together with the protection zone of other earth stations in the same PEA authorized pursuant to this, does not cover, in the aggregate, more than the amount of population of the PEA within which the earth station is located as noted in table 2 to this paragraph (c)(2):

TABLE 2 TO PARAGRAPH (c)(2)

Population within Partial Economic Area (PEA) where earth station is located	Maximum permitted aggregate population within protection zone of earth stations
Greater than 2,250,000	0.1 percent of population in PEA.
Between 60,000 and 2,250,000.	2,250 people.
Fewer than 60,000	3.75 percent of population in PEA.

(3) The protection zone does not contain any major event venue, urban mass transit route, passenger railroad, or cruise ship port. In addition, the area mentioned in the preceding sentence shall not cross any of the following types of roads, as defined in functional classification guidelines issued by the Federal Highway Administration pursuant to 23 CFR 470.105(b): Interstate, Other Freeways and Expressways, or Other Principal Arterial. The Federal Highway Administration Office of Planning, Environment, and Realty Executive Geographic Information System (HEPGIS) map contains information on the classification of roads. For purposes of this rule, an urban area shall be an Adjusted Urban Area as defined in section 101(a)(37) of Title 21 of the United States Code.

(4) The applicant has successfully completed frequency coordination with the UMFUS licensees within the protection zone with respect to existing facilities constructed and in operation by the UMFUS licensee. In coordinating with UMFUS licensees, the applicant shall use the applicable processes contained in §101.103(d) of this chapter.

(d) Notwithstanding that FSS is coprimary with the Upper Microwave Flexible Use Service in the 47.2–48.2 GHz band, earth stations in the 47.2–48.2 GHz band shall be limited to individually licensed earth stations. An applicant for a license for a transmitting earth station in the 47.2–48.2 GHz band must meet one of the following criteria to be authorized to operate without providing any additional interference protection to stations in the Upper Microwave Flexible Use Service:

(1) The FSS licensee also holds the relevant Upper Microwave Flexible Use Service license(s) for the area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to -77.6 dBm/m^2/MHz; or

(2) The earth station in the 47.2–48.2 GHz band was authorized prior to February 1, 2018; or

(3) The application for the earth station in the 47.2–48.2 GHz band was filed prior to February 1, 2018; or

(4) The applicant demonstrates compliance with all of the following criteria in its application:

(i) There are no more than two other authorized earth stations operating in the 47.2–48.2 GHz band within the county where the proposed earth station is located that meet the criteria contained in paragraph (d)(1), (2), (3), or (4) of this section, and there are no more than 14 other authorized earth stations operating in the 47.2–48.2 GHz band within the PEA where the proposed earth station is located that meet the criteria contained in paragraph (d)(1), (2), (3), or (4) of this section. For purposes of this requirement, multiple earth stations that are collocated with or at a location contiguous to each other shall be considered as one earth station;

(ii) The area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to -77.6 dBm/m^2/MHz, together with the similar area of any other earth station authorized pursuant to paragraph (d) of this section, does not

cover, in the aggregate, more than the amount of population of the PEA within which the earth station is located as noted in table 3 to this paragraph (d)(4)(ii):

TABLE 3 TO PARAGRAPH (d)(4)(ii)

Population within Partial Economic Area (PEA) where earth station is located	Maximum permitted aggregate population within −77.6 dBm/m²/MHz PFD contour of earth stations
Greater than 2,250,000	0.1 percent of population in PEA.
Between 60,000 and 2,250,000.	2,250 people.
Fewer than 60,000	3.75 percent of population in PEA.

(iii) The area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to −77.6 dBm/m²/MHz does not contain any major event venue, any highway classified by the U.S. Department of Transportation under the categories Interstate, Other Freeways and Expressways, or Other Principal Arterial, or an urban mass transit route, passenger railroad, or cruise ship port; and

(iv) The applicant has successfully completed frequency coordination with the UMFUS licensees within the area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to −77.6 dBm/m²/MHz with respect to existing facilities constructed and in operation by the UMFUS licensee. In coordinating with UMFUS licensees, the applicant shall use the applicable processes contained in § 101.103(d) of this chapter.

(e) Notwithstanding that FSS is co-primary with the Upper Microwave Flexible Use Service in the 24.75–25.25 GHz and 50.4–51.4 GHz bands, earth stations in these bands shall be limited to individually licensed earth stations. An applicant for a license for a transmitting earth station in the 24.75–25.25 GHz or 50.4–51.4 GHz band must meet one of the following criteria to be authorized to operate without providing any additional interference protection to stations in the Upper Microwave Flexible Use Service:

(1) The FSS licensee also holds the relevant Upper Microwave Flexible Use Service license(s) for the area in which the earth station generates a power flux density (PFD), at 10 meters above ground level, of greater than or equal to −77.6dBm/m²/MHz;

(2) The earth station in the 24.75–25.25 GHz band was authorized prior to August 20, 2018; or the earth station in the 50.4–51.4 GHz band was authorized prior to June 12, 2019; or

(3) The application for the earth station in the 24.75–25.25 GHz band was filed prior to August 20, 2018; or the application for the earth station in the 50.4–51.4 GHz band was filed prior to June 12, 2019; or

(4) The applicant demonstrates compliance with all of the following criteria in its application:

(i) There are no more than two other authorized earth stations operating in the same frequency band within the county where the proposed earth station is located that meet the criteria contained in either paragraph (e)(1), (2), (3), or (4) of this section, and there are no more than 14 other authorized earth stations operating in the same frequency band within the Partial Economic Area where the proposed earth station is located that meet the criteria contained in paragraph (e)(1), (2), (3), or (4) of this section. For purposes of the requirement in this paragraph (e)(4), multiple earth stations that are collocated with or at a location contiguous to each other shall be considered as one earth station;

(ii) The area in which the earth station generates a power flux density (PFD), at 10 meters above ground level, of greater than or equal to −77.6 dBm/m²/MHz, together with the similar area of any other earth station operating in the same frequency band authorized pursuant to paragraph (e) of this section, does not cover, in the aggregate, more than the amount of population of the county within which the earth station is located as noted in table 4 to this paragraph (e)(4)(ii):

TABLE 4 TO PARAGRAPH (e)(4)(ii)

Population within the County where earth station is located	Maximum permitted aggregate population within −77.6 dBm/m²/MHz PFD contour of earth stations
Greater than 450,000	0.1 percent of population in county.
Between 6,000 and 450,000	450 people.
Fewer than 6,000	7.5 percent of population in county.

(iii) The area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to −77.6 dBm/m2/MHz does not contain any major event venue, urban mass transit route, passenger railroad, or cruise ship port. In addition, the area mentioned in paragraph (e)(4)(ii) of this section shall not cross any of the following types of roads, as defined in functional classification guidelines issued by the Federal Highway Administration pursuant to 23 CFR 470.105(b): Interstate, Other Freeways and Expressways, or Other Principal Arterial. The Federal Highway Administration Office of Planning, Environment, and Realty Executive Geographic Information System (HEPGIS) map contains information on the classification of roads. For purposes of this paragraph (e)(4), an urban area shall be an Adjusted Urban Area as defined in section 101(a)(37) of Title 21 of the United States Code; and

(iv) The applicant has successfully completed frequency coordination with the UMFUS licensees within the area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to −77.6 dBm/m2/MHz with respect to existing facilities constructed and in operation by the UMFUS licensee. In coordinating with UMFUS licensees, the applicant shall use the applicable processes contained in §101.103(d) of this chapter.

(f) If an earth station applicant or licensee in the 24.75–25.25 GHz, 27.5–28.35 GHz, 37.5–40 GHz, 47.2–48.2 GHz and/or 50.4–51.4 GHz bands enters into an agreement with an UMFUS licensee, their operations shall be governed by that agreement, except to the extent that the agreement is inconsistent with the Commission's rules or the Communications Act.

(g) Any earth station authorizations issued pursuant to paragraph (a)(4), (c), (d)(4), or (e)(4) of this section shall be conditioned upon operation being in compliance with the criteria contained in the applicable paragraph.

(h) *Re-coordination.* An earth station licensed under this section that is brought into operation later than one year after the date of the license grant must be re-coordinated with UMFUS stations using the applicable processes in §101.103(d) of this chapter. The earth station licensee must complete re-coordination within one year before its commencement of operation. The re-coordination should account for any demographic or geographic changes as well as changes to the earth station equipment or configuration. A re-coordination notice must be filed in ICFS before commencement of earth station operations.

[81 FR 79937, Nov. 14, 2016, as amended at 83 FR 63, Jan. 2, 2018; 83 FR 34489, July 20, 2018; 84 FR 20819, May 13, 2019; 84 FR 47147, Sept. 9, 2019; 86 FR 11887, Mar. 1, 2021; 88 FR 21440, Apr. 10, 2023]

§ 25.137 Requests for U.S. market access through non-U.S.-licensed space stations.

(a) Earth station applicants requesting authority to communicate with a non-U.S.-licensed space station and entities filing a petition for declaratory ruling to access the United States market using a non-U.S.-licensed space station must attach an exhibit with their FCC Form 312 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 Communications 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, § 25.122, § 25.123, or § 25.125 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 the requirement in this paragraph (b) 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 communicate with a non-U.S.-licensed space station and entities filing a petition for declaratory ruling to access the United States 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) The surety bond requirement in § 25.165, for non-U.S.-licensed space stations that are not in orbit and operating.

(5) Entities that have one market access request on file with the Commission for NGSO-like satellite operations in a particular frequency band will not be permitted to request access to the U.S. market for another NGSO-like satellite system in that frequency band in the same processing round subject to the procedures of §§ 25.157 and 25.261.

(e) An entity requesting access to the United States market through a non-U.S.-licensed space station pursuant to a petition for declaratory ruling may amend its request by submitting an additional petition for declaratory ruling. Such additional petitions 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 petitions will be considered relative to pending applications and petitions.

(f) A non-U.S.-licensed space station operator that has been granted access to the United States market pursuant to a declaratory ruling may modify its U.S. operations under the procedures set forth in §§ 25.117(d), (h), and (j) and 25.118(e).

(g) A non-U.S.-licensed satellite operator that acquires control of a non-U.S.-licensed space station that has been permitted to serve the United States must notify the Commission within 30 days after consummation of the transaction so that the Commission can afford interested parties an opportunity to comment on whether the transaction affected any of the considerations we made when we allowed the satellite operator to enter the U.S. market. A non-U.S.-licensed satellite that has been transferred to new owners may continue to provide service in the United States unless and until the Commission determines otherwise. 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; 81 FR 55331, Aug. 18, 2016; 81 FR 75344, Oct. 31, 2016; 85 FR 43735, July 20, 2020; 88 FR 21440, Apr. 10, 2023; 88 FR 84754, Dec. 6, 2023; 89 FR 34167, Apr. 30, 2024]

§ 25.138 Earth Stations in the 3.7–4.2 GHz band.

(a) Applications for new, modified, or renewed earth station licenses and registrations in the 3.7–4.0 GHz portion of the band in CONUS are no longer accepted.

(b) Applications for new earth station licenses or registrations within CONUS in the 4.0–4.2 GHz portion of the band will not be accepted until the transition is completed and upon announcement by the Space Bureau via Public Notice that applications may be filed.

(c) Fixed and temporary fixed earth stations operating in the 3.7–4.0 GHz portion of the band within CONUS will be protected from interference by licensees in the 3.7 GHz Service subject to the deadlines set forth in § 27.1412 of this chapter and are eligible for transition into the 4.0–4.2 GHz band so long as they:

(1) Were operational as of April 19, 2018 and continue to be operational;

(2) Were licensed or registered (or had a pending application for license or registration) in the ICFS database on November 7, 2018; and

(3) Timely certified the accuracy of the information on file with the Commission by May 28, 2019.

(d) Fixed and temporary earth station licenses and registrations that meet the criteria in paragraph (c) of this section may be renewed or modified to maintain operations in the 4.0–4.2 GHz band.

(e) Applications for new, modified, or renewed licenses and registrations for earth stations outside CONUS operating in the 3.7–4.2 GHz band will continue to be accepted.

[85 FR 22864, Apr. 23, 2020, as amended at 88 FR 21440, Apr. 10, 2023]

§ 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 GSO space station operation in the FSS and the 17/24 GHz BSS.

(a)(1) In addition to the information required by § 25.114, an applicant for GSO FSS space station operation involving transmission of analog video signals must certify that the proposed analog video operation has been coordinated with operators of authorized co-frequency space stations within six degrees of the requested orbital location.

(2) In addition to the information required by § 25.114, an applicant for GSO FSS space station operation, including applicants proposing feeder links for space stations operating in the 17/24 GHz BSS, that will be located at an orbital location less than two degrees

from the assigned location of an authorized co-frequency GSO space station, must either certify that the proposed operation has been coordinated with the operator of the co-frequency space station or submit an interference analysis demonstrating the compatibility of the proposed system with the co-frequency space station. Such an analysis 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, available at *https://www.fcc.gov/edocs:* DA 03–3863 and DA 04–1708.) The provisions in this paragraph (a)(2) do not apply to proposed analog video operation, which is subject to the requirement in paragraph (a)(1) of this section. Proposed GSO FSS space-to-Earth transmissions in the 17.3–17.8 GHz band are subject to the requirements of paragraphs (b)(4) through (6) of this section with respect to possible interference into 17/24 GHz BSS networks. Proposed GSO FSS space-to-Earth transmissions in the 17.3–17.8 GHz band are subject to the requirements of §25.264 with respect to possible interference to the reception of DBS feeder link transmissions (Earth-to-space) in this band.

(3) In addition to the information required by §25.114, an applicant for a GSO FSS space station, including applicants proposing feeder links for space stations operating in the 17/24 GHz BSS, must provide the following for operation other than analog video operation:

(i) With respect to proposed operation in the conventional or extended C-bands, a certification that downlink EIRP density will not exceed 3 dBW/4kHz for digital transmissions or 8 dBW/4kHz for analog transmissions and that associated uplink operation will not exceed applicable EIRP density envelopes in §25.218 unless the non-routine uplink and/or downlink operation is coordinated with operators of authorized co-frequency space stations at assigned locations within six degrees of the orbital location of the proposed space station and except as provided in paragraph (d) of this section.

(ii) With respect to proposed operation in the conventional or extended Ku-bands, a certification that downlink EIRP density will not exceed 14 dBW/4kHz for digital transmissions or 17 dBW/4kHz for analog transmissions and that associated uplink operation will not exceed applicable EIRP density envelopes in §25.218 unless the non-routine uplink and/or downlink operation is coordinated with operators of authorized co-frequency space stations at assigned locations within six degrees of the orbital location of the proposed space station and except as provided in paragraph (d) of this section.

(iii) With respect to proposed FSS operation in the conventional or extended Ka-bands, a certification that the proposed space station will not generate power flux density at the Earth's surface in excess of the limits in paragraphs (a)(3)(iii)(A) and (B) of this section, and that associated uplink operation will not exceed applicable EIRP density envelopes in §25.218(i) unless the non-routine uplink and/or downlink operation is coordinated with operators of authorized co-frequency space stations at assigned locations within six degrees of the orbital location and except as provided in paragraph (d) of this section.

(A) -118 dBW/m^2/MHz, except as provided in paragraph (a)(3)(iii)(B) of this section.

(B) For space-to-Earth FSS transmissions in the 17.3–17.8 GHz band in the region of the contiguous United States, located west of 100 West Longitude: -121 dBW/m^2/MHz.

(iv) With respect to proposed operation in the 24.75–25.25 GHz band (Earth-to-space), a certification that the proposed uplink operation will not exceed the applicable EIRP density envelopes in §25.138(a) and that the associated space station will not generate a power flux density at the Earth's surface in excess of the applicable limits in this part, unless the non-routine uplink and/or downlink FSS operation is coordinated with operators of authorized co-frequency space stations at assigned locations within six degrees of

the orbital location and except as provided in paragraph (d) of this section.

(v) With respect to proposed operation in the 4500–4800 MHz (space-to-Earth), 6725–7025 MHz (Earth-to-space), 10.70–10.95 GHz (space-to-Earth), 11.20–11.45 GHz (space-to-Earth), and/or 12.75–13.25 GHz (Earth-to-space) bands, a statement that the proposed operation will take into account the applicable requirements of Appendix 30B of the ITU Radio Regulations (incorporated by reference, *see* §25.108) and a demonstration that it is compatible with other U.S. ITU filings under Appendix 30B.

(vi) With respect to proposed operation in other FSS bands, an interference analysis demonstrating compatibility with any previously authorized co-frequency space station at a location two degrees away or a certification that the proposed operation has been coordinated with the operator(s) of the previously authorized space station(s). If there is no previously authorized space station at a location two degrees away, the applicant must submit an interference analysis demonstrating compatibility with a hypothetical co-frequency space station two degrees away with the same receiving and transmitting characteristics as the proposed space station.

(b) Each applicant for a license to operate a space station transmitting in the 17.3–17.8 GHz band must provide the following information, in addition to that required by §25.114:

(1)–(2) [Reserved]

(3) An applicant for a license to operate a 17/24 GHz BSS space station transmitting in the 17.3–17.8 GHz band must certify that the downlink power flux density on the Earth's surface will not exceed the regional power flux density limits given in paragraphs (b)(3)(i) through (iv) of this section, or must provide the certification specified in §25.114(d)(15)(ii):

(i) In the region of the contiguous United States, located south of 38° North Latitude and east of 100° West Longitude: −115 dBW/m^2/MHz.

(ii) In the region of the contiguous United States, located north of 38° North Latitude and east of 100° West Longitude: −118 dBW/m^2/MHz.

(iii) In the region of the contiguous United States, located west of 100° West Longitude: −121 dBW/m^2/MHz.

(iv) For all regions outside of the contiguous United States including Alaska and Hawaii: −115 dBW/m^2/MHz.

(4) Except as described in paragraph (b)(5) of this section, the following applicants must either certify that their proposed operations have been coordinated with the adjacent operator of a previously authorized or proposed co-frequency space station, or 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 space station transmitting in the 17.3–17.8 GHz band operating in compliance with the technical requirements of this part, than if the applicant were located at an orbital separation of four degrees from the previously licensed or proposed space station.

(i) Applicants for a 17/24 GHz BSS space station transmitting in the 17.3–17.8 GHz band to be located less than four degrees from a previously authorized or proposed co-frequency 17/24 GHz BSS space station;

(ii) Applicants for a FSS space station transmitting in the 17.3–17.8 GHz band to be located less than four degrees from a previously authorized or proposed co-frequency 17/24 GHz BSS space station; and

(iii) Applicants for a 17/24 GHz BSS space station transmitting in the 17.3–17.8 GHz band to be located less than four degrees from a previously authorized or proposed co-frequency FSS space station transmitting in the 17.3–17.8 GHz band.

(5) Where an authorized or proposed 17/24 GHz BSS or FSS space station is located within four degrees of a previously authorized or proposed 17/24 GHz BSS space station, no new third proposed 17/24 GHz BSS or FSS space station may be located within eight degrees of the first authorized or proposed space station in the same direction as the second authorized or proposed space station, unless the applicant for the third space station certifies that its proposed operation has been coordinated with the operator of

the first previously authorized or proposed 17/24 GHz BSS space station, or the applicant for the third proposed space station provides an interference analysis of the kind described in paragraph (a) of this section, or the applicant for the third proposed space station demonstrates that its proposed network will not cause more interference to the first previously authorized or proposed space station than if the applicant for the third proposed space station were located at an orbital separation of eight degrees from the first previously authorized or proposed 17/24 GHz BSS space station.

(6) In addition to the requirements of paragraphs (b)(3), (4), and (5) of this section, the link budget for any satellite transmitting in the 17.3–17.8 GHz band (space-to-Earth) must take into account longitudinal station-keeping tolerances. Any applicant for a space station transmitting in the 17.3–17.8 GHz band that has reached a coordination agreement with an operator of another space station to allow that operator to exceed the pfd levels specified in paragraph (a)(3)(iii) or (b)(3) of this section, must use those higher pfd levels for the purpose of this showing.

(c) [Reserved]

(d) An operator of a GSO FSS space station in the conventional or extended C-bands, conventional or extended Ku-bands, 24.75–25.25 GHz band (Earth-to-space), or conventional or extended Ka-bands may notify the Commission of its non-routine transmission levels and be relieved of the obligation to coordinate such levels with later applicants and petitioners.

(1) The letter notification must include the downlink off-axis EIRP density levels or power flux density levels and/or uplink off-axis EIRP density levels, specified per frequency range and space station antenna beam, that exceed the relevant routine limits set forth in paragraphs (a)(3)(i) through (iii) of this section and § 25.218.

(2) The notification will be placed on public notice pursuant to § 25.151(a)(11).

(3) Non-routine transmissions notified pursuant to this paragraph (d) need not be coordinated with operators of authorized co-frequency space stations that filed their complete applications or petitions after the date of filing of the notification with the Commission. Such later applicants and petitioners must accept any additional interference caused by the notified non-routine transmissions.

(4) An operator of a replacement space station, as defined in § 25.165(e), may operate with non-routine transmission levels to the extent permitted under paragraph (d)(3) of this section for the replaced space station.

(e)–(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; 81 FR 55332, Aug. 18, 2016; 83 FR 34490, July 20, 2018; 84 FR 53654, Oct. 8, 2019; 86 FR 49489, Sept. 3, 2021; 87 FR 72404, Nov. 25, 2022; 89 FR 58072, 58074, July 17, 2024; 89 FR 66615, Aug. 16, 2024]

§ 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]

(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 re-engineer 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]

[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; 81 FR 55333, Aug. 18, 2016; 82 FR 59985, Dec. 18, 2017]

§ 25.143 Licensing provisions for the 1.6/2.4 GHz Mobile-Satellite Service and 2 GHz Mobile-Satellite Service.

(a) Authority to launch and operate a constellation of NGSO satellites will be granted in a single blanket license for operation of a specified number of space stations in specified orbital planes. An individual license will be issued for each GSO satellite, whether it is to be operated in a GSO-only system or in a GSO/NGSO hybrid system.

(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 petitioner must 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.

(c) *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.

[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; 81 FR 55333, Aug. 18, 2016; 82 FR 59985, Dec. 18, 2017]

§ 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]

§ 25.146 Licensing and operating provisions for NGSO FSS space stations.

(a) An NGSO FSS applicant proposing to operate in the 10.7–30 GHz frequency range must certify that it will comply with:

(1) Any applicable power flux-density levels in Article 21, Section V, Table 21–4 of the ITU Radio Regulations (incorporated by reference, § 25.108), except that in the 19.3–19.4 GHz and 19.6–19.7 GHz bands applicants must certify

that they will comply with the ITU PFD limits governing NGSO FSS systems in the 17.7–19.3 GHz band; and

(2) Any applicable equivalent power flux-density levels in Article 22, Section II, and Resolution 76 of the ITU Radio Regulations (both incorporated by reference, § 25.108).

(b) [Reserved]

(c) Prior to the initiation of service, an NGSO FSS operator licensed or holding a market access authorization to operate in the 10.7–30 GHz frequency range must receive a ''favorable'' or ''qualified favorable'' finding by the ITU Radiocommunication Bureau, in accordance with Resolution 85 of the ITU Radio Regulations (incorporated by reference, § 25.108), regarding its compliance with applicable ITU EPFD limits. In addition, a market access holder in these bands must:

(1) Communicate the ITU finding to the Commission; and

(2) Submit the input data files used for the ITU validation software.

(d) Coordination will be required between NGSO FSS systems and GSO FSS earth stations in the 10.7–12.75 GHz band when:

(1) The GSO satellite network has receive earth stations with 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

(2)The $EPFD_{down}$ radiated by the NGSO satellite system 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 exceeds—174.5 dB(W/(m^2/40kHz)) for any percentage of time for NGSO systems with all satellites only operating at or below 2500 km altitude, or—202 dB(W/(m^2/40kHz)) for any percentage of time for NGSO systems with any satellites operating above 2500 km altitude.

(e) An NGSO FSS licensee or market access recipient must ensure that ephemeris data for its constellation is available to all operators of authorized, in-orbit, co-frequency satellite systems in a manner that is mutually acceptable.

[82 FR 59985, Dec. 18, 2017, as amended at 86 FR 11644, Feb. 26, 2021]

§ 25.147 Space Stations in the 3.7–4.2 GHz band.

The 3.7–4.0 GHz portion of the band is being transitioned in CONUS from FSS GSO (space-to-Earth) to the 3.7 GHz Service.

(a) New applications for space station licenses and petitions for market access concerning space-to-Earth operations in the 3.7–4.0 GHz portion of the band within CONUS will no longer be accepted.

(b) Applications for new or modified space station licenses or petitions for market access in the 4.0–4.2 GHz portion of the band within CONUS will not be accepted during the transition except by existing operators in the band to implement an efficient transition.

(c) Applications for new or modified space station licenses or petitions for market access for space-to-Earth operations in the 3.7–4.2 GHz band outside CONUS will continue to be accepted.

[85 FR 22864, Apr. 23, 2020]

§ 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) [Reserved]

(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)–(e) [Reserved]

(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, as amended at 86 FR 49489, Sept. 3, 2021]

§ 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. A 1.6/2.4 GHz band licensee is permitted to apply for ATC authorization on a non-forward-band mode of operation where the equipment deployed will meet the requirements of paragraph (c)(4) of this section.

(2) ATC operations shall be limited to certain frequencies:

(i) [Reserved]

(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 shall ensure compliance with the Commission's radio frequency exposure requirements in §§ 1.1307(b), 2.1091, and 2.1093 of this chapter, as appropriate. An Environmental Assessment may be required if RF radiation from the proposed facilities would, in combination with radiation from other sources, cause RF power density or field strength in an accessible area to exceed the applicable limits specified in § 1.1310 of this chapter. Applications for equipment authorization of mobile or portable devices operating under this section must contain a statement confirming compliance with these requirements. Technical information showing the basis for this statement must be submitted to the Commission upon request.

(4) Applications for equipment authorization of terrestrial low-power system equipment that will operate in the 2483.5–2495 MHz band shall demonstrate the following:

(i) The transmitted signal is digitally modulated;

(ii) The 6 dB bandwidth is at least 500 kHz;

(iii) The maximum transmit power is no more than 1 W with a peak EIRP of no more than 6 dBW;

(iv) The maximum power spectral density conducted to the antenna is not greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission;

(v) Emissions below 2483.5 MHz are attenuated below the transmitter power (P) measured in watts by a factor of at least 40 + 10 log (P) dB at the channel edge at 2483.5 MHz, 43 + 10 log (P) dB at 5 MHz from the channel edge, and 55 + 10 log (P) dB at X MHz from the channel edge where X is the greater of 6 MHz or the actual emission bandwidth.

(vi) Emissions above 2495 MHz are attenuated below the transmitter power (P) measured in watts by a factor of at least 43 + 10 log (P) dB on all frequencies between the channel edge at 2495 MHz and X MHz from this channel edge and 55 + 10 log (P) dB on all frequencies more than X MHz from this channel edge, where X is the greater of 6 MHz or the actual emission bandwidth;

(vii) 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 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. If 1 percent of the emission bandwidth of the fundamental emission is less than 1 MHz, the power measured must be integrated over the required measurement bandwidth of 1 MHz. A resolution bandwidth narrower than 1 MHz is permitted to improve measurement accuracy, provided the measured power is integrated over the full required measurement bandwidth (*i.e.*, 1 MHz). The emission bandwidth of the fundamental emission of a transmitter 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; and

NOTE TO PARAGRAPH (c)(4): Systems meeting the requirements set forth in this section are deemed to have also met the requirements of §25.254(a) through (d). No further demonstration is needed for these systems with respect to §25.254(a)–(d).

(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 paragraphs (f) and (g) 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 shall 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) *Special provisions for terrestrial low-power systems in the 2483.5–2495 MHz band.* (1) An operational MSS system that applies for authority to deploy

ATC in the 2483.5–2495 MHz band for terrestrial low-power operations satisfying the equipment certification requirements of paragraph (c)(4) of this section is not required to demonstrate compliance with paragraph (b) of this section, except to demonstrate the commercial availability of MSS, without regard to coverage requirements.

(2) An ATC licensee seeking to modify its license to add authority to operate a terrestrial low-power network shall certify in its modification application that its operations will utilize a Network Operating System (NOS), consisting of a network management system located at an operations center or centers. The NOS shall have the technical capability to address and resolve interference issues related to the licensee's network operations by reducing operational power; adjusting operational frequencies; shutting off operations; or any other appropriate means. The NOS shall also have the ability to resolve interference from the terrestrial low-power network to the licensee's MSS operations and to authorize access points to the network, which in turn may authorize access to the network by end-user devices. The NOS operations center shall have a point of contact in the United States available 24 hours a day, seven days a week, with a phone number and address made publicly-available by the licensee.

(3) All access points operating in the 2483.5–2495 MHz band shall only operate when authorized by the ATC licensee's NOS, and all client devices operating in the 2483.5–2495 MHz band shall only operate when under the control of such access points.

(h) *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; 82 FR 8818, Jan. 31, 2017; 85 FR 18150, Apr. 1, 2020]

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.

(a) At regular intervals, the Commission will issue public notices listing:

(1) The receipt of applications for new station authorizations, except applications for space station licenses filed pursuant to §25.110(b)(3)(i) or (ii) of this part;

(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 that the Commission in its discretion believes to be of public significance;

(8) Special environmental considerations as required by part 1 of this chapter;

(9) Submission of Coordination Requests and Appendix 30B filings to the

ITU in response to requests filed pursuant to § 25.110(b)(3)(i) and (b)(3)(ii);

(10) The receipt of space station application information filed pursuant to § 25.110(b)(3)(iii);

(11) The receipt of notifications of non-routine transmission filed pursuant to § 25.140(d);

(12) The receipt of EPFD input data files from an NGSO FSS licensee or market access recipient, submitted pursuant to § 25.111(b) or § 25.146(c)(2); and

(13) The receipt of NGSO FSS compatibility showings filed pursuant to § 25.261(d).

(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; 81 FR 55333, Aug. 18, 2016; 82 FR 59985, Dec. 18, 2017; 88 FR 39792, June 20, 2023]

EDITORIAL NOTE: At 82 FR 59985, Dec. 18, 2017, § 25.151 was amended by removing ''and'' from the end of paragraph (b)(10) and by removing the period at the end of paragraph (b)(11) and adding ''; and'' in its place; however, these amendments could not be incorporated because paragraphs (b)(10) and (b)(11) did not exist.

§ 25.152 [Reserved]

§ 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 Communications Filing System (ICFS) 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 Communications Filing System (ICFS) 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 Communications Filing System (ICFS) 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 Communications Filing System (ICFS) 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; 88 FR 21440, Apr. 10, 2023]

§ 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 interference, or other practical reason, the grant of one or more other applications.

(b) A license application for NGSO-like satellite operation, as defined in §25.157(a), will be entitled to comparative consideration with one or more mutually exclusive applications only if the application is received by the Commission in a condition acceptable for filing by the ''cut-off'' date specified in a public notice.

(c) A license application for GSO-like satellite operation, as defined in §25.158(a)(1), will be entitled to comparative consideration with another application only if:

(1) The application is mutually exclusive with another application for GSO-like operation; and

(2) The application is received by the Commission in a condition acceptable for filing at the same millisecond as the other application.

[68 FR 51505, Aug. 27, 2003, as amended at 81 FR 55333, Aug. 18, 2016]

§ 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) [Reserved]

(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 operation will be considered pursuant to the procedures set forth in §25.157, except as provided in §25.157(b) or (i), as appropriate.

(2) Applications for GSO-like satellite operation will be considered pursuant to the procedures set forth in §25.158, except as provided in §25.158(a)(2).

(3) Applications for both NGSO-like satellite operation and GSO-like satellite operation in two or more service bands will be treated as 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 inter-satellite link authority will be treated like an application separate from its associated service band. Each feeder-link request or inter-satellite link request will be considered pursuant to the procedure for applications for GSO-like operation or NGSO-like operation, as applicable.

(5) [Reserved]

(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; 81 FR 55333, Aug. 18, 2016; 82 FR 59985, Dec. 18, 2017; 85 FR 43735, July 20, 2020]

§ 25.157 Consideration of applications for NGSO-like satellite operation.

(a) This section specifies the procedures for considering license applications for ''NGSO-like'' satellite operation, except as provided in paragraphs (b) and (i) of this section. For purposes of this section, the term ''NGSO-like satellite operation'' means:

(1) Operation of any NGSO satellite system; and

(2) Operation of a GSO MSS satellite to communicate with earth stations with non-directional antennas.

(b)(1) The procedures in this section do not apply to an application for authority to operate a replacement space station(s) that meets the relevant criteria in §25.165(e)(1) and (2) and that will be launched before the space station(s) to be replaced is retired from service or within a reasonable time after loss of a space station during launch or due to premature failure in orbit.

(2) Paragraphs (e), (f), and (g) of this section do not apply to an NGSO FSS application granted with a condition to share spectrum pursuant to §25.261.

(c) Each application for NGSO-like satellite operation that is acceptable for filing under §25.112, except replacement applications described in paragraph (b) of this section, 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 applications for NGSO-like satellite operation.

(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) of this section.

(2) In cases where 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, or the amount of 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 a license granted in a processing round pursuant to this section 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 for NGSO-like satellite operation in that frequency band will not be permitted to participate in that processing round.

(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.

(i) For consideration of license applications filed pursuant to the procedures described in § 25.122 or § 25.123, the application will be processed and granted in accordance with §§ 25.150 through 25.156, taking into consideration the information provided by the applicant under § 25.122(d) or § 25.123(c), but without a processing round as described in this section and without a queue as described in § 25.158.

[68 FR 51505, Aug. 27, 2003, as amended at 81 FR 55334, Aug. 18, 2016; 81 FR 75344, Oct. 31, 2016; 82 FR 59985, Dec. 18, 2017; 85 FR 43735, July 20, 2020]

§ 25.158 Consideration of applications for GSO-like satellite operation.

(a)(1) This section specifies the procedures for considering license applications for ''GSO-like'' satellite operation, except as provided in paragraph (a)(2) of this section. For purposes of this section, the term ''GSO-like satellite operation'' means operation of a GSO satellite to communicate with earth stations with directional antennas, including operation of GSO satellites to provide MSS feeder links.

(2) The procedures prescribed in this section do not apply to an application for authority to launch and operate a replacement space station that meets the relevant criteria in § 25.165(e)(1) and (e)(2) and that will be launched before the space station to be replaced is retired from service or within a reasonable time after loss of a space station during launch or due to premature failure in orbit.

(b) Except as provided in paragraph (a)(2) of this section, license applications for GSO-like satellite operation, including first-step filings pursuant to § 25.110(b)(3)(i) or (ii), 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 under § 25.112, the application will be placed on public notice pursuant to § 25.151.

(i) For applications filed pursuant to § 25.110(b)(3)(i) or (b)(3)(ii), the public notice will announce that the Coordination Request or Appendix 30B filing has been submitted to the ITU. When further information is filed pursuant to § 25.110(b)(3)(iii), it will be reviewed to determine whether it is substantially complete within the meaning of § 25.112. If so, a second public notice will be issued pursuant to § 25.151 to give interested parties an opportunity to file pleadings pursuant to § 25.154.

(ii) For any other license application for GSO-like satellite operation, the public notice will announce that the application has been found acceptable for filing and will give interested parties 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) A license applicant for GSO-like satellite operation must not transfer, assign, or otherwise permit any other entity to assume its place in any queue.

(d) In the event that two or more applications for GSO-like satellite operation 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, as amended at 81 FR 55334, Aug. 18, 2016]

§25.159 Limits on pending applications and unbuilt satellite systems.

(a) [Reserved]

(b) Applicants with an application for one NGSO-like satellite system license on file with the Commission in a particular frequency band will not be permitted to apply for another NGSO-like satellite system license in that frequency band in the same processing round subject to the procedures of §§25.157 and 25.261.

(c) If an applicant has an attributable interest in one or more other entities seeking one or more space station licenses or grants of U.S. market access, 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 or requests for U.S. market access and licensed-but-unbuilt satellite systems in this section and in §25.137(d)(5). For purposes of this section, 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, as amended at 81 FR 55334, Aug. 18, 2016; 85 FR 43735, July 20, 2020; 88 FR 84754, Dec. 6, 2023]

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) The failure to meet an applicable milestone specified in § 25.164(a) or (b), if no authorized space station is functional in orbit;

(2) The failure to meet an applicable milestone specified in § 25.164(b)(1) or (2), if at least one authorized space station is functional in an authorized orbit, which failure will result in the termination of authority for the space stations not in orbit as of the milestone date, but allow for technically identical replacements; or

(3) The failure to meet any other milestone or construction requirement imposed as a condition of authorization. In the case of a space station authorization when at least one authorized space station is functional in orbit, however, such termination will be with respect to only the authorization for any space stations not in orbit as of the milestone date.

(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.

(d) The failure to maintain 50 percent of the maximum number of NGSO space stations authorized for service following the 9-year milestone period as functional space stations in authorized orbits, which failure will result in the termination of authority for the

space stations not in orbit as of the date of noncompliance, but allow for technically identical replacements.

(e) The failure to provide any SCS on all or some of the SCS authorized frequencies for more than 90 days. In this instance, the authorization will be terminated in whole or in part with respect to the relevant frequencies on which SCS has not been operational for more than 90 days in the United States, 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; 82 FR 59985, Dec. 18, 2017; 89 FR 34167, Apr. 30, 2024]

§ 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 that have been established to ensure 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.

[56 FR 24016, May 28, 1991, as amended at 81 FR 55334, Aug. 18, 2016]

§ 25.164 Milestones.

(a) The recipient of an initial license for a GSO space station, other than a SDARS space station, granted on or after August 27, 2003, must launch the space station, position it in its assigned orbital location, and operate it in accordance with the station authorization no later than five years after the grant of the license, unless a different schedule is established by this chapter or the Commission.

(b)(1) The recipient of an initial authorization for an NGSO satellite system, other than an SDARS system, must launch 50 percent of the maximum number of space stations authorized for service, place them in their assigned orbits, and operate them in accordance with the station authorization no later than 6 years after the grant of the authorization, unless a different schedule is established by Title 47, Chapter I. This paragraph does not apply to replacement NGSO space stations as defined in § 25.165(e).

(2) A licensee that satisfies the requirement in paragraph (b)(1) of this section must launch the remaining space stations necessary to complete its authorized service constellation, place them in their assigned orbits, and operate each of them in accordance

with the authorization no later than nine years after the grant of the authorization.

(c)–(e) [Reserved]

(f) A licensee subject to the requirements in paragraph (a) or (b) of this section must either demonstrate compliance with the applicable requirement or notify the Commission in writing that the requirement was not met, within 15 days after the specified deadline. Compliance with a milestone requirement in paragraph (a) or (b) of this section may be demonstrated by certifying pursuant to §25.121(d) that the space station(s) in question, 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 NGSO satellites and GSO satellites must meet the requirement in paragraph (a) of this section with respect to the GSO satellite(s) and the applicable requirements in paragraph (b) of this section with respect to the NGSO 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; 81 FR 55334, Aug. 18, 2016; 82 FR 59985, Dec. 18, 2017; 86 FR 49489, Sept. 3, 2021]

§25.165 Surety bonds.

(a) For all space station licenses issued after September 20, 2004, other than licenses for SDARS space stations, space stations licensed in accordance with §25.122 or §25.123, and replacement space stations as defined in paragraph (e) of this section, the licensee must post a bond within 30 days of the grant of its license. Space station licensed in accordance with §25.122 or §25.123 must post a bond within one year plus 30 days of the grant of the license. Failure to post a bond will render the license null and void automatically.

(1) An NGSO licensee must have on file a surety bond requiring payment in the event of default as defined in paragraph (c) of this section, in an amount, at a minimum, determined according to the following formula, with the resulting dollar amount rounded to the nearest $10,000: A = $1,000,000 + $4,000,000 * D/2192, where A is the amount to be paid and D is the lesser of 2192 or the number of days that elapsed from the date of license grant until the date when the license was surrendered.

(2) A GSO licensee must have on file a surety bond requiring payment in the event of default as defined in paragraph (c) of this section, in an amount, at a minimum, determined according to the following formula, with the resulting dollar amount rounded to the nearest $10,000: A = $1,000,000 + $2,000,000 * D/1827, where A is the amount to be paid and D is the lesser of 1827 or the number of days that elapsed from the date of license grant until the date when the license was surrendered.

(3) Licensees of satellite systems including both NGSO space stations and GSO space stations that will operate in the same frequency bands must file a surety bond requiring payment in the event of default as defined in paragraph (c) of this section, in an amount, at a minimum, to be determined according to the formula in paragraph (a)(1) of this section.

(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 with respect to a bond filed pursuant to paragraph (a) of this section if it surrenders the license before meeting an applicable milestone requirement in §25.164(a) or (b)(1) or if it fails to satisfy any such milestone.

(d) A licensee will be relieved of its bond obligation under paragraph (a) of this section upon a Commission finding that the licensee has satisfied the applicable milestone requirement(s) in §25.164(a) and (b)(1) for the authorization.

(e) A replacement space station is one that:

(1) Is authorized to operate at an orbital location within ±0.15° of the assigned location of a GSO space station to be replaced or is authorized for NGSO operation and will replace an existing NGSO space station in its authorized orbit, except for space stations authorized under §25.122 or §25.123;

(2) Is authorized to operate in the same frequency bands, and with the same coverage area as the space station to be replaced; and

(3) Is scheduled to be launched so that it will be brought into use at approximately the same time as, but no later than, the existing space station is retired.

(f) An applicant that has submitted a Coordination Request pursuant to §25.110(b)(3)(i) or an Appendix 30B filing pursuant to §25.110(b)(3)(ii) must obtain a surety bond in the amount of $500,000 in accordance with the requirements in paragraph (b) of this section for licensees. The application will be returned as defective pursuant to §25.112 if a copy of the required bond is not filed with the Commission within 30 days after release of a public notice announcing that the Commission has submitted the Coordination Request or Appendix 30B filing to the ITU.

(g) An applicant will be considered to be in default with respect to a bond filed pursuant to paragraph (f) of this section if the applicant fails to submit a complete, acceptable license application pursuant to §25.110(b)(3)(iii) for the operation proposed in the initial application materials filed pursuant to §25.110(b)(3)(i) or (b)(3)(ii) within two years of the date of submission of the initial application materials.

[68 FR 51507, Aug. 27, 2003, as amended at 69 FR 51587, Aug. 20, 2004; 81 FR 55335, Aug. 18, 2016; 82 FR 59986, Dec. 18, 2017; 85 FR 43735, July 20, 2020; 86 FR 49489, Sept. 3, 2021]

REPORTING REQUIREMENTS FOR SPACE STATION OPERATORS

§ 25.171 Space station point of contact reporting requirements.

(a) *Annual report.* On June 30 of each year, a space station licensee or market access recipient must provide 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.

(b) *Updated information.* If a space station licensee or market access recipient point of contact information changes, the space station licensee or market access recipient must file the updated information within 10 days of the change.

(c) *Electronic filing.* Filings under paragraph (a) or (b) of this section must be made electronically in the Commission's International Communications Filing System (ICFS) in the ''Other Filings'' tab of the station's current authorization file.

[86 FR 11888, Mar. 1, 2021, as amended at 88 FR 21441, Apr. 10, 2023]

§ 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 §25.171(a).

(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 Communications Filing System (ICFS), 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, as amended at 86 FR 11888, Mar. 1, 2021; 88 FR 21441, Apr. 10, 2023]

§ 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) In addition to the frequency-use restrictions set forth in § 2.106 of this chapter, the following restrictions apply:

(i) In the 27.5–28.35 GHz band, the FSS (Earth-to-space) is secondary to the Upper Microwave Flexible Use Service authorized pursuant to part 30 of this chapter, except for FSS operations associated with earth stations authorized pursuant to § 25.136.

(ii) Use of the 37.5–40 GHz band by the FSS (space-to-Earth) is limited to individually licensed earth stations. Earth stations in this band must not be ubiquitously deployed and must not be used to serve individual consumers.

(iii) The U.S. non-Federal Table of Frequency Allocations, in § 2.106 of this chapter, is applicable between Commission space station licensees relying on a U.S. ITU filing and transmitting to or receiving from anywhere on Earth, including airborne earth stations, in the 17.7–20.2 GHz or 27.5–30 GHz bands.

(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 Earth Stations on Vessels (ESVs) communicating with GSO FSS space stations, subject to the provisions in § 2.106 of this chapter:

3700–4200 MHz (space-to-Earth)
5925–6425 MHz (Earth-to-space)

(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):

10.95–11.2 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)
18.3–18.8 GHz (space-to-Earth)
19.7–20.2 GHz (space-to-Earth)
28.35–28.6 GHz (Earth-to-space)
29.25–30.0 GHz (Earth-to-space)

(ii) The following frequencies are available for use by Earth Stations in Motion (ESIMs) communicating with GSO FSS space stations, subject to the provisions in § 2.106 of this chapter:

(A) 10.7–11.7 GHz (space-to-Earth).
(B) 11.7–12.2 GHz (space-to-Earth).
(C) 14.0–14.5 GHz (Earth-to-space).
(D) 17.3–17.7 GHz (space-to-Earth).
(E) 17.7–17.8 GHz (space-to-Earth).
(F) 17.8–18.3 GHz (space-to-Earth).
(G) 18.3–18.8 GHz (space-to-Earth).
(H) 18.8–19.3 GHz (space-to-Earth)
(I) 19.3–19.4 GHz (space-to-Earth).
(J) 19.6–19.7 GHz (space-to-Earth).
(K) 19.7–20.2 GHz (space-to-Earth).
(L) 28.35–28.6 GHz (Earth-to-space).
(M) 28.6–29.1 GHz (Earth-to-space).
(N) 29.25–30.0 GHz (Earth-to-space).

(iii) The following frequencies are available for use by Earth Stations in Motion (ESIMs) communicating with NGSO FSS space stations, subject to the provisions in § 2.106 of this chapter:

10.7–11.7 GHz (space-to-Earth)
11.7–12.2 GHz (space-to-Earth)
14.0–14.5 GHz (Earth-to-space)
17.8–18.3 GHz (space-to-Earth)
18.3–18.6 GHz (space-to-Earth)
18.8–19.3 GHz (space-to-Earth)
19.3–19.4 GHz (space-to-Earth)
19.6–19.7 GHz (space-to-Earth)
19.7–20.2 GHz (space-to-Earth)
28.4–28.6 GHz (Earth-to-space)
28.6–29.1 GHz (Earth-to-space)
29.5–30.0 GHz (Earth-to-space)

(11) [Reserved]

(12) The following frequencies are available for use by the mobile-satellite service (Earth-to-space) for the reception of Automatic Identification Systems (AIS) broadcast messages from ships:

156.7625–156.7875 MHz
156.8125–156.8375 MHz
161.9625–161.9875 MHz
162.0125–162.0375 MHz

(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)(1) Telemetry, tracking, and command signals may be transmitted in frequencies within the assigned bands that are not at a band edge only if the transmissions cause no greater interference and require no greater protection from harmful interference than the communications traffic on the satellite network or have been coordinated with operators of authorized co-frequency space stations at orbital locations within six degrees of the assigned orbital location.

(2) Frequencies, polarization, and coding of telemetry, tracking, and command transmissions must be selected to minimize interference into other satellite networks.

(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.

(k) Space station downlinks operating as SCS under the provisions of §25.125 and §2.106(d)(33)(i) of this chapter are subject to the following rules.

(1) *Out of band emission limits.* Notwithstanding the emission limitations of paragraph (f) of this section, the aggregation of all space station downlink emissions outside a licensee's SCS frequency band(s) of operation shall not exceed a power flux density of −120 dBW/m^2/MHz at 1.5 meters above ground level.

(2) *Interference caused by out of band emissions.* If any emission from a transmitter operating in the SCS service results in harmful interference to users of another radio service, the FCC may require a greater attenuation of the emission than specified in this section.

[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.govinfo.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.

(6) Multiple antennas in an NGSO FSS gateway earth station complex located within an area bounded by one second of latitude and one second of longitude may be regarded as a single earth station for purposes of coordination with terrestrial services.

(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/m²)
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 transmit or transmit-receive earth 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 for authority to operate a new transmitting earth station in the vicinity of an FCC monitoring station or to modify the operation of a transmitting earth station in a way that would increase the field strength produced at such a monitoring station above that previously authorized should consider the possible need to protect the FCC stations from harmful interference. Geographic coordinates of the facilities that require protection are listed in §0.121(c) of this chapter. Applications for fixed stations that will produce field strength greater than 10 mV/m or power flux density greater than -65.8 dBW/m^2 in the authorized emission bandwidth at any of the referenced coordinates may be examined to determine the 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 referenced coordinates, a condition to protect the monitoring station may be included in 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 coprimary 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 NGSO 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 must coordinate with licensees of FSS and terrestrial-service systems sharing the band to determine geographic protection areas around each NGSO MSS/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) [Reserved]

(m) Feeder links to DBS space stations:

(1) Each applicant for a license to construct a new FSS earth station to provide feeder-link service to DBS space stations in the frequency band 17.3–17.8 GHz, or to modify any such station currently authorized except where the modification is for a new station within one kilometer of a currently-licensed earth station and modification will not increase the aggregate pfd, measured at any point 3–10 meters above the ground, above that generated by the current earth station, shall identify a coordination zone around its proposed new or modified earth station by the methodology outlined in Annex 3 of Appendix 7 of the ITU Radio Regulations, using the following values for the parameters in Table 9b of Annex 7 of Appendix 7:

TABLE 2 TO PARAGRAPH (m)(1)

Space service designation in which the transmitting earth station operates	Fixed-Satellite				
Frequency bands (GHz)	17.3–17.7			17.3–17.8	
Space service designation in which the receiving earth station operates	Broadcasting-Satellite			Fixed-Satellite	
Orbit	GSO			GSO	
Modulation at receiving earth station	N (digital)			N (digital)	
Receiving earth station interference parameters and criteria:	17/24 GHZ BSS			FSS	
p_o (%)	0.015			0.003	
n	2			2	
p (%)	0.015			0.0015	
N_L(dB)	1			1	
M_s (dB)	In the area specified in § 25.140(b)(3)			In the area specified in § 25.140(a)(3)(iii)	
	(i) and (iv)	(ii)	(iii)	(A)	(B)
	4.8	3.0	1.8	2.5	0.8
W(dB)	4			0	
Receiving earth station parameters:	17/24 GHz BSS			FSS	
G_m (dBi)	36			N/A	
G_r	0			0	
ε_{min}	20°			5°	
T_e (K)	150			300	

TABLE 2 TO PARAGRAPH (m)(1)—Continued

Reference bandwidth: *B* (Hz)	10^6				
Permissible interference power: P_r(p) (dBW) in B	In the area specified in § 25.140(b)(3)			In the area specified in § 25.140(a)(3)(iii)	
	(i) and (iv)	(ii)	(iii)	(A)	(B)
	−146.8	−149.8	−152.8	−144	−150.1

(2) Each applicant for such new or modified feeder-link earth station shall provide the following information to a third-party coordinator of its choice for use in coordination required by this paragraph:

(i) The geographical coordinates of the proposed earth station antenna(s);

(ii) Proposed operating frequency band(s) and emission(s);

(iii) Antenna diameter (meters);

(iv) Antenna center height above ground and ground elevation above mean sea level;

(v) Antenna gain pattern(s) in the plane of the main beam;

(vi) Longitude range of geostationary satellite orbit (GSO) satellites at which an antenna may be pointed;

(vii) Horizon elevation plot;

(viii) Antenna horizon gain plot(s) determined in accordance with the procedure in Section 2.1 of Annex 5 to Appendix 7 of the ITU Radio Regulations;

(ix) Minimum elevation angle;

(x) Maximum equivalent isotropically radiated power (e.i.r.p.) density in the main beam in any 1 MHz band;

(xi) Maximum available RF transmit power density in any 1 MHz band at the input terminals of the antenna(s);

(xii) A plot of the coordination distance contour(s) and rain scatter coordination distance contour(s) as determined by Table 2 of Section 3 to Appendix 7 of the ITU Radio Regulations.

(3) Each applicant for such new or modified feeder-link earth stations shall file with its application memoranda of coordination with each co-frequency licensee authorized to construct BSS receive earth stations or an individually licensed FSS receive earth station within the coordination zone. Feeder link earth station applicants are not required to complete coordination with blanket-licensed receiving FSS earth stations in the 17.3–17.8 GHz band.

(n) From December 5, 2021 until December 5, 2030, consolidated telemetry, tracking, and control (TT&C) operations at no more than four locations may be authorized on a primary basis to support space station operations, and no other TT&C operations shall be entitled to interference protection in the 3.7–4.0 GHz band.

[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.govinfo.gov*.

§ 25.204 Power and out-of-band emission 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 $\theta \leq 0°$

$+ 40 + 3\theta$ dBW in any 4 kHz band for $0° < \theta \leq 5°$

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 $\theta \leq 0°$
+ 64 + 3 θ dBW in any 1 MHz band for $0° < \theta \leq 5°$

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)(3) 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)(3) 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.

(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 §25.218(i)(1), (2), and (4) 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.

(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) SCS earth stations providing SCS pursuant to §§25.125 and 25.115 shall comply with the power requirements and out-of-band emission limits corresponding to devices operating in part 22, 24, or 27 of this chapter (*e.g.*, §22.913, §24.232, or §27.50), as required for their operating frequencies.

[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; 81 FR 55336, Aug. 18, 2016; 83 FR 34491, July 20, 2018; 84 FR 53655, Oct. 8, 2019; 89 FR 34167, Apr. 30, 2024]

§25.205 Minimum antenna elevation angle.

(a) Earth station antennas must not transmit at elevation angles less than

five degrees, measured from the horizontal plane to the direction of maximum radiation, in a frequency band shared with terrestrial radio services or in a frequency band with an allocation to space services operating in both the Earth-to-space and space-to-Earth directions. In other bands, earth station antennas must not transmit at elevation angles less than three degrees. In some instances, it may be necessary to specify greater minimum elevation angles because of interference considerations.

(b) ESAAs in aircraft on the ground must not transmit at elevation angles less than three degrees. There is no minimum angle of antenna elevation for ESAAs while airborne.

[81 FR 55336, Aug. 18, 2016]

§ 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 and in-band field strength 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/m^2) in any 4 kHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

$-152 + (\delta - 5)/2$ dB(W/m^2) 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/m^2) 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/m^2) in any 4 kHz band for angles of arrival between 0 and 5 degrees above the horizontal plane; $-150 + (\delta - 5)/2$ dB(W/m^2) 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/m^2) in any 4 kHz band for angles of arrival between 25 and 90 degrees above the horizontal plane; or

(2) -126 dB(W/m^2) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane; $-126 + (\delta - 5)/2$ 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 -116 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 (b): These limits relate to the power flux density, which would be obtained under assumed free-space propagation conditions.

(c) For a GSO space station in the 17.7–19.7 GHz, 22.55–23.55 GHz, or 24.45–24.75 GHz bands, or for an NGSO space station in the 22.55–23.55 GHz or 24.45–24.75 GHz bands, the PFD at the Earth's surface produced by emissions for all conditions and for all methods of modulation must not exceed the following values:

(1) -115 dB (W/m^2) 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/m^2) 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/m^2) 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)–(m) [Reserved]

(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/m²) 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/m²) 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/m²) 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/m²) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

−115 + 0.5(−5) dB(W/m²) in any 1 MHz band for angles of arrival between 5 and 25 degrees above the horizontal plane;

−105 dB(W/m²) 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 rainfade):

−139 dB(W/m²) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

−139 + 4/3 (δ−5) dB(W/m²) 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 (δ−20) dB(W/m²) in any 1 MHz band for angles of arrival δ (in degrees) between 20 and 25 degrees above the horizontal plane;

−117 dB(W/m²) 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/m²) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

−127 + 4/3 (δ−5) dB(W/m²) 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 (δ−20) dB(W/m²) in any 1 MHz band for angles of arrival δ (in degrees) between 20 and 25 degrees above the horizontal plane;

−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 (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 rainfade):

−132 dB(W/m²) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

−132 + 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

−117 dB(W/m²) 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/m²) 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/m^2) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

−120 + (δ−5) dB(W/m^2) 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/m^2) 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/m^2) 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 aggregate field strength at the earth's surface produced by all visible beams and satellites within each satellite constellation providing SCS service as they move over any given point or area in bands authorized by NG33A in the United States Table of Frequency Allocations and §25.125 must meet:

(1) 40 dBμV/m for the 600 MHz, 700 MHz, and 800 MHz bands; and

(2) 47 dμV/m for the AWS and PCS bands; and

(3) Licensees must comply with all applicable provisions and requirements of treaties and other international agreements between the United States Government and the governments of other countries, including Canada and Mexico. Absent specific international agreements regarding SCS, licensees must comply with the limited provided in paragraphs (w)(1) and (2) of this section.

[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.govinfo.gov*.

§25.209 Earth station antenna performance standards.

(a) Except as provided in paragraph (f) of this section, the co-polarization gain of any earth station antenna operating in the FSS and transmitting to a GSO satellite, including earth stations providing feeder links for satellite services other than FSS, may not exceed the following limits:

(1) In the plane tangent to the GSO arc, as defined in §25.103, for earth stations not operating in the conventional Ku-band, the 24.75–25.25 GHz band, or the 27.5–30 GHz band:

$29–25\log_{10}\theta$	dBi	for $1.5° \le \theta \le 7°$.
8	dBi	for $7° < \theta \le 9.2°$.
$32–25\log_{10}\theta$	dBi	for $9.2° < \theta \le 48°$.
−10	dBi	for $48° < \theta \le 180°$.

Where θ is the angle in degrees from a line from the earth station antenna to the assigned orbital location of the target satellite, and dBi refers to dB relative to an isotropic radiator. This envelope may be exceeded by up to 3 dB in 10% of the range of θ angles from ±7–180°, and by up to 6 dB in the region of main reflector spillover energy.

(2) In the plane tangent to the GSO arc, for earth stations operating in the conventional Ku-band:

$29–25\log_{10}\theta$	dBi	for $1.5° \le \theta \le 7°$.
8	dBi	for $7° < \theta \le 9.2°$.
$32–25\log_{10}\theta$	dBi	for $9.2° < \theta \le 19.1°$.
0	dBi	for $19.1° < \theta \le 180°$.

Where θ and dBi are as defined in paragraph (a)(1) of this section. This envelope may be exceeded by up to 3 dB in 10% of the range of θ angles from ±7–180°, and by up to 6 dB in the region of main reflector spillover energy.

(3) In the plane tangent to the GSO arc, for earth stations operating in the 24.75–25.25 GHz or 27.5–30 GHz bands:

$29–25\log_{10}\theta$	dBi	for $2° \le \theta \le 7°$.
8	dBi	for $7° < \theta \le 9.2°$.
$32–25\log_{10}\theta$	dBi	for $9.2° < \theta \le 19.1°$.
0	dBi	for $19.1° < \theta \le 180°$.

Where θ and dBi are as defined in paragraph (a)(1) of this section. This envelope may be exceeded by up to 3 dB in 10% of the range of θ angles from ±7–180°, and by up to 6 dB in the region of main reflector spillover energy.

(4) In the plane perpendicular to the GSO arc, as defined in § 25.103, for earth stations not operating in the conventional Ku-band, the 24.75–25.25 GHz band, or the 27.5–30 GHz band:

$32–25\log_{10}\theta$	dBi	for $3° < \theta \le 48°$.
−10	dBi	for $48° < \theta \le 180°$.

Where θ and dBi are as defined in paragraph (a)(1) of this section. This envelope may be exceeded by up to 6 dB in 10% of the range of θ angles from ±3–180°, and by up to 6 dB in the region of main reflector spillover energy.

(5) In the plane perpendicular to the GSO arc, for earth stations operating in the 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 $3° < \theta \le 19.1°$.
0	dBi	for $19.1° < \theta \le 180°$.

Where θ and dBi are as defined in paragraph (a)(1) of this section. This envelope may be exceeded by up to 6 dB in 10% of the range of θ angles from ±3–180°, and by up to 6 dB in the region of main reflector spillover energy.

(6) In the plane perpendicular to the GSO arc, for earth stations operating in the 24.75–25.25 GHz or 27.5–30 GHz bands:

$32–25\log_{10}\theta$	dBi	for $3.5° < \theta \leq 7°$.
10.9	dBi	for $7° < \theta \leq 9.2°$.
$35–25\log_{10}\theta$	dBi	for $9.2° < \theta \leq 19.1°$.
3	dBi	for $19.1° < \theta \leq 180°$.

Where θ and dBi are as defined in paragraph (a)(1) of this section. This envelope may be exceeded by up to 6 dB in 10% of the range of θ angles from ±3–180°, and by up to 6 dB in the region of main reflector spillover energy.

(b) Except as provided in paragraph (f) of this section, the off-axis cross-polarization gain of any antenna used for transmission from an FSS earth station to a GSO satellite, including earth stations providing feeder links for satellite services other than FSS, may not exceed the following limits:

(1) In the plane tangent to the GSO arc, for earth stations not operating in the 24.75–25.25 GHz or 27.5–30 GHz bands:

$19–25\log_{10}\theta$	dBi	for $1.8° < \theta \leq 7°$.

Where θ and dBi are as defined in paragraph (a)(1) of this section.

(2) In the plane perpendicular to the GSO arc, for earth stations not operating in the 24.75–25.25 GHz or 27.5–30 GHz bands:

$19–25\log_{10}\theta$	dBi	for $3° < \theta \leq 7°$.

Where θ and dBi are as defined in paragraph (a)(1) of this section.

(3) In the plane tangent to the GSO arc or in the plane perpendicular to the GSO arc, for earth stations operating in the 24.75–25.25 GHz or 27.5–30 GHz bands:

$19–25\log_{10}\theta$	dBi	for $2° < \theta \leq 7°$.

Where θ and dBi are as defined in paragraph (a)(1) of this section.

(c)(1) An earth station licensed for operation with a GSO FSS space station or registered for reception of transmissions from such a space station pursuant to § 25.115(b)(1) and (b)(3) is not entitled to protection from interference from authorized operation of other stations that would not cause harmful interference to that earth station if it were using an antenna with receive-band gain patterns conforming to the levels specified in paragraphs (a) and (b) of this section.

(2) A 17/24 GHz BSS telemetry earth station is not entitled to protection from harmful interference from authorized space station operation that would not cause harmful interference to that earth station if it were using an antenna with receive-band gain patterns conforming to the levels specified in paragraphs (a) and (b) of this section. Receive-only earth stations in the 17/24 GHz BSS are entitled to protection from harmful interference caused by other space stations to the extent indicated in § 25.224.

(d) [Reserved]

(e) An earth station using asymmetrical antennas without skew angle adjustment capability must comply with the gain values specified in paragraph (a)(1) of this section, in the plane orthogonal to the to the main plane of the antenna, or, alternatively, in the plane corresponding to the maximum skew angle experienced at any location

at which the earth station may be located.

(f) A GSO FSS earth station with an antenna that does not conform to the applicable 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. This demonstration must show that the transmissions of the earth station comport with the requirements in §25.218 or the applicant must demonstrate that the operations of the earth station have been coordinated under §25.220.

(g) [Reserved]

(h) The gain of any transmitting antenna in a gateway earth station communicating with NGSO FSS satellites in the 10.7–11.7 GHz, 12.75–13.15 GHz, 13.2125–13.25 GHz, 13.8–14.0 GHz, and/or 14.4–14.5 GHz bands must lie below the envelope defined as follows:

$29–25\log_{10}(\theta)$	dBi	for $1° \leq \theta \leq 36°$.
−10	dBi	for $36° \leq \theta \leq 180°$.

Where θ and dBi are as defined in paragraph (a)(1) of this section. This envelope may be exceeded by up to 3 dB in 10% of the range of θ angles from ±7–180°.

[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; 81 FR 55336, Aug. 18, 2016; 83 FR 34491, July 20, 2018; 84 FR 53655, Oct. 8, 2019; 85 FR 44787, July 24, 2020; 87 FR 72406, Nov. 25, 2022]

§25.210 Technical requirements for space stations.

(a)–(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, 17.3–17.8 GHz (space-to-Earth), 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)–(i) [Reserved]

(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; 81 FR 55338, Aug. 18, 2016; 83 FR 34491, July 20, 2018; 87 FR 72406, Nov. 25, 2022]

§25.211 Analog video transmissions in the FSS.

(a) [Reserved]

(b) All conventional C-band analog video transmissions must 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. All transmissions in frequency bands described in §25.208(b) and (c)

must 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.

(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) For transmission in the 5925–6425 MHz band, the input power into the antenna will not exceed 26.5 dBW; or

(3) For transmission in the 14.0–14.5 GHz band, the input power into the antenna will not exceed 27 dBW.

(e) Applications for authority for analog video uplink transmission in the 5925–6425 MHz or 14.0–14.5 GHz bands that are not eligible for routine processing under paragraph (d) of this section are subject to the requirements 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; 81 FR 55338, Aug. 18, 2016]

§ 25.212 Narrowband analog transmissions and digital transmissions in the GSO FSS.

(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, other than an ESIM, may be routinely licensed for analog transmissions in the conventional Ku-band or the extended Ku-band with bandwidths up to 200 kHz (or up to 1 MHz for command carriers at the band edge) if the input power spectral density into the antenna will not exceed −8 dBW/4 kHz, and the application includes certification pursuant to § 25.132(a)(1) of conformance with the antenna gain performance requirements in § 25.209(a) and (b).

(2) An earth station may be routinely licensed for digital transmission, including digital video transmission, in the conventional Ku-band, or, except for an ESIM, in the extended Ku-band, if input power spectral density into the antenna will not exceed −14 dBW/4 kHz and the application includes certification pursuant to § 25.132(a)(1) of conformance with the antenna gain performance requirements in § 25.209(a) and (b).

(d) An individual earth station may be routinely licensed for digital transmission in the conventional C-band or, except for an ESIM, in the extended C-band, if the applicant certifies conformance with relevant antenna performance standards in § 25.209(a) and (b), and power density into the antenna will not exceed −2.7 dBW/4 kHz. An individual earth station, other than an ESIM, may be routinely licensed for analog transmission with carrier bandwidths up to 200 kHz (or up to 1 MHz for command carriers at the band edge) in the conventional C-band or the

extended C-band, if the applicant certifies conformance with relevant antenna performance standards in §25.209(a) and (b), and power density into the antenna will not exceed +0.5 dBW/4 kHz.

(e) An earth station may be routinely licensed for digital transmission in the conventional or extended Ka-bands if the input power spectral density into the antenna will not exceed 3.5 dBW/MHz and the application includes certification pursuant to §25.132(a)(1) of conformance with the antenna gain performance requirements in §25.209(a) and (b).

(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.

(g) A license application for earth station operation in a network using variable power density control of earth stations transmitting simultaneously in shared frequencies to the same target satellite receiving beam may be routinely processed if the applicant certifies that the aggregate off-axis EIRP density from all co-frequency earth stations transmitting simultaneously to the same target satellite receiving beam, not resulting from colliding data bursts transmitted pursuant to a contention protocol, will not exceed the applicable off-axis EIRP density limits permissible for a single earth station, as specified in §25.218.

(h) Applications for authority for fixed earth station operation in the conventional C-band, the extended C-band, the conventional Ku-band, the extended Ku-band, the conventional Ka-band, or the extended Ka-band that do not qualify for routine processing under relevant criteria in this section, §25.211, or §25.218 are subject to the requirements in §25.220.

[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; 81 FR 55338, Aug. 18, 2016; 84 FR 53655, Oct. 8, 2019; 87 FR 72406, Nov. 25, 2022]

§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
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, except as specified in paragraph (b)(4) of this section, 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 technical requirements in paragraphs (b)(2) through (4) of this section, notwithstanding the frequency bands specified in these sections: §§ 25.143(b)(2)(ii) (except NGSO FSS systems) and (iii) (except NGSO FSS systems), 25.204(e), and 25.210(f) and (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).

(4) For all small satellite licensees, for which the application was filed pursuant to § 25.122 or § 25.123, 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 not be required to comply with the technical requirements specified in this section.

(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: §§ 25.143(b)(2)(iv), 25.204(e), and 25.210(f), (i), and (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; 82 FR 59986, Dec. 18, 2017; 85 FR 43735, July 20, 2020; 86 FR 11644, Feb. 26, 2021]

§ 25.218 Off-axis EIRP density envelopes for FSS earth stations transmitting in certain frequency bands.

(a) *Applicability*. This section applies to applications for fixed and temporary-fixed FSS earth stations transmitting to geostationary space stations in the conventional C-band, extended C-band, conventional Ku-band, extended Ku-band, conventional Ka-band, extended Ka-band, or 24.75–25.25 GHz, and applications for ESIMs transmitting in the conventional C-band, conventional Ku-band, conventional Ka-band, except for applications proposing transmission of analog command signals at a band edge with bandwidths greater than 1 MHz or transmission of any other type of analog signal with bandwidths greater than 200 kHz.

(b) *Routine processing*. Earth station applications subject to this section may be routinely processed if they meet the applicable off-axis EIRP density envelopes set forth in this section.

(c) *Analog earth station operation in the conventional or extended C-bands.* (1) For co-polarized transmissions in the plane tangent to the GSO arc, as defined in § 25.103:

$29.5–25\log_{10}\theta$	dBW/4 kHz	for $1.5° \le \theta \le 7°$.
8.5	dBW/4 kHz	for $7° < \theta \le 9.2°$.
$32.5–25\log_{10}\theta$	dBW/4 kHz	for $9.2° < \theta \le 48°$.
−9.5	dBW/4 kHz	for $48° < \theta \le 180°$.

Where θ is the angle in degrees from a line from the earth station antenna to the assigned orbital location of the target satellite. The EIRP density levels specified for $\theta > 7°$ may be exceeded by up to 3 dB in up to 10% of the range of theta (θ) angles from ±7–180°, and by up to 6 dB in the region of main reflector spillover energy.

(2) For co-polarized transmissions in the plane perpendicular to the GSO arc, as defined in § 25.103:

$32.5–25\log_{10}\theta$	dBW/4 kHz	for $3° \le \theta \le 48°$.
−9.5	dBW/4 kHz	for $48° < \theta \le 180°$.

Where θ is as defined in paragraph (c)(1) of this section. These EIRP density levels may be exceeded by up to 6 dB in the region of main reflector spillover energy and in up to 10% of the range of θ angles not included in that region, on each side of the line from the earth station to the target satellite.

(3) For cross-polarized transmissions in the plane tangent to the GSO arc and in the plane perpendicular to the GSO arc:

$19.5–25\log_{10}\theta$	dBW/4 kHz	for $1.5° \le \theta \le 7°$.

Where θ is as defined in paragraph (c)(1) of this section.

(d) *Digital earth station operation in the conventional or extended C-bands.* (1) For co-polarized transmissions in the plane tangent to the GSO arc:

$26.3–25\log_{10}\theta$	dBW/4 kHz	for $1.5° \le \theta \le 7°$.
5.3	dBW/4 kHz	for $7° < \theta \le 9.2°$.

$29.3–25\log_{10}\theta$	dBW/4 kHz	for $9.2° < \theta \leq 48°$.
−12.7	dBW/4 kHz	for $48° < \theta \leq 180°$.

Where θ is as defined in paragraph (c)(1) of this section. The EIRP density levels specified for θ > 7° may be exceeded by up to 3 dB in up to 10% of the range of theta (θ) angles from ±7–180°, and by up to 6 dB in the region of main reflector spillover energy.

(2) For co-polarized transmissions in the plane perpendicular to the GSO arc:

$29.3–25\log_{10}\theta$	dBW/4 kHz	for $3° \leq \theta \leq 48°$.
−12.7	dBW/4 kHz	for $48° < \theta \leq 180°$.

Where θ is as defined in paragraph (c)(1) of this section. These EIRP density levels may be exceeded by up to 6 dB in the region of main reflector spillover energy and in up to 10% of the range of θ angles not included in that region, on each side of the line from the earth station to the target satellite.

(3) For cross-polarized transmissions in the plane tangent to the GSO arc and in the plane perpendicular to the GSO arc:

$16.3–25\log_{10}\theta$	dBW/4 kHz	for $1.5° \leq \theta \leq 7°$.

Where θ is as defined in paragraph (c)(1) of this section.

(4) A license application for earth station operation in a network using variable power density control of earth stations transmitting simultaneously in shared frequencies to the same target satellite receiving beam may be routinely processed if the applicant certifies that the aggregate off-axis EIRP density from all co-frequency earth stations transmitting simultaneously to the same target satellite receiving beam, not resulting from colliding data bursts transmitted pursuant to a contention protocol, will not exceed the off-axis EIRP density limits permissible for a single earth station, as specified in paragraphs (d)(1) through (d)(3) of this section.

(e) *Analog earth station operation in the conventional Ku-band.* (1) For co-polarized transmissions in the plane tangent to the GSO arc:

$21–25\log_{10}\theta$	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 $9.2° < \theta \leq 19.1°$.
−8	dBW/4 kHz	for $19.1° < \theta \leq 180°$.

Where θ is as defined in paragraph (c)(1) of this section. The EIRP density levels specified for θ > 7° may be exceeded by up to 3 dB in up to 10% of the range of theta (θ) angles from ±7–180°, and by up to 6 dB in the region of main reflector spillover energy.

(2) For co-polarized transmissions in the plane perpendicular to the GSO arc:

$24–25\log_{10}\theta$	dBW/4 kHz	for $3° \leq \theta \leq 19.1°$.
−8	dBW/4 kHz	for $19.1° < \theta \leq 180°$.

Where θ is as defined in paragraph (c)(1) of this section. These EIRP density levels may be exceeded by up to 6 dB in the region of main reflector spillover energy and in up to 10% of the range of θ angles not included in that

region, on each side of the line from the earth station to the target satellite.

(3) For cross-polarized transmissions in the plane tangent to the GSO arc and in the plane perpendicular to the GSO arc:

$11–25\log_{10}\theta$	dBW/4 kHz	for $1.5° \le \theta \le 7°$.

Where θ is as defined in paragraph (c)(1) of this section.

(f) *Digital earth station operation in the conventional Ku-band.* (1) For co-polarized transmissions in the plane tangent to the GSO arc:

$15–25\log_{10}\theta$	dBW/4 kHz	for $1.5° \le \theta \le 7°$.
−6	dBW/4 kHz	for $7° < \theta \le 9.2°$.
$18–25\log_{10}\theta$	dBW/4 kHz	for $9.2° < \theta \le 19.1°$.
−14	dBW/4 kHz	for $19.1° < \theta \le 180°$.

Where θ is as defined in paragraph (c)(1) of this section. The EIRP density levels specified for $\theta > 7°$ may be exceeded by up to 3 dB in up to 10% of the range of theta (θ) angles from ±7–180°, and by up to 6 dB in the region of main reflector spillover energy.

(2) For co-polarized transmissions in the plane perpendicular to the GSO arc:

$18–25\log_{10}\theta$	dBW/4 kHz	for $3° \le \theta \le 19.1°$.
−14	dBW/4 kHz	for $19.1° < \theta \le 180°$.

Where θ is as defined in paragraph (c)(1) of this section. These EIRP density levels may be exceeded by up to 6 dB in the region of main reflector spillover energy and in up to 10% of the range of θ angles not included in that region, on each side of the line from the earth station to the target satellite.

(3) For cross-polarized transmissions in the plane tangent to the GSO arc and in the plane perpendicular to the GSO arc:

$5–25\log_{10}\theta$	dBW/4 kHz	for $1.5° \le \theta \le 7°$.

Where θ is as defined in paragraph (c)(1) of this section.

(4) A license application for earth station operation in a network using variable power density control of earth stations transmitting simultaneously in shared frequencies to the same target satellite receiving beam may be routinely processed if the applicant certifies that the aggregate off-axis EIRP density from all co-frequency earth stations transmitting simultaneously to the same target satellite receiving beam, not resulting from colliding data bursts transmitted pursuant to a contention protocol, will not exceed the off-axis EIRP density limits permissible for a single earth station, as specified in paragraphs (f)(1) through -(f)(3) of this section.

(g) *Analog earth station operation in the extended Ku-band.* (1) For co-polarized transmissions in the plane tangent to the GSO arc:

$21–25\log_{10}\theta$	dBW/4 kHz	for $1.5° \le \theta \le 7°$.
0	dBW/4 kHz	for $7° < \theta \le 9.2°$.
$24–25\log_{10}\theta$	dBW/4 kHz	for $9.2° < \theta \le 48°$.
−18	dBW/4 kHz	for $48° < \theta \le 180°$.

Where θ is as defined in paragraph (c)(1) of this section, and N is as defined in paragraph (d)(1) of this section. The EIRP density levels specified for θ > 7° may be exceeded by up to 3 dB in up to 10% of the range of theta (θ) angles from ±7–180°, and by up to 6 dB in the region of main reflector spillover energy.

(2) For co-polarized transmissions in the plane perpendicular to the GSO arc:

$24–25\log_{10}\theta$	dBW/4 kHz	for $3° \le \theta \le 48°$.
−18	dBW/4 kHz	for $48° < \theta \le 180°$.

Where θ is as defined in paragraph (c)(1) of this section. These EIRP density levels may be exceeded by up to 6 dB in the region of main reflector spillover energy and in up to 10% of the range of θ angles not included in that region, on each side of the line from the earth station to the target satellite.

(3) For cross-polarized transmissions in the plane tangent to the GSO arc and in the plane perpendicular to the GSO arc:

$11–25\log_{10}\theta$	dBW/4 kHz	for $1.5° \le \theta \le 7°$.

Where θ is as defined in paragraph (c)(1) of this section.

(h) *Digital earth station operation in the extended Ku-band.* (1) For co-polarized transmissions in the plane tangent to the GSO arc:

$15–25\log_{10}\theta$	dBW/4 kHz	for $1.5° \le \theta \le 7°$.
−6	dBW/4 kHz	for $7° < \theta \le 9.2°$.
$18–25\log_{10}\theta$	dBW/4 kHz	for $9.2° < \theta \le 48°$.
−24	dBW/4 kHz	for $48° < \theta \le 180°$.

Where θ is as defined in paragraph (c)(1) of this section. The EIRP density levels specified for θ > 7° may be exceeded by up to 3 dB in up to 10% of the range of theta (θ) angles from ±7–180°, and by up to 6 dB in the region of main reflector spillover energy.

(2) For co-polarized transmissions in the plane perpendicular to the GSO arc:

$18–25\log_{10}\theta$	dBW/4 kHz	for $3° \le \theta \le 48°$.
−24	dBW/4 kHz	for $48° < \theta \le 85°$.

Where θ is as defined in paragraph (c)(1) of this section. These EIRP density levels may be exceeded by up to 6 dB in the region of main reflector spillover energy and in up to 10% of the range of θ angles not included in that region, on each side of the line from the earth station to the target satellite.

(3) For cross-polarized transmissions in the plane tangent to the GSO arc and in the plane perpendicular to the GSO arc:

$5–25\log_{10}\theta$	dBW/4 kHz	for $1.5° \le \theta \le 7°$.

Where θ is as defined in paragraph (c)(1) of this section.

(4) A license application for earth station operation in a network using variable power density control of earth

stations transmitting simultaneously in shared frequencies to the same target satellite receiving beam may be routinely processed if the applicant certifies that the aggregate off-axis EIRP density from all co-frequency earth stations transmitting simultaneously to the same target satellite receiving beam, not resulting from colliding data bursts transmitted pursuant to a contention protocol, will not exceed the off-axis EIRP density limits permissible for a single earth station, as specified in paragraphs (h)(1) through (h)(3) of this section.

(i) *Digital earth station operation in the conventional or extended Ka-band.* (1) For co-polarized transmissions in the plane tangent to the GSO arc:

32.5–25log(θ)	dBW/MHz	for	2.0° ≤ θ ≤ 7°.
11.5	dBW/MHz	for	7° ≤ θ ≤ 9.2°.
35.5–25log(θ)	dBW/MHz	for	9.2° ≤ θ ≤ 19.1°.
3.5	dBW/MHz	for	19.1° < θ ≤ 180°.

where θ is as defined in paragraph (c)(1) of this section.

(2) For co-polarized transmissions in the plane perpendicular to the GSO arc:

35.5–25log(θ)	dBW/MHz	for	3.5° ≤ θ ≤ 7°.
14.4	dBW/MHz	for	7° < θ ≤ 9.2°.
38.5–25log(θ)	dBW/MHz	for	9.2° < θ ≤ 19.1°.
6.5	dBW/MHz	for	19.1° < θ ≤ 180°.

where θ is as defined in paragraph (c)(1) of this section.

(3) The EIRP density levels specified in paragraphs (i)(1) and (2) of this section may be exceeded by up to 3 dB, for values of θ > 7°, over 10% of the range of theta (θ) angles from 7–180° on each side of the line from the earth station to the target satellite.

(4) For cross-polarized transmissions in the plane tangent to the GSO arc and in the plane perpendicular to the GSO arc:

22.5–25log(θ)	dBW/MHz	for	2.0° < θ ≤ 7.0°.

where θ is as defined in paragraph (c)(1) of this section.

(5) A license application for earth station operation in a network using variable power density control of earth stations transmitting simultaneously in shared frequencies to the same target satellite receiving beam may be routinely processed if the applicant certifies that the aggregate off-axis EIRP density from all co-frequency earth stations transmitting simultaneously to the same target satellite receiving beam, not resulting from colliding data bursts transmitted pursuant to a contention protocol, will not exceed the off-axis EIRP density limits permissible for a single earth station, as specified in paragraphs (i)(1) through (4) of this section.

(j) *Non-qualifying applications.* Applications for authority for fixed earth station operation in the conventional C-band, extended C-band, conventional Ku-band, extended Ku-band, conventional Ka-band, extended Ka-band, or 24.75–25.25 GHz, that do not qualify for routine processing under relevant criteria in this section, § 25.211, or § 25.212 are subject to the requirements in § 25.220.

[81 FR 55339, Aug. 18, 2016, as amended at 84 FR 53656, Oct. 8, 2019; 85 FR 44787, July 24, 2020; 87 FR 72407, Nov. 25, 2022]

§ 25.219 [Reserved]

§ 25.220 Non-routine transmit/receive earth station operations.

(a) The requirements in this section apply to applications for, and operation of, earth stations transmitting in the conventional or extended C-bands, the conventional or extended Ku-bands, or the conventional or extended Ka -bands that do not qualify for routine licensing under relevant criteria in §25.211, §25.212, or §25.218.

(b) Applications filed pursuant to this section must include the information required by §25.115(g)(1).

(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) [Reserved]

(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) Unless the non-routine uplink transmission levels are permitted under a coordination agreement with the space station operator, or unless coordination with the operator is not required pursuant to §25.140(d)(3) or (d)(4), the operator of an earth station licensed pursuant to this section must reduce its transmitted EIRP density to levels at or within relevant routine limits:

(i) Toward the part of the geostationary orbit arc within one degree of a subsequently launched, two-degree-compliant space station receiving in the same uplink band at an orbital location within six degrees of the earth station's target satellite, and

(ii) Toward a two-degree-compliant space station receiving in the same uplink band at an orbital location more than six degrees away from the target satellite if co-frequency reception by the space station is adversely affected by the non-routine earth station transmission levels.

(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; 81 FR 55341, Aug. 18, 2016; 83 FR 34491, July 20, 2018; 84 FR 53656, Oct. 8, 2019; 87 FR 72407, Nov. 25, 2022]

§§ 25.221–25.223 [Reserved]

§ 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]

§§ 25.226–25.227 [Reserved]

§ 25.228 Operating and coordination requirements for earth stations in motion (ESIMs).

(a) GSO FSS ESIM transmissions must comport with the applicable EIRP density limits in § 25.218, unless coordinated pursuant to the requirements in § 25.220.

(b) Each FSS ESIM must be self-monitoring and, should a condition occur that would cause the ESIMs to exceed its authorized off-axis EIRP density limits in the case of GSO FSS ESIMs or any emission limits included in the licensing conditions in the case of NGSO FSS ESIMs, the ESIM must automatically cease transmissions within 100 milliseconds, and not resume transmissions until the condition that caused the ESIM to exceed those limits is corrected.

(c) Each FSS ESIM must be monitored and controlled by a network control and monitoring center (NCMC) or equivalent facility. Each ESIM must comply with a ''disable transmission'' command from the NCMC within 100 milliseconds of receiving the command. In addition, the NCMC must monitor the operation of each ESIM in its network, and transmit a ''disable transmission'' command to any ESIM that operates in such a way as to exceed the authorized off-axis EIRP density limit for GSO FSS ESIMs or any emission limits included in the licensing conditions in the case of NGSO FSS ESIMs. The NCMC must not allow the ESIM(s) under its control to resume transmissions until the condition that caused the ESIM(s) to exceed the authorized EIRP density limits is corrected.

(d) ESIM licensees must ensure installation of ESIM 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. An ESIM terminal exhibiting radiation exposure levels exceeding 1.0 mW/cm^2 in accessible areas, such as at the exterior surface of the radome, must have a label attached to the surface of the terminal warning about the radiation hazard and must include thereon a diagram showing the regions around the terminal where the radiation levels could exceed the maximum radiation exposure limit specified in 47 CFR 1.1310 Table 1.

(e) The following requirements govern all ESV operations:

(1) ESV operators must control all ESVs by a NCMC or equivalent facility located in the United States, except that an ESV on U.S.-registered vessels may operate under control of a NCMC 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.

(2) There must 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. NCMC or a NCMC located in another country with which the United States has a bilateral agreement that enables such cessation of emissions.

(3) ESV NCMC operators communicating with ESVs on vessels of foreign registry must maintain detailed information on each such vessel's country of registry and a point of contact for the relevant administration responsible for licensing those ESVs.

(f) For all VMES operations, there must 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.

(g) The following requirements govern all ESAA operations:

(1) There must 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 ESAAs.

(2) 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.

(3) Prior to operations within a foreign nation's airspace, the ESAA operator must ascertain whether the relevant administration has operations that could be affected by ESAA terminals, and must determine whether that administration has adopted specific requirements concerning ESAA operations. When the aircraft enters foreign airspace, the ESAA terminal must 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 may operate within those identified areas without further action. To the extent that the foreign administration has not adopted requirements regarding ESAA operations, ESAA operators must coordinate their operations with any potentially affected operations.

(h) The following requirements govern all operations in the 3700–4200 MHz (space-to-Earth) and 5925–6425 MHz (Earth-to-space) frequency bands of ESVs receiving from or transmitting to GSO satellites in the Fixed-Satellite Service:

(1) ESVs must 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.

(2) ESV operators transmitting in the 5925–6425 MHz (Earth-to-space) frequency band to GSO satellites in the Fixed-Satellite Service (FSS) must 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.

(3) ESVs, operating while docked, for which coordination with terrestrial stations in the 3700–4200 MHz band is completed in accordance with §25.251, will receive protection from such terrestrial stations in accordance with the coordination agreements, for 180 days, renewable for 180 days.

(4) ESVs in motion must not claim protection from harmful interference from any authorized terrestrial stations to which frequencies are already assigned, or any authorized terrestrial station to which frequencies may be assigned in the future in the 3700–4200 MHz (space-to-Earth) frequency band.

(5) 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, must complete coordination with potentially affected U.S.-licensed fixed service operators prior to operation. The coordination method and the interference criteria objective will be determined by the frequency coordinator. The details of the coordination must be maintained and available at the frequency coordinator, and must 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 that identifies the notification sent to the Commission is released. Continuance of operation of that ESV for the duration of the coordination term must 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.

(6) An ESV 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 control and monitoring center. 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.

(7) ESV transmissions in the 5925–6425 MHz (Earth-to-space) band shall not exceed an EIRP spectral density towards the radio-horizon of 17 dBW/MHz, and shall not exceed an EIRP towards the radio-horizon of 20.8 dBW. The ESV network shall shut-off the ESV transmitter if either the EIRP spectral density towards the radio-horizon or the EIRP towards the radio-horizon is exceeded.

(i) For ESAA transmissions in the 14.0–14.5 GHz band from 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 must 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 under free-space propagation conditions.

(j) The following requirements govern all ESIMs transmitting to GSO or NGSO satellites in the Fixed-Satellite Service in the 14.0–14.5 GHz band.

(1) Operations of ESIMs in the 14.0–14.2 GHz (Earth-to-space) frequency band within 125 km (for ESVs and VMESs) or within radio line of sight (for ESAAs) of the NASA TDRSS facilities on Guam (latitude 13°36′55″ N, longitude 144°51′22″ E), 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), or Blossom Point, Maryland (latitude 38°25′44″ N, longitude 77°05′02″ 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 must notify the Space Bureau once they have completed coordination. Upon receipt of such notification from a licensee, the Space 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. 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 Space Bureau that the site is nearing operational status. Upon public notice from the Space Bureau, all Ku-band ESIM licensees must cease operations in the 14.0–14.2 GHz band within 125 km (for ESVs and VMESs) or within radio line of sight (for ESAAs) of the new TDRSS site until the licensees complete coordination with NTIA/IRAC for the new TDRSS facility. Licensees must notify the Space Bureau once they have completed coordination for the new TDRSS site. Upon receipt of such notification from a licensee, the Space 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 ESIM licensee then will be permitted to commence operations in the 14.0–14.2 GHz band within 125 km (for ESVs and VMESs) or within radio line of sight (for ESAAs) of the new TDRSS site, subject to any operational constraints developed in the coordination process.

(2) Within 125 km (for ESVs and VMESs) or within radio line of sight (for ESAAs) of the NASA TDRSS facilities identified in paragraph (j)(1) of this section, ESIM 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.

(3) Operations of ESIMs in the 14.47–14.5 GHz (Earth-to-space) frequency band in the vicinity (for ESVs and VMESs) or within radio line of sight (for ESAAs) 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 Management Unit, NSF, Division of Astronomical Sciences, 2415 Eisenhower Avenue, Arlington VA 22314; Email: *esm@nsf.gov*. Licensees must notify the Space Bureau once they have completed coordination. Upon receipt of the coordination agreement from a licensee, the Space 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. Table 1 provides a list of each applicable RAS site, its location, and the applicable coordination zone.

TABLE 1 TO § 25.228(j)(3)—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.
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″	50.
Kitt Peak, AZ	31°57′23″	111°36′45″	50.
Pie Town, NM	34°18′04″	108°07′09″	50.
Los Alamos, NM	35°46′30″	106°14′44″	50.
Fort Davis, TX	30°38′06″	103°56′41″	50.
North Liberty, IA	41°46′17″	91°34′27″	50.
Hancock, NH	42°56′01″	71°59′12″	50.
St. Croix, VI	17°45′24″	64°35′01″	50.

*Owens Valley, CA operates both a VLBA station and single-dish telescopes.

(4) 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 Space Bureau that the site is nearing operational status. Upon public notice from the Space Bureau, all Ku-band ESIMs licensees must 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 for ESVs and VMESs, radio line of sight for ESAAs) of the new RAS site until the licensees complete coordination for the new RAS facility. Licensees must notify the Space Bureau once they have completed coordination for the new RAS site and must submit the coordination agreement to the Commission. Upon receipt of such notification from a licensee, the Space 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 ESIMs 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.

(5) ESIMs licensees must use Global Positioning Satellite-related or other similar position location technology to ensure compliance with the provisions of subparagraphs 1–3 of this paragraph.

[84 FR 53656, Oct. 8, 2019, as amended at 85 FR 44787, July 24, 2020; 88 FR 21441, Apr. 10, 2023]

§§ 25.229–25.249 [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% $\Delta T/T$, 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/m^2/200 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/m^2/200 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/ m^2/200 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/m^2/200 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/ m^2/200 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 (incorporated by reference, see § 25.108).

(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.

(e) Licensees of terrestrial low-power systems operating in the 2483.5–2495 MHz band shall operate consistent with the technical limits and other requirements specified in §25.149(c)(4) and (g)(2)–(3).

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; 82 FR 8819, Jan. 31, 2017; 88 FR 21441, Apr. 10, 2023]

§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 NGSO MSS operations in the 29.1–29.25 GHz band regarding 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 regard, any single NGSO MSS operator may identify only one feeder-link earth station complex protection zone in each category identified in §101.147(y)(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; 81 FR 55348, Aug. 18, 2016]

§ 25.258 Sharing between NGSO MSS feeder-link stations and GSO FSS services in the 29.25–29.5 GHz band.

(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 earth stations in the vicinity of operational NGSO MSS feeder-link earth station complexes must, to the maximum extent possible, operate with frequency/polarization selections that will minimize unacceptable interference with reception of GSO FSS and NGSO MSS uplink transmissions in the 29.25–29.5 GHz band. 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 must conform to the rules contained in §25.218(i).

(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; 81 FR 55348, Aug. 18, 2016; 84 FR 53659, Oct. 8, 2019]

§ 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 Sharing among NGSO FSS space stations.

(a) *Scope.* This section applies to NGSO FSS operation with earth stations with directional antennas anywhere in the world under a Commission license, or in the United States under a grant of U.S. market access.

(b) *Coordination.* NGSO FSS licensees and market access recipients must coordinate in good faith the use of commonly authorized frequencies regardless of their processing round status.

(c) *Default procedure.* Absent coordination between two or more satellite systems, whenever the increase in system noise temperature of an earth station receiver, or a space station receiver for a satellite with on-board processing, of either system, $\Delta T/T$, exceeds 6 percent due to interference from emissions originating in the other system in a commonly authorized frequency band, such frequency band will be divided among the affected satellite networks in accordance with the following procedure:

(1) Each of n (number of) satellite networks involved that were licensed or granted market access through the same processing round, except as provided in paragraph (e) of this section, must select 1/n of the assigned spectrum available in each of these frequency bands. The selection order for

each satellite network will be determined by the date that the first space station in each satellite system is launched and capable of operating in the frequency band under consideration;

(2) The affected station(s) of the respective satellite systems may operate in only the selected (1/n) spectrum associated with its satellite system while the ΔT/T of 6 percent threshold is exceeded;

(3) All affected station(s) may resume operations throughout the assigned frequency bands once the threshold is no longer exceeded.

(d) [Reserved]

(e) *Sunsetting.* Ten years after the first authorization or grant of market access in a processing round, the systems approved in that processing round will no longer be required to protect earlier-rounds systems, and instead will be required to share spectrum with earlier-round systems under paragraph (c) of this section.

[82 FR 59986, Dec. 18, 2017, as amended at 88 FR 39792, June 20, 2023]

EFFECTIVE DATE NOTE: At 88 FR 39792, June 20, 2023, § 25.261 was amended by adding paragraph (d) and revising paragraph (e), and the date of effectiveness is delayed indefinitely. For the convenience of the user, the added and revised text is set forth as follows:

§ 25.261 Sharing among NGSO FSS space stations.

* * * * *

(d) *Protection of earlier-round systems.* Prior to commencing operations, an NGSO FSS licensee or market access recipient must either certify that it has completed a coordination agreement with any operational NGSO FSS system licensed or granted U.S. market access in an earlier processing round, or submit for Commission approval a compatibility showing which demonstrates by use of a degraded throughput methodology that it will not cause harmful interference to any such system with which coordination has not been completed. If an earlier-round system becomes operational after a later-round system has commenced operations, the later-round licensee or market access recipient must submit a certification of coordination or a compatibility showing with respect to the earlier-round system no later than 60 days after the earlier-round system commences operations as notified pursuant to § 25.121(b) or otherwise.

(1) Compatibility showings will be placed on public notice pursuant to § 25.151(a)(13).

(2) While a compatibility showing remains pending before the Commission, the submitting NGSO FSS licensee or market access recipient may commence operations on an unprotected, non-interference basis with respect to the operations of the system that is the subject of the showing.

(e) *Sunsetting.* Ten years after the first authorization or grant of market access in a processing round, the systems approved in that processing round will no longer be required to protect earlier-rounds systems under paragraph (d) of this section, and instead will be required to share spectrum with earlier-round systems under paragraph (c) of this section.

§ 25.262 Licensing and domestic coordination requirements for 17/24 GHz BSS space stations and FSS space stations transmitting in the 17.3–17.8 GHz band.

(a) A 17/24 GHz BSS or FSS applicant seeking to transmit in the 17.3–17.8 GHz band may be authorized to operate a space station at levels up to the maximum power flux density limits defined in paragraphs (a)(1) and (2) of this section without coordinating its power flux density levels with adjacent licensed or permitted operators, as follows:

(1) For 17/24 GHz BSS applicants, up to the power flux density levels specified in § 25.140(b)(3) only if there is no licensed space station, or prior-filed application for a space station transmitting in the 17.3–17.8 GHz band at a location less than four degrees from the orbital location at which the applicant proposes to operate; and

(2) For FSS space station applicants transmitting in the 17.3–17.8 GHz band, up to the maximum power flux density levels in § 25.140(a)(3)(iii), only if there is no licensed 17/24 GHz BSS space station, or prior-filed application for a 17/24 GHz BSS space station, at a location less than four degrees from the orbital location at which the FSS applicant proposes to operate, and there is no licensed FSS space station, or prior-filed application for an FSS space station transmitting in the 17.3–17.8 GHz band, at a location less than two degrees from the orbital location at which the applicant proposes to operate.

(b) Any U.S. licensee or permittee authorized to transmit in the 17.3–17.8 GHz band that does not comply with

the applicable power flux-density limits set forth in § 25.140(a)(3)(iii) and/or (b)(3) shall bear the burden of coordinating with any future co-frequency licensees and permittees of a space station transmitting in the 17.3–17.8 GHz band as required in § 25.114(d)(15)(ii).

(c) If no good faith agreement can be reached, the operator of the FSS space station transmitting in the 17.3–17.8 GHz band that does not comply with § 25.140(a)(3)(iii) or the operator of the 17/24 GHz BSS space station that does not comply with § 25.140(b)(3), shall reduce its power flux-density levels to be compliant with those specified in § 25.140(a)(3)(iii) and/or (b)(3) as appropriate.

(d) Any U.S. licensee or permittee of a space station transmitting in the 17.3–17.8 GHz band that is required to provide information in its application pursuant to § 25.140(a)(2) or (b)(4) must accept any increased interference that may result from adjacent space stations transmitting in the 17.3–17.8 GHz band that are operating in compliance with the rules for such space stations specified in §§ 25.140(a) and (b), 25.202(a)(9) and (e) through (g), 25.210(i) through (j), 25.224, 25.262, 25.264(h), and 25.273(a)(3).

(e) 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.

[87 FR 72407, Nov. 25, 2022]

§ 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 Space 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; 88 FR 21441, Apr. 10, 2023]

§ 25.264 Requirements to facilitate reverse-band operation in the 17.3–17.8 GHz band.

(a) Each applicant or licensee for a space station transmitting in the 17.3–17.8 GHz band must submit a series of tables or graphs containing predicted off-axis gain data for each antenna that will transmit in any portion of the 17.3–17.8 GHz band, in accordance with the following specifications. 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 or licensee 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 one measurement frequency at the center of the portion of the 17.3–17.8 GHz frequency band over which the space station is designed to transmit. Applicants or licensees must provide additional measurement data at 5 MHz above the lower edge of the band and/or at 5 MHz below the upper edge of the band, upon request by the Commission staff.

(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 or licensee must state the reasons for including such additional information.

(6) The predictive gain information must be submitted to the Commission for each license application that is filed for a space station transmitting in any portion of the 17.3–17.8 GHz band no later than two years after license grant for the space station.

(b) A space station applicant or licensee transmitting in any portion of the 17.3–17.8 GHz band must submit power flux density (pfd) calculations based on the predicted gain data 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/m^2/100 kHz in the 17.3–17.8 GHz band. In this rule, the term prior-filed U.S. DBS space station refers to any co-frequency Direct Broadcast Satellite service space station for which an application was filed with the Commission, or an authorization was granted by the Commission, prior to the filing of the information and certifications required by paragraphs (a) and (b) of this section. 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 calculations must take into account the aggregate pfd levels at the DBS receiver at each measurement frequency arising from all antenna beams on the space station transmitting in the 17.3–17.8 GHz band. They must also take into account the maximum permitted longitudinal station-keeping tolerance, orbital inclination and orbital eccentricity of both the space station transmitting in the 17.3–17.8 GHz band 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) Indicate the extent to which the calculated pfd of the space station'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.

(3) If the calculated pfd exceeds the threshold level of −117 dBW/m^2/100 kHz at the location of any prior-filed U.S. DBS space station, the applicant or licensee must also provide with the pfd calculations a certification that all affected DBS operators acknowledge and do not object to such higher off-axis pfd levels. No such certification is required in cases where the frequencies assigned to the DBS and to the space station transmitting in the 17.3–17.8 GHz band do not overlap.

(4) The information and any certification required by paragraph (b) of this section must be submitted to the Commission for each license application that is filed for a space station transmitting in any portion of the 17.3–17.8 GHz band no later than two years after license grant for the space station.

(c) No later than two months prior to launch, each licensee of a space station transmitting in any portion of the 17.3–17.8 GHz band must update the predicted transmitting antenna off-axis gain information provided in accordance with paragraph (a) of this section by submitting measured transmitting antenna off-axis gain information over the angular ranges, measurement frequencies and polarizations specified 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. As an alternative, licensees authorized to operate at locations one degree or greater from a prior-filed DBS space station may submit simulated transmitting antenna off-axis gain data in lieu of measured data, over the same angular ranges, frequencies and polarizations.

(d) No later than two months prior to launch, or when applying for authority to change the location of a space station transmitting in any portion of the 17.3–17.8 GHz band that is already in orbit, each such space station licensee must provide pfd calculations based on the measured off-axis gain data 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/m^2/100 kHz; and

(ii) At the location of any subsequently filed U.S. DBS space station where the pfd level in the 17.3–17.8 GHz band calculated on the basis of measured gain data exceeds −117 dBW/m^2/100 kHz. In this paragraph (d)(1)(ii), the term ''subsequently filed U.S. DBS space station'' refers to any co-frequency Direct Broadcast Satellite service space station proposed in a license application filed with the Commission after the operator of a space station transmitting in any portion of the 17.3–17.8 GHz band submitted the predicted data required by paragraphs (a) and (b) of this section but before submission of the measured data required by 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 transmitting 17.3–17.8 GHz 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/m²/100 kHz at those prior-filed U.S. DBS space station locations.

(e) If the aggregate 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/m²/100 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 operator of the space station transmitting in any portion of the 17.3–17.8 GHz band must either:

(i) Coordinate its operations that are in excess of the threshold pfd level of −117 dBW/m²/100 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/m²/100 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 aggregate 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 operator of the space station transmitting in the 17.3–17.8 GHz band 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/m²/100 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/m²/100 kHz, whichever is greater, is not exceeded.

(3) No coordination or adjustment of operating parameters is required in cases where there is no overlap in frequencies assigned to the DBS and the space station transmitting in the 17.3–17.8 GH band.

(f) The applicant or licensee for the space station transmitting in the 17.3–17.8 GHz band 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 operator of the space station transmitting in the 17.3–17.8 GHz band adjusts its operating parameters in accordance with paragraph (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 or FSS space stations transmitting in the 17.3–17.8 GHz band 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 space stations transmitting in the 17.3–17.8 GHz band 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 space stations transmitting in the 17.3–17.8 GHz band to the extent that the DBS space station operates within the bounds of inclination and eccentricity listed in paragraphs (i)(1) and (2) of this section. 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 in paragraphs (i)(1) and (2) of this section:

(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, as amended at 81 FR 55348, Aug. 18, 2016; 87 FR 72407, Nov. 25, 2022; 89 FR 58072, 58074, July 17, 2024]

§ 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) Operators of blanket-licensed GSO FSS earth station networks that provide international service must maintain a control point within the United States, or 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 network immediately upon notification of harmful interference.

(d) The licensee shall ensure that the licensed facilities are properly secured against unauthorized access or use whenever an operator is not present at the transmitter. For space station operations, this includes securing satellite commands against unauthorized access and use.

(e) [Reserved]

(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 Communications Filing System.

(g) All applicants shall ensure compliance with the Commission's radio frequency exposure requirements in §§ 1.1307(b), 2.1091, and 2.1093 of this chapter, as appropriate. Applicants with terminals that will exceed the guidelines in § 1.1310 of this chapter for radio frequency radiation exposure shall provide a plan for mitigation of radiation exposure to the extent required to meet those guidelines. Licensees of transmitting earth stations 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.

[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; 81 FR 55349, Aug. 18, 2016; 82 FR 59986, Dec. 18, 2017; 85 FR 18150, Apr. 1, 2020; 85 FR 52453, Aug. 25, 2020; 88 FR 21442, Apr. 10, 2023]

§ 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.

(e) Transmission from an earth station of an unmodulated carrier at a power level sufficient to saturate a satellite transponder is prohibited, except as consented to by the space station licensee to determine transponder performance characteristics.

[58 FR 13421, Mar. 11, 1993, as amended at 81 FR 55349, Aug. 18, 2016]

§ 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 September 3, 2017, transmissions of fixed-frequency, digitally modulated video signals with a symbol rate of 128,000/s or more from a temporary-fixed earth station must be identified through use of an ATIS in accordance with the requirements that follow.

(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 V1.1.2 (2014–03) (incorporated by reference, *see* § 25.108).

(2) The ATIS message must continuously repeat.

NOTE 1 TO PARAGRAPH (b): Paragraph (b) is waived for earth stations using modulators manufactured before August 1, 2017, that cannot be made compliant with the DVB–CID standard by a software upgrade.

(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; 81 FR 33601, May 31, 2016, as amended at 82 FR 40494, Aug. 25, 2017]

§ 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) The space station operator will coordinate on an operator-to-operator basis with any potentially affected satellite networks.

(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, as amended at 85 FR 52453, Aug. 25, 2020]

§ 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) *Geostationary orbit space station end of life operations.* 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 stored energy sources on board the satellite are discharged, by venting excess propellant, discharging batteries, relieving pressure vessels, or other appropriate measures.

(d) *Applicability of minimum perigee for geostationary orbit space stations.* The minimum perigee requirement of paragraph (a) of this section shall not apply to space stations launched prior to March 18, 2002.

(e) *Low-Earth orbit space stations.* For space stations ending their mission in or passing through the low-Earth orbit region below 2000 km altitude and planning disposal through uncontrolled atmospheric re-entry, disposal must be completed as soon as practicable following end of mission, and no later than five years after the end of the mission. For purposes of this paragraph (e), *end of mission* is defined as the time at which the individual spacecraft is no longer capable of conducting collision avoidance maneuvers. For spacecraft without collision avoidance capabilities, *end of mission* is defined as the point in which the individual spacecraft has completed its primary mission.

[69 FR 54588, Sept. 9, 2004, as amended at 78 FR 8431, Feb. 6, 2013; 81 FR 55349, Aug. 18, 2016; 89 FR 65223, Aug. 9, 2024]

§ 25.284 [Reserved]

§ 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]

§ 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.

[79 FR 8326, Feb. 12, 2014, as amended at 84 FR 53659, Oct. 8, 2019]

§ 25.288 Obligation to remedy interference caused by NGSO MSS feeder downlinks in the 6700–6875 MHz band.

If an NGSO MSS satellite transmitting in the 6700–6875 MHz band causes harmful interference to previously licensed co-frequency Public Safety facilities, the satellite operator has an obligation to remedy the interference.

[81 FR 55349, Aug. 18, 2016]

§ 25.289 Protection of GSO networks by NGSO systems.

Unless otherwise provided in this chapter, an NGSO system licensee must not cause unacceptable interference to, or claim protection from, a GSO FSS or GSO BSS network. An

NGSO FSS licensee operating in compliance with the applicable equivalent power flux-density limits in Article 22, Section II of the ITU Radio Regulations (incorporated by reference, §25.108) will be considered as having fulfilled this obligation with respect to any GSO network.

[82 FR 59986, Dec. 18, 2017]

§ 25.290 Responsibility of licensee for blanket-licensed earth station operation.

The holder of an FCC blanket earth station license is responsible for operation of any earth station under that license. Operators of satellite networks and systems must not transmit communications to or from such earth stations 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.

[84 FR 53659, Oct. 8, 2019]

Subpart E—Miscellaneous

§ 25.301 Satellite Emergency Notification Devices (SENDs).

No device described by the marketer or seller using the terms ''SEND'' or ''Satellite Emergency Notification Device'' may be marketed or sold in the United States unless it complies with the requirements of RTCM 12800.0 (incorporated by reference, see §25.108).

[88 FR 21442, Apr. 10, 2023]

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, and a licensee or permittee in the satellite DARS service, must comply with the equal employment opportunity requirements set forth in 47 CFR part 73.

[72 FR 50033, Aug. 29, 2007, as amended at 78 FR 8431, Feb. 6, 2013; 81 FR 10122, Feb. 29, 2016]

Subpart J—Public Interest Obligations

§ 25.701 Other DBS 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.* (1) Each DBS operator engaged in origination programming shall maintain, and make available for public inspection, a complete record of a request to purchase adverting time that:

(i) Is made by or on behalf of a legally qualified candidate for public office; or

(ii) Communicates a message relating to any political matter of national importance, including:

(A) A legally qualified candidate;

(B) Any election to Federal office; or

(C) A national legislative issue of public importance.

(2) A record maintained under this paragraph shall contain information regarding:

(i) Whether the request to purchase advertising time is accepted or rejected by the DBS operator;

(ii) The rate charged for the advertising time;

(iii) The date and time on which the communication is aired;

(iv) The class of time that is purchased;

(v) The name of the candidate to which the communication refers and the office to which the candidate is seeking election, the election to which the communication refers, or the issue to which the communication refers (as applicable);

(vi) In the case of a request made by, or on behalf of, a candidate, the name

of the candidate, the authorized committee of the candidate, and the treasurer of such committee; and

(vii) In the case of any other request, the name of the person purchasing the time, the name, address, and phone number of a contact person for such person, and a list of the chief executive officers or members of the executive committee or of the board of directors of such person.

(3) When free time is provided for use by or on behalf of candidates, a record of the free time provided shall be placed in the political file.

(4) All records required by this paragraph shall be placed in the online public file hosted by the Commission as soon as possible and shall be retained for a period of two years. As soon as possible means immediately absent unusual circumstances.

(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 in the online file hosted by the Commission records sufficient to verify compliance with this rule. 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, each DBS provider shall maintain in the online file hosted by the Commission 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.

(D) Each satellite carrier shall, no later than July 31, 2020, provide an up-to-date email address for carriage election notice submissions and an up-to-date phone number for carriage-related questions. Each satellite carrier is responsible for the continuing accuracy and completeness of the information furnished. It must respond to questions from broadcasters as soon as is reasonably possible.

(ii) All records required by paragraph (i) of this paragraph shall be placed in the online file hosted by the Commission as soon as possible and shall be retained for a period of two years.

(iii) Each DBS provider must also place in the online file hosted by the Commission the records required to be placed in the public inspection file by §25.701(e) (commercial limits in children's programs) and by §25.601 and 47 CFR part 76, subpart E (equal employment opportunity requirements) and retain those records for the period required by those rules.

(iv) Each DBS provider must provide a link to the online public inspection file hosted on the Commission's Web site from the home page of its own Web site, if the provider has a Web site, and provide on its Web site contact information for a representative who can assist any person with disabilities with issues related to the content of the public files. Each DBS provider also must include in the online public file hosted by the Commission the address of the provider's local public file, if the provider retains documents in the local public file that are not available in the Commission's online file, and the name, phone number, and email address of the provider's designated contact for questions about the public file.

(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; 81 FR 10122, Feb. 29, 2016; 84 FR 45668, Aug. 30, 2019; 87 FR 7754, Feb. 10, 2022]

§ 25.702 Other SDARS Public interest obligations.

(a) *Political broadcasting requirements.* The following political broadcasting

rules shall apply to all SDARS licensees: 47 CFR 73.1940 (Legally qualified candidates for public office), 73.1941 (Equal opportunities), 73.1942 (Candidate rates), and 73.1944 (Reasonable access).

(b) *Political file.* (1) Each SDARS licensee engaged in origination programming shall maintain, and make available for public inspection, a complete record of a request to purchase broadcast time that:

(i) Is made by or on behalf of a legally qualified candidate for public office; or

(ii) Communicates a message relating to any political matter of national importance, including:

(A) A legally qualified candidate;

(B) Any election to Federal office; or

(C) A national legislative issue of public importance.

(2) A record maintained under this paragraph shall contain information regarding:

(i) Whether the request to purchase broadcast time is accepted or rejected by the licensee;

(ii) The rate charged for the broadcast time;

(iii) The date and time on which the communication is aired;

(iv) The class of time that is purchased;

(v) The name of the candidate to which the communication refers and the office to which the candidate is seeking election, the election to which the communication refers, or the issue to which the communication refers (as applicable);

(vi) In the case of a request made by, or on behalf of, a candidate, the name of the candidate, the authorized committee of the candidate, and the treasurer of such committee; and

(vii) n the case of any other request, the name of the person purchasing the time, the name, address, and phone number of a contact person for such person, and a list of the chief executive officers or members of the executive committee or of the board of directors of such person.

(3) When free time is provided for use by or on behalf of candidates, a record of the free time provided shall be placed in the political file.

(4) All records required by this paragraph shall be placed in the online public file hosted by the Commission as soon as possible and shall be retained for a period of two years. As soon as possible means immediately absent unusual circumstances.

(c) *Public inspection file.* (1) Each SDARS applicant or licensee must also place in the online public file hosted by the Commission the records required to be placed in the public inspection file by 47 CFR 25.601 and 73.2080 (equal employment opportunities (EEO)) and retain those records for the period required by those rules.

(2) Each SDARS licensee must provide a link to the public inspection file hosted on the Commission's Web site from the home page of its own Web site, if the licensee has a Web site, and provide on its Web site contact information for a representative who can assist any person with disabilities with issues related to the content of the public files. Each SDARS licensee also must include in the online public file the address of the licensee's local public file, if the licensee retains documents in the local public file that are not available in the Commission's online file, and the name, phone number, and email address of the licensee's designated contact for questions about the public file.

[81 FR 10122, Feb. 29, 2016, as amended at 87 FR 7754, Feb. 10, 2022]

PART 26—SPACE LAUNCH SERVICES

Subpart A—General Information

Sec.

26.1 Basis and purpose.
26.2 Frequencies.
26.3 Scope of service.
26.4 Other applicable rule parts.
26.5 Terms and definitions.

Subpart B—Applications and Licenses

26.101 Eligibility.
26.102 License period; renewal.
26.103 Licensing.
26.104 Regulatory status.
26.105 Authorization required.
26.106 Submission and filing of applications.
26.107 Restrictions on the operation of stations.

26.108 Content of applications; registration of stations.
26.109 Assignment and transfer.

Subpart C—Frequency Coordination

26.201 Policies governing the assignment of frequencies.
26.202 Frequency coordinator requirements.

Subpart D—Technical Standards

26.301 Authorized bandwidth.
26.302 Emission masks.
26.303 Power limits.
26.304 Antenna structures; air navigation safety.
26.305 Incorporation by reference.

AUTHORITY: 47 U.S.C. 151, 152, 154, 301, 303, unless otherwise noted.

SOURCE: 89 FR 63321, Aug. 5, 2024, unless otherwise noted.

Subpart A—General Information

§ 26.1 Basis and purpose.

This section contains the statutory basis for the rules in this part and provides the purpose for which this part is issued.

(a) *Basis.* The rules for Space Launch Services in this part are promulgated under the provisions of the Communications Act of 1934, as amended, that vest authority in the Federal Communications Commission (Commission or FCC) to regulate radio transmission and to issue licenses for radio stations. All rules in this part are in accordance with applicable treaties and agreements to which the United States is a party.

(b) *Purpose.* This part states the conditions under which spectrum is made available and licensed for the provision of Space Launch Services. This part does not govern the licensing of radio systems belonging to and operated by the United States.

§ 26.2 Frequencies.

The following frequencies are available for assignment on a nationwide, non-exclusive basis for Space Launch Services:

(a) 2025–2110 MHz; and

(b) 2200–2290 MHz.

§ 26.3 Scope of service.

(a) Space launch stations are restricted to the following uses:

(1) *2025–2110 MHz band.* The use of Space Launch Services licenses in the 2025–2110 MHz band is restricted to ground-to-launch vehicle telecommand uses necessary to support space launch operations.

(2) *2200–2290 MHz band.* The use of Space Launch Services licenses in the 2200–2290 MHz band is restricted to launch vehicle-to-ground communications associated with telemetry and tracking operations.

(b) Telemetry, tracking, and telecommand functions permissible as space launch operations include, but are not limited to:

(1) Pre-launch testing, such as preflight checks, ground testing, and telemetry;

(2) Vehicle tracking, including the transmission of parameter data from a launch vehicle to ground;

(3) Telecommand signals for propulsive maneuvering of a launch vehicle and separation of payload from launch vehicle; and

(4) Telecommand signals for propulsive maneuvering of a reentry vehicle for return and recovery.

(c) The use of Space Launch Services licenses for on-orbit communications after a launch vehicle separates from its payload are not permitted, provided that a space launch station may be used for telemetry, tracking, and telecommand activities for the incidental orbiting of a launch vehicle before or after it has separated from its payload. The use of Space Launch Services licenses for such incidental orbiting are permitted only to the extent necessary for space launch operations.

§ 26.4 Other applicable rule parts.

Other FCC rule parts applicable to the Space Launch Services include the following:

(a) *Part 0.* Part 0 of this chapter describes the Commission's organization and delegations of authority. Part 0 also lists available Commission publications, standards, and procedures for access to Commission records, and location of Commission Field Offices.

(b) *Part 1.* Part 1 of this chapter 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 of part 1 includes the rules for the Wireless Radio Services and the procedures for filing electronically via the Universal Licensing System (ULS).

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

(d) *Part 5.* Part 5 of this chapter contains rules prescribing the manner in which parts of the radio frequency spectrum may be made available for experimentation.

(e) *Part 15.* Part 15 of this chapter sets forth the requirements and conditions applicable to certain radio frequency devices.

(f) *Part 17.* Part 17 of this chapter 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 25.* Part 25 of this chapter contains the requirements for satellite communications, including satellite digital audio radio service (DARS).

(h) *Part 74.* Part 74 of this chapter sets forth the requirements and conditions applicable to experimental radio, auxiliary, special broadcast, and other program distributional services.

(i) *Part 87.* Part 87 of this chapter sets forth the requirements and conditions applicable to aviation services.

§ 26.5 Terms and definitions.

Base station. A station at a specified site authorized to communicate with mobile stations.

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 (absolute or isotropic gain).

Expendable launch vehicle. A launch vehicle whose propulsive stages are used only once.

First stage of a launch. The first 15 minutes of flight.

Fixed service. A radio communication service between specified fixed points.

Fixed station. A station in the fixed service.

Frequency coordination. The process of obtaining the recommendation of a frequency coordinator for a frequency(ies) that will most effectively meet the applicant's needs while minimizing interference to licensees already operating within a given frequency band.

Frequency coordinator. An entity or organization that has been certified by the Commission to recommend frequencies for use by licensees in the Space Launch Services.

Harmful interference. For the purposes of resolving conflicts between stations operating under this part, any emission, radiation, or induction which specifically degrades, obstructs, or interrupts the service provided by such stations.

Itinerant operation. Operation of a radio station at unspecified locations for varying periods of time.

Launch vehicle. A vehicle built to place a payload or human beings from Earth in a suborbital trajectory, in Earth orbit, or otherwise in outer space.

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.

Reentry vehicle. A vehicle designed to return from Earth orbit or outer space to Earth substantially intact. A reentry vehicle is regarded as a launch vehicle in the context of a space launch operation only to the extent that it is being used for launch purposes.

Reusable launch vehicle. A launch vehicle that is designed to return to Earth substantially intact and may be launched more than one time or that contains vehicle stages that may be recovered by a launch operator for future use.

Space launch operations. Any activity that places a launch vehicle, whether an expendable launch vehicle or a reusable launch vehicle or reentry vehicle used for launch, and any payload or human being from Earth in a suborbital trajectory, in Earth orbit, or otherwise in outer space, including prelaunch testing and recovery or reentry of the launch vehicle.

Telecommand. The transmission of non-voice signals for the purpose of remotely controlling a device.

Telemetry. The transmission of non-voice signals for the purpose of automatically indicating or recording measurements at a distance from the measuring instrument. In the context of space launch operations, telemetry is diagnostic information, transmitted from the launch vehicle to ground controller stations during the flight, which allows the ground controller station to track the performance of the launch vehicle.

Universal Licensing System (*ULS*). The consolidated database, application filing system, and processing system for all Wireless Telecommunications Services. The ULS offers Wireless Telecommunications Bureau (WTB) applicants and the general public electronic filing of all applications requests, and full public access to all WTB licensing data.

Subpart B—Applications and Licenses

§ 26.101 Eligibility.

The following entities are eligible for Space Launch Services licenses:

(a) A non-Federal entity that conducts space launch operations; or

(b) A parent of such entity or a subsidiary of such entity if either conducts space launch operations.

§ 26.102 License period; renewal.

Licenses for stations in the Space Launch Services will be issued for a term of ten years from the date of original issuance, or renewal. Prior to expiration of the term of a license, the space launch licensee shall submit to the Commission an application for the renewal in accordance with part 1, subpart F, of this chapter. Such renewal application shall certify that, during the preceding license term, the licensee operated and continues to operate consistent with Commission rules in this chapter and the terms of its existing authorization, including the operation of stations consistent with the terms of frequency coordination performed during its license term.

§ 26.103 Licensing.

The 2025–2110 MHz and 2200–2290 MHz bands are authorized on a non-exclusive nationwide basis for Space Launch Services. Non-exclusive nationwide licenses will serve as a prerequisite for registering launch sites and individual fixed, base, itinerant, and mobile stations, as well as individual coordinated launches. A Space Launch Services licensee cannot operate a launch site and corresponding fixed, base, itinerant, or mobile stations before registering it under its license and may only operate a station after that station has been cleared to operate in a particular frequency band in connection with a particular launch pursuant to the post-grant frequency coordination process set forth in subpart C of this part. Space Launch Services licensees must delete registrations for unused launch sites and unused fixed, base, itinerant, and mobile stations to maintain database integrity and facilitate coordination with other users of the 2025–2110 MHz and 2200–2290 MHz bands.

§ 26.104 Regulatory status.

Licensees are permitted to provide services on a non-common carrier basis. A licensee may render communications services consistent with the regulatory status in its license and with the Commission's rules in this chapter applicable to the Space Launch Services.

§ 26.105 Authorization required.

(a) *General rule.* Stations in the Space Launch Services must be used and operated only in accordance with the service rules set forth in this part, including the terms of the frequency coordination performed pursuant to subpart C of this part, and with a valid authorization granted by the Commission

under the provisions of this part, except as specified in paragraph (b) of this section.

(b) *Restrictions.* 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 Commission 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, 309, and 310.

§ 26.106 Submission and filing of applications.

(a) Applications for authorizations in the Space Launch Services must be filed in the Universal Licensing System (ULS) in accordance with part 1, subpart F, of this chapter. All modifications or renewals of licenses, assignments or transfers of control of licenses or any rights thereunder, and waiver requests associated with any of the foregoing shall be granted only upon an application filed pursuant to part 1, subpart F, as well. Applicants should also refer to the Commission rules regarding the payment of statutory charges (subpart G of part 1) and the use of the FCC Registration Number (FRN) (*see* subpart W of part 1).

(b) All applications and other filings using the application and notification forms listed in part 1, subpart F, of this chapter or associated schedules must be filed electronically in accordance with the electronic filing instructions provided by ULS. The Commission will announce by public notice the deployment date of the service in ULS and provide corresponding filing instructions.

[89 FR 63324, Aug. 5, 2024]

EFFECTIVE DATE NOTE: At 89 FR 63324, Aug. 5, 2024, § 26.106 was added, and the date of effectiveness is delayed indefinitely.

§ 26.107 Restrictions on the operation of stations.

Stations in the Space Launch Services may operate in a particular frequency band only if they have been registered pursuant to this subpart and cleared to operate in that frequency band by the space launch frequency coordinator using the frequency coordination process set forth in subpart C of this part.

§ 26.108 Content of applications; registration of stations.

(a) *Application for authorization.* Each application for authorization required by this part shall be specific and complete with regard to the information requested by the application forms in part 1, subpart F, of this chapter and associated public notice(s). Applicants must provide any additional information requested by the National Telecommunications and Information Administration (NTIA) or the frequency coordinator to complete the frequency coordination process set forth in subpart C of this part.

(b) *Station registration.* Once authorization is granted, Space Launch Services licensees must register in ULS each launch site and each corresponding station (fixed, base, itinerant, or mobile) that will be used in their space launch operations, as well as each individual launch that has completed the frequency coordination process set forth in subpart C of this part.

(c) *Update of data.* Space Launch Services licensees have a continuing obligation to update their licenses and corresponding site and station registration data as soon as the operational or technical details of a launch changes to ensure proper coordination.

[89 FR 63324, Aug. 5, 2024]

EFFECTIVE DATE NOTE: At 89 FR 63324, Aug. 5, 2024, § 26.108 was added, and the date of effectiveness is delayed indefinitely.

§ 26.109 Assignment and transfer.

Licensees may assign or transfer their non-exclusive nationwide licenses upon application to and prior approval from the Commission, and any stations registered under those licenses will remain associated with those licenses unless otherwise agreed upon by the parties to the assignment or transfer and approved by the Commission.

Subpart C—Frequency Coordination

§ 26.201 Policies governing the assignment of frequencies.

(a) Frequencies assigned to Space Launch Services stations are available on a shared basis only and will not be assigned for the exclusive use of any licensee.

(b) Any base, fixed, itinerant, or mobile station operating in the band must comply with the frequency coordination requirements set forth in this subpart.

(c) All applicants and licensees shall cooperate in the selection and use of frequencies for Space Launch Services and comply with the frequency coordination requirements in this subpart in order to minimize the potential for interference and make the most effective use of the authorized facilities. Information regarding registered launch sites, stations, and launches that have completed the frequency coordination process set forth in this subpart will be available at *https://wireless.fcc.gov/uls*. Licensees should examine this information before registering individual launch operations, and make every effort to ensure that their planned launch operations will not interfere or conflict with previously registered operations. Licensees of stations suffering or causing harmful interference are expected to cooperate and resolve this problem by mutually satisfactory arrangements.

§ 26.202 Frequency coordinator requirements.

Once an application for a new Space Launch Services authorization is granted, each Space Launch Services licensee must submit, for each proposed launch operation, the applicable launch site and corresponding fixed, base, itinerant, and mobile stations consistent with this subpart and submit their technical and operational parameters to the space launch frequency coordinator to initiate post-grant frequency coordination. Any changes to the technical and operational parameters for a launch event that occur after completion of post-grant frequency coordination also require coordination, and these changes shall be provided to initiate an updated post-frequency grant coordination.

(a) The space launch frequency coordinator may request, and Space Launch Services licensees are required to provide, all appropriate technical information, system requirements, and justification for requested station parameters when such information is necessary to identify and recommend the most appropriate frequency.

(b) In the 2025–2110 MHz band:

(1) *Site-based local coordination.* (i) The space launch frequency coordinator must initiate a post-grant coordination request for site-specific coordination with the local Broadcast Auxiliary Service (BAS) frequency coordinator, including the provision of all necessary technical and operational parameters for each space launch licensee, to protect BAS, Cable Television Relay Service (CARS), and Local Television Transmission Service (LTTS) operations, as well as Federal entities that have completed coordination with the BAS frequency coordinator.

(ii) The space launch frequency coordinator is not required to initiate a post-grant coordination request for site-specific coordination with the local BAS frequency coordinator if the Space Launch Services licensee provides a showing to the space launch frequency coordinator that:

(A) It has previously coordinated its proposed launch operations with the appropriate local BAS frequency coordinator and continues to comply with any conditions or agreements resulting from such prior coordination, or that it has entered into applicable coordination agreements with co-frequency entities;

(B) It has ascertained that its proposal will not constrain, preclude, nor interfere with incumbents in the band, including BAS, CARS, and LTTS licensees and previously coordinated Federal operations; and

(C) It has demonstrated in a technical showing that its proposed operation will not create more than 0.5 dB increase in the noise threshold of a receiver at a fixed or temporary fixed electronic news gathering (ENG) receive site.

(iii) Upon request, the space launch frequency coordinator and/or the Space Launch Services licensee must provide any additional information requested by the local BAS frequency coordinator regarding a pending recommendation that it has processed but has not yet been granted.

(iv) It is the responsibility of the space launch frequency coordinator to ensure that its frequency recommendations do not conflict with the frequency recommendations of the local BAS frequency coordinator. Should a conflict arise, the affected coordinators are jointly responsible for taking action to resolve the conflict, up to and including notifying the Commission and the National Telecommunications and Information Administration (NTIA) that a launch request must be denied.

(2) *Per-launch coordination with NTIA.* (i) To protect Federal users in the band, the space launch frequency coordinator shall conduct a post-grant, per-launch coordination with NTIA by providing the Space Launch licensee's site and station registration with their corresponding technical and operational parameters to initiate the coordination process for each proposed launch.

(ii) To assist NTIA's review, the space launch frequency coordinator may provide a showing that the operational and technical parameters of a proposed launch are consistent with a prior successful coordination and that the space launch licensee continues to comply with any conditions or agreements resulting from such prior coordination or that its proposed launch is covered by an applicable coordination agreement(s) with co-frequency entities.

(c) In the 2200–2290 MHz band:

(1) *Per-launch coordination with NTIA.* (i) To protect Federal users in the band, the space launch frequency coordinator shall conduct a post-grant, per-launch coordination with NTIA by providing the Space Launch Services licensee's site and station registration with their corresponding technical and operational parameters to initiate the coordination process for each proposed launch.

(ii) To assist NTIA's review, the space launch frequency coordinator may provide a showing that the operational and technical parameters of a proposed launch are consistent with a prior successful coordination and that the space launch licensee continues to comply with any conditions or agreements resulting from such prior coordination or that its proposed launch is covered by an applicable coordination agreement(s) with co-frequency entities.

(2) [Reserved]

[89 FR 63324, Aug. 5, 2024]

EFFECTIVE DATE NOTE: At 89 FR 63324, Aug. 5, 2024, § 26.202 was added, and the date of effectiveness is delayed indefinitely.

Subpart D—Technical Standards.

§ 26.301 Authorized bandwidth.

The Commission shall issue licenses in the Space Launch Services with bandwidths up to and including 5 megahertz, provided that the Commission may issue licenses with a maximum bandwidth exceeding 5 megahertz upon adequate justification from a license applicant explaining why the requested bandwidth is necessary for specific space launch operations, including an explanation of why the applicant's operations cannot be satisfied using a bandwidth of 5 megahertz or less.

[89 FR 63325, Aug. 5, 2024]

EFFECTIVE DATE NOTE: At 89 FR 63325, Aug. 5, 2024, § 26.301 was added, and the date of effectiveness is delayed indefinitely.

§ 26.302 Emission masks.

(a) *2025–2110 MHz.* For frequencies offset from the assigned frequency less than the 50 percent of the necessary bandwidth, no attenuation is required. At a frequency offset equal to 50 percent of the necessary bandwidth, an attenuation of at least 8 dB is required. Frequencies offset more than 50 percent of the necessary bandwidth shall be attenuated by the following mask:

Equation 1 to Paragraph (a)

$$40 \times \log\left(\frac{2 \times |f_d|}{B_n}\right) + 8 \text{ dBsd}$$

Where:

f_d is the frequency displaced from the center of the emission bandwidth.

B_n is the necessary bandwidth, which is determined in accordance with Annex J of the NTIA Manual of Regulations and Procedures for Federal Radio Frequency Management (NTIA Manual) (incorporated by reference, see § 26.305).

dBsd is dB attenuation in a 4 kHz bandwidth, relative to the maximum power in any 4 kHz bandwidth within the necessary bandwidth (0 dBsd), where attenuation in this sense refers to the reduction in level relative to the reference, 0 dBsd, unless otherwise specified.

The unwanted emission mask rolls off at 40 dB per decade to a maximum attenuation of 60 dBsd, at which point it continues on both sides of the carrier for all frequencies beyond this point; see Annex M of the NTIA Manual regarding measurement requirements (incorporated by reference, see § 26.305); for any narrowband or single frequency unwanted emission which is not spread by the modulation process, the required attenuation shall be at least 60 dBc, where dBc is attenuation below the mean transmit power, rather than the dBsd value determined in equation 1 to this paragraph (a).

(b) *2200–2290 MHz.* (1) During the first stage of a launch, all spectral components larger than −[55 + 10xlog(P)] dBc (*i.e.*, larger than −25 dBm) at the transmitter output must be within the spectral mask calculated using the following equation:

Equation 2 to Paragraph (b)(1)

$M(f) = K + 90 \log(R) - 100 \log |f\text{-}fc|$; $|f\text{-}fc| \geq R/m$

Where:

M(f) = power (dBc) at frequency f (MHz).

K = −20 for analog signals.

K = −28 for binary signals.

K = −61 for FQPSK–B, FQPSK–JR, SOQPSK–TG.

K = −73 for ARTM CPM.

fc = transmitter center frequency (MHz).

R = bit rate (Mbps) for digital signals or (Δf +fmax)(MHz) for analog FM signals.

M = number of states in modulating signal (m = 2 for binary signals, m = 4 for quaternary signals and analog signals).

f = peak deviation.

fmax = maximum modulation frequency.

(2) After the first stage of a launch, the emission mask set forth in paragraph (a) of this section shall apply.

§ 26.303 Power limits.

(a) *2025–2110 MHz.* The equivalent isotropically radiated power (EIRP) transmitted in any direction towards the horizon by an earth station in the 2025–2110 MHz band of the Space Launch Services shall not (with limited exceptions) exceed the following limits:

(1) +40 dBW in any 4 kHz band for $\theta \leq 0°$;

(2) $+40+3\theta$ dBW in any 4 kHz band for $0° < \theta \leq 5°$; and

(3) 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) *2200–2290 MHz.* During the first stage of a launch, the EIRP of any station in the 2200–2290 MHz band of the Space Launch Services shall not exceed 25 Watts and the transmitter output power shall not exceed 25 Watts. In addition, the power flux-density at the Earth's surface produced by emissions from a transmitter operating after the first stage of a launch for all conditions and for all methods of modulation shall not exceed the following limits:

(1) −154 dB(W/m2) in any 4 kHz for angles of arrival less than 5° above the horizontal plane;

(2) −154 + 0.5 (δ−5) dB(W/m2) in any 4 kHz for angles of arrival δ (degrees) between 5° and 25° above the horizontal plane; and

(3) −144 dB(W/m2) in any 4 kHz for angles of arrival between 25° and 90° above the horizontal plane.

§ 26.304 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. 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 (see §§ 77.5 through 77.11 of this chapter). For any construction or alteration that would exceed the requirements of § 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.

§ 26.305 Incorporation by reference.

Certain material is incorporated by reference into this subpart with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. All approved incorporation by reference (IBR) material is available for inspection at the Federal Communications Commission (FCC) and at the National Archives and Records Administration (NARA). Contact the FCC at the address indicated in § 0.401(a) of this chapter; phone: (202) 418–0270; email: *oetinfo@fcc.gov*. For information on the availability of this material at NARA, visit *www.archives.gov/federal-register/cfr/ibr-locations* or email *fr.inspection@nara.gov*. The material may be obtained from National Telecommunications and Information Administration (NTIA), Office of Spectrum Management, 1401 Constitution Avenue NW, Room 1087, Washington, DC 20230; phone (202) 482–1850; website: *www.ntia.gov/office/office-spectrum-management-osm:*

(a) NTIA Manual of Regulations and Procedures for Federal Radio Frequency Management, Annex J: Guidance for Determination of Necessary Bandwidth, NTIA Manual of Regulations and Procedures for Federal Radio Frequency Management, January 2023 Revision (of the January 2021 Edition); IBR approved for § 26.302. (Available at *www.ntia.gov/sites/default/files/2023-11/j__2021__edition__rev__2023.pdf*.)

(b) NTIA Manual of Regulations and Procedures for Federal Radio Frequency Management, Annex M: Measurement Methods, January 2023 Revision (of the January 2021 Edition); IBR approved for § 26.302. (Available at *www.ntia.gov/sites/default/files/2023-11/m__2021__edition__rev__2023.pdf*.)

PART 27—MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES

Subpart A—General Information

Sec.

27.1 Basis and purpose.
27.2 Permissible communications.
27.3 Other applicable rule parts.
27.4 Terms and definitions.
27.5 Frequencies.
27.6 Service areas.
27.9 Operation of certificated signal boosters.

APPENDIX A TO SUBPART A TO PART 27—LIST OF PARTIAL ECONOMIC AREAS WITH CORRESPONDING COUNTIES

Subpart B—Applications and Licenses

27.10 Regulatory status.
27.11 Initial authorization.
27.12 Eligibility.
27.13 License period.
27.14 Construction requirements.
27.15 Geographic partitioning and spectrum disaggregation.
27.16 Network access requirements for Block C in the 746–757 and 776–787 MHz bands.

Subpart C—Technical Standards

27.50 Power limits and duty cycle.
27.51 Equipment authorization.
27.52 RF exposure.
27.53 Emission limits.
27.54 Frequency stability.
27.55 Power strength limits.
27.56 Antenna structures; air navigation safety.
27.57 International coordination.
27.58 Interference to BRS/EBS receivers.
27.59–27.62 [Reserved]
27.64 Protection from interference.
27.65 Acceptance of interference in 2000–2020 MHz.
27.66 Discontinuance, reduction, or impairment of service.
27.70 Information exchange.
27.72 Information sharing requirements.
27.73 WCS, AMT, and Goldstone coordination requirements.
27.75 Basic interoperability requirement.
27.77 Restriction on mobile and portable equipment in the 1695–1710 MHz and 1755–1780 MHz bands.

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.
27.202–27.208 [Reserved]
27.209 Designated entities; bidding credits; unjust enrichment.
27.210 Definitions.

Subpart E—Application, Licensing, and Processing Rules for WCS

27.301 [Reserved]
27.302 Eligibility.
27.303 Upper 700 MHz commercial and public safety coordination zone.
27.304–27.307 [Reserved]
27.308 Technical content of applications.
27.310–27.320 [Reserved]
27.321 Mutually exclusive applications.
27.322–27.325 [Reserved]

Subpart F—Competitive Bidding Procedures for the 698–806 MHz Band

27.501 746–758 MHz, 775–788 MHz, and 805–806 MHz bands subject to competitive bidding.
27.502 Designated entities.

Subpart G—Guard Band Service (746–747/776–777 MHz and 762–764/792–794 MHz Bands)

27.601 Authority and coordination requirements.
27.602 Lease agreements.
27.604 Limitation on licenses won at auction.
27.607 Performance requirements and annual reporting requirement.

Subpart H—Competitive Bidding Procedures for the 698–746 MHz Band

27.701 698–746 MHz bands subject to competitive bidding.
27.702 Designated entities.

Subpart I—1.4 GHz Band

27.801 Scope.
27.802 Permissible communications.
27.803 Coordination requirements.
27.804 Field strength limits at WMTS facility.
27.805 Geographic partitioning and spectrum disaggregation.
27.806 1.4 GHz service licenses subject to competitive bidding.
27.807 Designated entities.

Subpart J—1670–1675 MHz Band

27.901 Scope.
27.902 Permissible communications.
27.903 Coordination requirements.
27.904 Geographic partitioning and spectrum disaggregation.
27.905 1670–1675 MHz service licenses subject to competitive bidding.
27.906 Designated entities.

Subpart K—1915–1920 MHz and 1995–2000 MHz

LICENSING AND COMPETITIVE BIDDING PROVISIONS

27.1001 1915–1920 MHz and 1995–2000 MHz bands subject to competitive bidding.
27.1002 Designated entities in the 1915–1920 MHz and 1995–2000 MHz bands

REIMBURSEMENT OBLIGATION OF LICENSEES AT 1915–1920 MHZ AND 1995–2000 MHZ

27.1021 Reimbursement obligation of licensees at 1915–1920 MHz.
27.1031 Reimbursement obligation of licensees at 1995–2000 MHz.

27.1041 Termination of cost-sharing obligations.

Subpart L—1695–1710 MHz, 1710–1755 MHz, 1755–1780 MHz, 2110–2155 MHz, 2155–2180 MHz, 2180–2200 MHz Bands

LICENSING AND COMPETITIVE BIDDING PROVISIONS

27.1101 1710–1755 MHz and 2110–2155 MHz bands subject to competitive bidding.
27.1102 Designated Entities in the 1710–1755 MHz and 2110–2155 MHz bands.
27.1103 2000–2020 MHz and 2180–2200 MHz bands subject to competitive bidding.
27.1104 Designated Entities in the 2000–2020 MHz and 2180–2200 MHz bands.
27.1105 1695–1710 MHz, 1755–1780 MHz and 2155–2180 MHz bands subject to competitive bidding.
27.1106 Designated Entities in the 1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz bands.

RELOCATION OF INCUMBENTS

27.1111 Relocation of fixed microwave service licensees in the 2110–2150 and 2160–2200 MHz bands.

PROTECTION OF INCUMBENT OPERATIONS

27.1131 Protection of part 101 operations.
27.1132 Protection of incumbent operations in the 2150–2160/62 MHz band.
27.1133 Protection of part 74 and part 78 operations.
27.1134 Protection of Federal Government operations.
27.1135 Protection of non-Federal Government Meteorological-Satellite operations.
27.1136 Protection of mobile satellite services in the 2000–2020 MHz and 2180–2200 MHz bands.

COST-SHARING POLICIES GOVERNING MICROWAVE RELOCATION FROM THE 2110–2150 MHZ AND 2160–2200 MHZ BANDS

27.1160 Cost-sharing requirements for AWS.
27.1162 Administration of the Cost-Sharing Plan.
27.1164 The cost-sharing formula.
27.1166 Reimbursement under the Cost-Sharing Plan.
27.1168 Triggering a Reimbursement Obligation.
27.1170 Payment issues.
27.1172 Dispute Resolution Under the Cost-Sharing Plan.
27.1174 Termination of Cost-Sharing Obligations.

COST-SHARING POLICIES GOVERNING BROADBAND RADIO SERVICE RELOCATION FROM THE 2150–2160/62 MHZ BAND

27.1176 Cost-sharing requirements for AWS in the 2150–2160/62 MHz band.
27.1178 Administration of the Cost-Sharing Plan.
27.1180 The cost-sharing formula.
27.1182 Reimbursement under the Cost-Sharing Plan.
27.1184 Triggering a reimbursement obligation.
27.1186 Payment issues.
27.1188 Dispute resolution under the Cost-Sharing Plan.
27.1190 Termination of cost-sharing obligations.

Subpart M—Broadband Radio Service and Educational Broadband Service

27.1200 Change to BRS and EBS.
27.1201 [Reserved]
27.1202 Cable/BRS cross-ownership.
27.1203 [Reserved]
27.1204 EBS Tribal priority filing window.
27.1205 EBS renewal standard.
27.1206 Geographic service area.
27.1207 Service areas and authorizations.
27.1208 Geographic area licensing.
27.1209 Reversion and overlay rights.
27.1210 Remote control operation.
27.1211 Unattended operation.
27.1212 License term.
27.1213 Designated entity provisions for BRS in Commission auctions commencing prior to January 1, 2004.
27.1214 EBS grandfathered leases.
27.1215 BRS grandfathered leases.
27.1216 Grandfathered E and F group EBS licenses.
27.1217 Competitive bidding procedures for the Broadband Radio Service and the Educational Broadband Service.
27.1218 Broadband Radio Service designated entity provisions.
27.1219 Educational Broadband Service designated entity provisions.

TECHNICAL STANDARDS

27.1220 Transmission standards.
27.1221 Interference protection.
27.1222 Operations in the 2568–2572 and 2614–2618 bands.

RELOCATION PROCEDURES FOR THE 2150–2160/62 MHZ BAND

27.1250 Transition of the 2150–2160/62 MHz band from the Broadband Radio Service to the Advanced Wireless Service.
27.1251 Mandatory negotiations.
27.1252 Involuntary relocation procedures.
27.1253 Sunset provisions.
27.1254 Eligibility.

27.1255 Relocation criteria for Broadband Radio Service licensees in the 2150–2160/62 MHz band.

Subpart N—600 MHz Band

COMPETITIVE BIDDING PROVISIONS

27.1300 600 MHz band subject to competitive bidding.
27.1301 Designated entities in the 600 MHz band.

COORDINATION/NOTIFICATION REQUIREMENTS

27.1320 Notification to white space database administrators.
27.1321 Requirements for operation of base and fixed stations in the 600 MHz downlink band in close proximity to Radio Astronomy Observatories.

Subpart O—3.7 GHz Service (3700–3980 MHz)

27.1401 Licenses in the 3.7 GHz Service are subject to competitive bidding.
27.1402 Designated entities in the 3.7 GHz Service.
27.1411 Transition of the 3700–3980 MHz band to the 3.7 GHz Service.
27.1412 Transition Plan.
27.1413 Relocation Coordinator.
27.1414 Relocation Payment Clearinghouse.
27.1415 Documentation of expenses.
27.1416 Reimbursable costs.
27.1417 Reimbursement fund.
27.1418 Payment obligations.
27.1419 Lump sum payment for earth station opt out.
27.1420 Cost-sharing formula.
27.1421 Disputes over costs and cost-sharing.
27.1422 Accelerated relocation payment.
27.1423 Protection of incumbent operations.
27.1424 Agreements between 3.7 GHz Service licensees and C-Band earth station operators.

Subpart P—Regulations Governing Licensing and Use of 900 MHz Broadband Service in the 897.5–900.5 MHz and 936.5–939.5 MHz Bands

27.1500 Scope.
27.1501 Definitions.
27.1502 Permanent discontinuance of 900 MHz broadband licenses.
27.1503 Broadband license eligibility and application requirements.
27.1504 Mandatory relocation.
27.1505 Performance requirements.
27.1506 Frequencies.
27.1507 Effective radiated power limits for 900 MHz broadband systems.
27.1508 Field strength limit.
27.1509 Emission limits.
27.1510 Unacceptable interference to narrowband 900 MHz licensees from 900 MHz broadband licensees.

Subpart Q—3.45 GHz Service (3450–3550 MHz)

27.1600 3450–3550 MHz band subject to competitive bidding.
27.1601 Designated entities in the 3450–3550 MHz band.
27.1602 Incumbent Federal operations.
27.1603 Coordination procedures.
27.1604 Reimbursement of relocation expenses of non-Federal radiolocation incumbents.
27.1605 Reimbursement clearinghouse.
27.1606 Aggregation of 3450–3550 MHz band licenses.
27.1607 Information sharing for time division duplex synchronization.

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) 617–652 MHz and 663–698 MHz.
(15) 3700–3980 MHz.

(16) 897.5–900.5 MHz and 936.5–939.5 MHz.

(17) 3450–3550 MHz.

(c) *Scope.* The rules in this part apply only to stations authorized under this part or authorized under another part of this chapter on frequencies or bands transitioning to authorizations under this part.

[62 FR 9658, Mar. 3, 1997]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §27.1, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.govinfo.gov.

§ 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.

3.45 GHz Service. A radiocommunication service licensed under this part for the frequency bands specified in § 27.5(o) (3450–3550 MHz band).

3.7 GHz Service. A radiocommunication service licensed under this part for the frequency bands specified in § 27.5(m) (3700–3980 MHz band).

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).

Commence operations. A 600 MHz Band licensee is deemed to commence operations when it begins pre-launch site activation and commissioning tests using permanent base station equipment, antennas and/or tower locations as part of its site and system optimization in the area of its planned commercial service infrastructure deployment.

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 radiocommunication service licensed under this part for the frequency bands specified in §27.5(i).

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.govinfo.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) [Reserved]

(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]

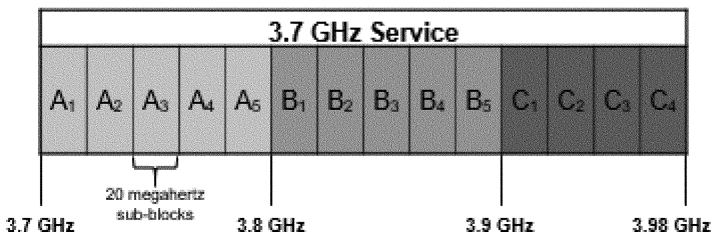
(k) *1915–1920 MHz and 1995–2000 MHz bands.* The paired 1915–1920 MHz and 1995–2000 MHz bands are available for assignment on an Economic Area (EA) basis.

(l) *600 MHz band.* The 600 MHz band (617–652 MHz and 663–698 MHz) has seven pairs of 5 megahertz channel blocks available for assignment on a Partial Economic Area basis as follows:

Block A: 617–622 MHz and 663–668 MHz;
Block B: 622–627 MHz and 668–673 MHz;
Block C: 627–632 MHz and 673–678 MHz;
Block D: 632–637 MHz and 678–683 MHz;
Block E: 637–642 MHz and 683–688 MHz;
Block F: 642–647 MHz and 688–693 MHz; and
Block G: 647–652 MHz and 693–698 MHz.

(m) *3700–3980 MHz band.* The 3.7 GHz Service is comprised of Block A (3700–3800 MHz); Block B (3800–3900 MHz); and Block C (3900–3980 MHz). These blocks are licensed as 14 individual 20 megahertz sub-blocks available for assignment in the contiguous United States on a Partial Economic Area basis, *see* §27.6(m), as follows:

Figure 1 to paragraph (m)



(n) *900 MHz broadband.* The paired 897.5–900.5 MHz and 936.5–939.5 MHz bands are available for assignment on a geographic basis. For operations in the 897.5–900.5 MHz and 936.5–939.5 MHz bands (designated as Channels 120–360 in section 90.613 of this chapter), no new applications will be accepted in transitioned markets for narrowband systems under part 90, subpart S of this chapter.

(o) *3450–3550 MHz band.* The 3.45 GHz Service is licensed as ten individual 10 megahertz blocks available for assignment in the contiguous United States on a Partial Economic Area basis, *see* § 27.6(n).

[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.govinfo.gov*.

§ 27.6 Service areas.

(a) *Composition of service areas.* 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 are available on the FCC's website at *www.fcc.gov/auctions* through the ''Maps'' submenu.

(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.

REAGs	MEAs	EAs
	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 (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 through the Federal Communications Commission's Reference Information Center. These maps and data are also available on the FCC website at *https://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 *Wireless Telecommunications Bureau Provides Details About Partial Economic Areas,* Public Notice, 29 FCC Rcd 6491, App. B (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 (PEA 416) 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.

(m) *3700–3980 MHz Band.* Service areas in the 3.7 GHz Service are based on Partial Economic Areas (PEAs) as defined by appendix A to this subpart (*see Wireless Telecommunications Bureau Provides Details About Partial Economic Areas,* DA 14–759, Public Notice, released June 2, 2014, for more information). The 3.7 GHz Service will be licensed in the contiguous United States, *i.e.*, the contiguous 48 states and the District of Columbia as defined by Partial Economic Areas Nos. 1–41, 43–211, 213–263, 265–297, 299–359, and 361–411. 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 3.7 GHz Service will not be licensed for the following PEAs:

TABLE 3 TO PARAGRAPH (m)

PEA No.	PEA name
42	Honolulu, HI.
212	Anchorage, AK.
264	Kodiak, AK.
298	Fairbanks, AK.
360	Juneau, AK.
412	Puerto Rico.
413	Guam-Northern Mariana Islands.
414	US Virgin Islands.
415	American Samoa.

(n) *3450–3550 MHz Band.* Service areas in the 3.45 GHz Service are based on Partial Economic Areas (PEAs) as defined by appendix A to this subpart.

[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.govinfo.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]

APPENDIX A TO SUBPART A OF PART 27—LIST OF PARTIAL ECONOMIC AREAS WITH CORRESPONDING COUNTIES

PEA No.	Federal Information Processing System No.	County name	State
1	09001	Fairfield	CT

PEA No.	Federal Information Processing System No.	County name	State
1	09003	Hartford	CT
1	09005	Litchfield	CT
1	09007	Middlesex	CT
1	09009	New Haven	CT
1	09011	New London	CT
1	09013	Tolland	CT
1	09015	Windham	CT
1	34003	Bergen	NJ
1	34013	Essex	NJ
1	34017	Hudson	NJ
1	34019	Hunterdon	NJ
1	34021	Mercer	NJ
1	34023	Middlesex	NJ
1	34025	Monmouth	NJ
1	34027	Morris	NJ
1	34029	Ocean	NJ
1	34031	Passaic	NJ
1	34035	Somerset	NJ
1	34037	Sussex	NJ
1	34039	Union	NJ
1	34041	Warren	NJ
1	36005	Bronx	NY
1	36027	Dutchess	NY
1	36047	Kings	NY
1	36059	Nassau	NY
1	36061	New York	NY
1	36071	Orange	NY
1	36079	Putnam	NY
1	36081	Queens	NY
1	36085	Richmond	NY
1	36087	Rockland	NY
1	36103	Suffolk	NY
1	36105	Sullivan	NY
1	36111	Ulster	NY
1	36119	Westchester	NY
1	42025	Carbon	PA
1	42069	Lackawanna	PA
1	42077	Lehigh	PA
1	42079	Luzerne	PA
1	42089	Monroe	PA
1	42095	Northampton	PA
2	06029	Kern	CA
2	06037	Los Angeles	CA
2	06059	Orange	CA
2	06065	Riverside	CA
2	06071	San Bernardino	CA
2	06079	San Luis Obispo	CA
2	06083	Santa Barbara	CA
2	06111	Ventura	CA
3	17031	Cook	IL
3	17043	DuPage	IL
3	17063	Grundy	IL
3	17089	Kane	IL
3	17091	Kankakee	IL
3	17093	Kendall	IL
3	17097	Lake	IL
3	17111	McHenry	IL
3	17197	Will	IL
3	18091	La Porte	IN
3	18089	Lake	IN
3	18127	Porter	IN
4	06001	Alameda	CA
4	06013	Contra Costa	CA
4	06041	Marin	CA
4	06053	Monterey	CA
4	06055	Napa	CA
4	06075	San Francisco	CA
4	06077	San Joaquin	CA
4	06081	San Mateo	CA
4	06085	Santa Clara	CA
4	06087	Santa Cruz	CA
4	06095	Solano	CA
4	06097	Sonoma	CA
4	06099	Stanislaus	CA
5	11001	District of Columbia	DC
5	24003	Anne Arundel	MD
5	24005	Baltimore	MD
5	24510	Baltimore City	MD
5	24009	Calvert	MD
5	24011	Caroline	MD
5	24013	Carroll	MD
5	24017	Charles	MD
5	24019	Dorchester	MD
5	24025	Harford	MD
5	24027	Howard	MD
5	24029	Kent	MD
5	24031	Montgomery	MD
5	24033	Prince George's	MD
5	24035	Queen Anne's	MD
5	24037	St. Mary's	MD
5	24041	Talbot	MD
5	51510	Alexandria City	VA
5	51013	Arlington	VA
5	51059	Fairfax	VA
5	51600	Fairfax City	VA
5	51610	Falls Church City	VA
5	51107	Loudoun	VA
5	51683	Manassas City	VA
5	51685	Manassas Park City	VA
5	51153	Prince William	VA
6	10001	Kent	DE
6	10003	New Castle	DE
6	24015	Cecil	MD
6	34001	Atlantic	NJ
6	34005	Burlington	NJ
6	34007	Camden	NJ
6	34009	Cape May	NJ
6	34011	Cumberland	NJ
6	34015	Gloucester	NJ
6	34033	Salem	NJ
6	42011	Berks	PA
6	42017	Bucks	PA
6	42029	Chester	PA
6	42045	Delaware	PA
6	42071	Lancaster	PA
6	42091	Montgomery	PA
6	42101	Philadelphia	PA
7	25001	Barnstable	MA
7	25005	Bristol	MA
7	25007	Dukes	MA
7	25009	Essex	MA
7	25017	Middlesex	MA
7	25019	Nantucket	MA
7	25021	Norfolk	MA
7	25023	Plymouth	MA
7	25025	Suffolk	MA
7	25027	Worcester	MA
7	44001	Bristol	RI
7	44003	Kent	RI
7	44005	Newport	RI
7	44007	Providence	RI
7	44009	Washington	RI
8	48085	Collin	TX
8	48113	Dallas	TX
8	48121	Denton	TX
8	48139	Ellis	TX
8	48181	Grayson	TX
8	48221	Hood	TX
8	48251	Johnson	TX
8	48257	Kaufman	TX
8	48367	Parker	TX
8	48397	Rockwall	TX
8	48439	Tarrant	TX
8	48497	Wise	TX

PEA No.	Federal Information Processing System No.	County name	State
9	12011	Broward	FL
9	12043	Glades	FL
9	12051	Hendry	FL
9	12061	Indian River	FL
9	12085	Martin	FL
9	12086	Miami-Dade	FL
9	12087	Monroe	FL
9	12093	Okeechobee	FL
9	12099	Palm Beach	FL
9	12111	St. Lucie	FL
10	48039	Brazoria	TX
10	48071	Chambers	TX
10	48157	Fort Bend	TX
10	48167	Galveston	TX
10	48201	Harris	TX
10	48291	Liberty	TX
10	48339	Montgomery	TX
10	48473	Waller	TX
11	13011	Banks	GA
11	13013	Barrow	GA
11	13035	Butts	GA
11	13057	Cherokee	GA
11	13059	Clarke	GA
11	13063	Clayton	GA
11	13067	Cobb	GA
11	13085	Dawson	GA
11	13089	DeKalb	GA
11	13097	Douglas	GA
11	13105	Elbert	GA
11	13113	Fayette	GA
11	13117	Forsyth	GA
11	13119	Franklin	GA
11	13121	Fulton	GA
11	13133	Greene	GA
11	13135	Gwinnett	GA
11	13137	Habersham	GA
11	13139	Hall	GA
11	13147	Hart	GA
11	13151	Henry	GA
11	13157	Jackson	GA
11	13159	Jasper	GA
11	13187	Lumpkin	GA
11	13195	Madison	GA
11	13211	Morgan	GA
11	13217	Newton	GA
11	13219	Oconee	GA
11	13221	Oglethorpe	GA
11	13223	Paulding	GA
11	13241	Rabun	GA
11	13247	Rockdale	GA
11	13257	Stephens	GA
11	13265	Taliaferro	GA
11	13297	Walton	GA
11	13311	White	GA
12	26049	Genesee	MI
12	26087	Lapeer	MI
12	26093	Livingston	MI
12	26099	Macomb	MI
12	26125	Oakland	MI
12	26155	Shiawassee	MI
12	26147	St. Clair	MI
12	26161	Washtenaw	MI
12	26163	Wayne	MI
13	12009	Brevard	FL
13	12017	Citrus	FL
13	12035	Flagler	FL
13	12049	Hardee	FL
13	12055	Highlands	FL
13	12069	Lake	FL
13	12083	Marion	FL
13	12095	Orange	FL
13	12097	Osceola	FL
13	12105	Polk	FL
13	12117	Seminole	FL
13	12119	Sumter	FL
13	12127	Volusia	FL
14	39007	Ashtabula	OH
14	39019	Carroll	OH
14	39029	Columbiana	OH
14	39035	Cuyahoga	OH
14	39043	Erie	OH
14	39055	Geauga	OH
14	39077	Huron	OH
14	39085	Lake	OH
14	39093	Lorain	OH
14	39099	Mahoning	OH
14	39103	Medina	OH
14	39133	Portage	OH
14	39151	Stark	OH
14	39153	Summit	OH
14	39155	Trumbull	OH
14	42085	Mercer	PA
15	04013	Maricopa	AZ
16	53009	Clallam	WA
16	53031	Jefferson	WA
16	53033	King	WA
16	53035	Kitsap	WA
16	53053	Pierce	WA
16	53061	Snohomish	WA
17	27003	Anoka	MN
17	27009	Benton	MN
17	27019	Carver	MN
17	27025	Chisago	MN
17	27037	Dakota	MN
17	27053	Hennepin	MN
17	27123	Ramsey	MN
17	27139	Scott	MN
17	27141	Sherburne	MN
17	27145	Stearns	MN
17	27163	Washington	MN
17	27171	Wright	MN
17	55109	St. Croix	WI
18	06073	San Diego	CA
19	41003	Benton	OR
19	41005	Clackamas	OR
19	41007	Clatsop	OR
19	41009	Columbia	OR
19	41041	Lincoln	OR
19	41043	Linn	OR
19	41047	Marion	OR
19	41051	Multnomah	OR
19	41053	Polk	OR
19	41057	Tillamook	OR
19	41067	Washington	OR
19	41071	Yamhill	OR
19	53011	Clark	WA
19	53015	Cowlitz	WA
19	53069	Wahkiakum	WA
20	08001	Adams	CO
20	08005	Arapahoe	CO
20	08013	Boulder	CO
20	08014	Broomfield	CO
20	08031	Denver	CO
20	08035	Douglas	CO
20	08047	Gilpin	CO
20	08059	Jefferson	CO
21	12053	Hernando	FL
21	12057	Hillsborough	FL
21	12101	Pasco	FL
21	12103	Pinellas	FL
22	06005	Amador	CA
22	06007	Butte	CA
22	06011	Colusa	CA
22	06017	El Dorado	CA

PEA No.	Federal Information Processing System No.	County name	State
22	06021	Glenn	CA
22	06057	Nevada	CA
22	06061	Placer	CA
22	06067	Sacramento	CA
22	06101	Sutter	CA
22	06113	Yolo	CA
22	06115	Yuba	CA
23	42003	Allegheny	PA
23	42005	Armstrong	PA
23	42007	Beaver	PA
23	42019	Butler	PA
23	42063	Indiana	PA
23	42073	Lawrence	PA
23	42125	Washington	PA
23	42129	Westmoreland	PA
24	17005	Bond	IL
24	17027	Clinton	IL
24	17121	Marion	IL
24	17133	Monroe	IL
24	17163	St. Clair	IL
24	29071	Franklin	MO
24	29099	Jefferson	MO
24	29183	St. Charles	MO
24	29189	St. Louis	MO
24	29510	St. Louis City	MO
25	21015	Boone	KY
25	21023	Bracken	KY
25	21037	Campbell	KY
25	21077	Gallatin	KY
25	21081	Grant	KY
25	21117	Kenton	KY
25	21135	Lewis	KY
25	21161	Mason	KY
25	21191	Pendleton	KY
25	39001	Adams	OH
25	39015	Brown	OH
25	39017	Butler	OH
25	39025	Clermont	OH
25	39027	Clinton	OH
25	39061	Hamilton	OH
25	39071	Highland	OH
25	39165	Warren	OH
26	04015	Mohave	AZ
26	32003	Clark	NV
27	49011	Davis	UT
27	49035	Salt Lake	UT
27	49045	Tooele	UT
27	49049	Utah	UT
27	49057	Weber	UT
28	48013	Atascosa	TX
28	48029	Bexar	TX
28	48091	Comal	TX
28	48187	Guadalupe	TX
29	12001	Alachua	FL
29	12003	Baker	FL
29	12007	Bradford	FL
29	12019	Clay	FL
29	12023	Columbia	FL
29	12029	Dixie	FL
29	12031	Duval	FL
29	12041	Gilchrist	FL
29	12047	Hamilton	FL
29	12067	Lafayette	FL
29	12075	Levy	FL
29	12089	Nassau	FL
29	12107	Putnam	FL
29	12109	St. Johns	FL
29	12121	Suwannee	FL
29	12125	Union	FL
30	20091	Johnson	KS
30	20209	Wyandotte	KS
30	29037	Cass	MO
30	29047	Clay	MO
30	29095	Jackson	MO
30	29165	Platte	MO
30	29177	Ray	MO
31	18011	Boone	IN
31	18035	Delaware	IN
31	18057	Hamilton	IN
31	18063	Hendricks	IN
31	18081	Johnson	IN
31	18095	Madison	IN
31	18097	Marion	IN
32	21047	Christian	KY
32	47021	Cheatham	TN
32	47037	Davidson	TN
32	47043	Dickson	TN
32	47125	Montgomery	TN
32	47147	Robertson	TN
32	47149	Rutherford	TN
32	47165	Sumner	TN
32	47187	Williamson	TN
32	47189	Wilson	TN
33	37053	Currituck	NC
33	51550	Chesapeake City	VA
33	51620	Franklin City	VA
33	51073	Gloucester	VA
33	51650	Hampton City	VA
33	51093	Isle of Wight	VA
33	51095	James City	VA
33	51115	Mathews	VA
33	51700	Newport News City	VA
33	51710	Norfolk City	VA
33	51735	Poquoson City	VA
33	51740	Portsmouth City	VA
33	51175	Southampton	VA
33	51800	Suffolk City	VA
33	51181	Surry	VA
33	51810	Virginia Beach City	VA
33	51830	Williamsburg City	VA
33	51199	York	VA
34	06019	Fresno	CA
34	06031	Kings	CA
34	06039	Madera	CA
34	06107	Tulare	CA
35	48209	Hays	TX
35	48331	Milam	TX
35	48453	Travis	TX
35	48491	Williamson	TX
36	22051	Jefferson Parish	LA
36	22057	Lafourche Parish	LA
36	22071	Orleans Parish	LA
36	22075	Plaquemines Parish	LA
36	22087	St. Bernard Parish	LA
36	22089	St. Charles Parish	LA
36	22093	St. James Parish	LA
36	22095	St. John the Baptist Parish	LA
36	22103	St. Tammany Parish	LA
36	22105	Tangipahoa Parish	LA
36	22109	Terrebonne Parish	LA
36	22117	Washington Parish	LA
36	28109	Pearl River	MS
37	39041	Delaware	OH
37	39045	Fairfield	OH
37	39049	Franklin	OH
37	39097	Madison	OH
37	39129	Pickaway	OH
38	55079	Milwaukee	WI
38	55089	Ozaukee	WI
38	55131	Washington	WI
38	55133	Waukesha	WI
39	40017	Canadian	OK
39	40027	Cleveland	OK
39	40031	Comanche	OK

PEA No.	Federal Information Processing System No.	County name	State
39	40051	Grady	OK
39	40081	Lincoln	OK
39	40083	Logan	OK
39	40087	McClain	OK
39	40109	Oklahoma	OK
39	40125	Pottawatomie	OK
40	01015	Calhoun	AL
40	01073	Jefferson	AL
40	01117	Shelby	AL
40	01115	St. Clair	AL
40	01121	Talladega	AL
40	01125	Tuscaloosa	AL
40	01127	Walker	AL
41	36011	Cayuga	NY
41	36017	Chenango	NY
41	36023	Cortland	NY
41	36025	Delaware	NY
41	36043	Herkimer	NY
41	36053	Madison	NY
41	36065	Oneida	NY
41	36067	Onondaga	NY
41	36075	Oswego	NY
41	36077	Otsego	NY
41	36097	Schuyler	NY
41	36109	Tompkins	NY
42	15001	Hawaii	HI
42	15003	Honolulu	HI
42	15005	Kalawao	HI
42	15007	Kauai	HI
42	15009	Maui	HI
43	37071	Gaston	NC
43	37119	Mecklenburg	NC
43	37179	Union	NC
44	36037	Genesee	NY
44	36051	Livingston	NY
44	36055	Monroe	NY
44	36069	Ontario	NY
44	36073	Orleans	NY
44	36099	Seneca	NY
44	36101	Steuben	NY
44	36117	Wayne	NY
44	36121	Wyoming	NY
44	36123	Yates	NY
45	37063	Durham	NC
45	37135	Orange	NC
45	37183	Wake	NC
46	05005	Baxter	AR
46	05009	Boone	AR
46	05015	Carroll	AR
46	05023	Cleburne	AR
46	05029	Conway	AR
46	05045	Faulkner	AR
46	05049	Fulton	AR
46	05063	Independence	AR
46	05065	Izard	AR
46	05067	Jackson	AR
46	05069	Jefferson	AR
46	05071	Johnson	AR
46	05085	Lonoke	AR
46	05089	Marion	AR
46	05101	Newton	AR
46	05105	Perry	AR
46	05115	Pope	AR
46	05117	Prairie	AR
46	05119	Pulaski	AR
46	05125	Saline	AR
46	05129	Searcy	AR
46	05135	Sharp	AR
46	05137	Stone	AR
46	05141	Van Buren	AR
46	05145	White	AR
46	05147	Woodruff	AR
46	05149	Yell	AR
47	48061	Cameron	TX
47	48215	Hidalgo	TX
47	48427	Starr	TX
47	48489	Willacy	TX
48	42001	Adams	PA
48	42041	Cumberland	PA
48	42043	Dauphin	PA
48	42067	Juniata	PA
48	42075	Lebanon	PA
48	42099	Perry	PA
48	42133	York	PA
49	36001	Albany	NY
49	36021	Columbia	NY
49	36035	Fulton	NY
49	36039	Greene	NY
49	36041	Hamilton	NY
49	36057	Montgomery	NY
49	36083	Rensselaer	NY
49	36091	Saratoga	NY
49	36093	Schenectady	NY
49	36095	Schoharie	NY
49	36113	Warren	NY
49	36115	Washington	NY
50	37149	Polk	NC
50	45007	Anderson	SC
50	45021	Cherokee	SC
50	45045	Greenville	SC
50	45073	Oconee	SC
50	45077	Pickens	SC
50	45083	Spartanburg	SC
50	45087	Union	SC
51	18019	Clark	IN
51	18043	Floyd	IN
51	18077	Jefferson	IN
51	18143	Scott	IN
51	21029	Bullitt	KY
51	21041	Carroll	KY
51	21103	Henry	KY
51	21111	Jefferson	KY
51	21185	Oldham	KY
51	21211	Shelby	KY
51	21223	Trimble	KY
52	21019	Boyd	KY
52	21043	Carter	KY
52	21063	Elliott	KY
52	21089	Greenup	KY
52	39053	Gallia	OH
52	39087	Lawrence	OH
52	39105	Meigs	OH
52	39167	Washington	OH
52	54005	Boone	WV
52	54007	Braxton	WV
52	54011	Cabell	WV
52	54013	Calhoun	WV
52	54015	Clay	WV
52	54019	Fayette	WV
52	54021	Gilmer	WV
52	54035	Jackson	WV
52	54039	Kanawha	WV
52	54043	Lincoln	WV
52	54045	Logan	WV
52	54053	Mason	WV
52	54067	Nicholas	WV
52	54073	Pleasants	WV
52	54079	Putnam	WV
52	54081	Raleigh	WV
52	54085	Ritchie	WV
52	54087	Roane	WV
52	54089	Summers	WV
52	54099	Wayne	WV
52	54101	Webster	WV

PEA No.	Federal Information Processing System No.	County name	State
52	54105	Wirt	WV
52	54107	Wood	WV
52	54109	Wyoming	WV
53	04003	Cochise	AZ
53	04019	Pima	AZ
53	04023	Santa Cruz	AZ
54	36029	Erie	NY
54	36063	Niagara	NY
55	01033	Colbert	AL
55	01049	DeKalb	AL
55	01055	Etowah	AL
55	01059	Franklin	AL
55	01071	Jackson	AL
55	01077	Lauderdale	AL
55	01079	Lawrence	AL
55	01083	Limestone	AL
55	01089	Madison	AL
55	01095	Marshall	AL
55	01103	Morgan	AL
55	47103	Lincoln	TN
56	26005	Allegan	MI
56	26015	Barry	MI
56	26023	Branch	MI
56	26025	Calhoun	MI
56	26067	Ionia	MI
56	26077	Kalamazoo	MI
56	26107	Mecosta	MI
56	26117	Montcalm	MI
56	26121	Muskegon	MI
56	26123	Newaygo	MI
56	26127	Oceana	MI
56	26159	Van Buren	MI
57	51036	Charles City	VA
57	51041	Chesterfield	VA
57	51057	Essex	VA
57	51075	Goochland	VA
57	51085	Hanover	VA
57	51087	Henrico	VA
57	51097	King and Queen	VA
57	51101	King William	VA
57	51103	Lancaster	VA
57	51119	Middlesex	VA
57	51127	New Kent	VA
57	51133	Northumberland	VA
57	51145	Powhatan	VA
57	51159	Richmond	VA
57	51760	Richmond City	VA
58	17023	Clark	IL
58	18007	Benton	IN
58	18015	Carroll	IN
58	18017	Cass	IN
58	18021	Clay	IN
58	18023	Clinton	IN
58	18045	Fountain	IN
58	18055	Greene	IN
58	18067	Howard	IN
58	18093	Lawrence	IN
58	18103	Miami	IN
58	18105	Monroe	IN
58	18107	Montgomery	IN
58	18109	Morgan	IN
58	18117	Orange	IN
58	18119	Owen	IN
58	18121	Parke	IN
58	18133	Putnam	IN
58	18153	Sullivan	IN
58	18157	Tippecanoe	IN
58	18159	Tipton	IN
58	18165	Vermillion	IN
58	18167	Vigo	IN
58	18171	Warren	IN
58	18181	White	IN
59	05035	Crittenden	AR
59	47157	Shelby	TN
59	47167	Tipton	TN
60	33001	Belknap	NH
60	33011	Hillsborough	NH
60	33013	Merrimack	NH
60	33015	Rockingham	NH
60	33017	Strafford	NH
61	39039	Defiance	OH
61	39051	Fulton	OH
61	39063	Hancock	OH
61	39065	Hardin	OH
61	39069	Henry	OH
61	39095	Lucas	OH
61	39123	Ottawa	OH
61	39125	Paulding	OH
61	39143	Sandusky	OH
61	39147	Seneca	OH
61	39171	Williams	OH
61	39173	Wood	OH
61	39175	Wyandot	OH
62	39021	Champaign	OH
62	39023	Clark	OH
62	39057	Greene	OH
62	39109	Miami	OH
62	39113	Montgomery	OH
62	39135	Preble	OH
63	40021	Cherokee	OK
63	40037	Creek	OK
63	40097	Mayes	OK
63	40113	Osage	OK
63	40131	Rogers	OK
63	40143	Tulsa	OK
63	40145	Wagoner	OK
64	18039	Elkhart	IN
64	18049	Fulton	IN
64	18085	Kosciusko	IN
64	18087	Lagrange	IN
64	18099	Marshall	IN
64	18131	Pulaski	IN
64	18141	St. Joseph	IN
64	18149	Starke	IN
64	26021	Berrien	MI
64	26027	Cass	MI
64	26149	St. Joseph	MI
65	12021	Collier	FL
65	12071	Lee	FL
66	26037	Clinton	MI
66	26045	Eaton	MI
66	26059	Hillsdale	MI
66	26065	Ingham	MI
66	26075	Jackson	MI
66	26091	Lenawee	MI
66	26115	Monroe	MI
67	12015	Charlotte	FL
67	12027	DeSoto	FL
67	12081	Manatee	FL
67	12115	Sarasota	FL
68	26081	Kent	MI
68	26139	Ottawa	MI
69	25003	Berkshire	MA
69	25011	Franklin	MA
69	25013	Hampden	MA
69	25015	Hampshire	MA
69	50003	Bennington	VT
70	06015	Del Norte	CA
70	41011	Coos	OR
70	41015	Curry	OR
70	41019	Douglas	OR
70	41029	Jackson	OR
70	41033	Josephine	OR
70	41039	Lane	OR

PEA No.	Federal Information Processing System No.	County name	State
71	47001	Anderson	TN
71	47009	Blount	TN
71	47013	Campbell	TN
71	47093	Knox	TN
71	47105	Loudon	TN
71	47129	Morgan	TN
71	47145	Roane	TN
71	47151	Scott	TN
71	47173	Union	TN
72	12005	Bay	FL
72	12013	Calhoun	FL
72	12037	Franklin	FL
72	12039	Gadsden	FL
72	12045	Gulf	FL
72	12063	Jackson	FL
72	12065	Jefferson	FL
72	12073	Leon	FL
72	12077	Liberty	FL
72	12079	Madison	FL
72	12123	Taylor	FL
72	12129	Wakulla	FL
72	13087	Decatur	GA
72	13099	Early	GA
72	13131	Grady	GA
72	13201	Miller	GA
72	13253	Seminole	GA
72	13275	Thomas	GA
73	48141	El Paso	TX
74	13047	Catoosa	GA
74	13083	Dade	GA
74	13295	Walker	GA
74	47007	Bledsoe	TN
74	47011	Bradley	TN
74	47065	Hamilton	TN
74	47115	Marion	TN
74	47107	McMinn	TN
74	47121	Meigs	TN
74	47123	Monroe	TN
74	47139	Polk	TN
74	47143	Rhea	TN
74	47153	Sequatchie	TN
75	35001	Bernalillo	NM
75	35043	Sandoval	NM
76	06003	Alpine	CA
76	06027	Inyo	CA
76	06035	Lassen	CA
76	06051	Mono	CA
76	06063	Plumas	CA
76	06091	Sierra	CA
76	32510	Carson City	NV
76	32001	Churchill	NV
76	32005	Douglas	NV
76	32007	Elko	NV
76	32011	Eureka	NV
76	32013	Humboldt	NV
76	32015	Lander	NV
76	32019	Lyon	NV
76	32027	Pershing	NV
76	32029	Storey	NV
76	32031	Washoe	NV
76	32033	White Pine	NV
77	23001	Androscoggin	ME
77	23005	Cumberland	ME
77	23007	Franklin	ME
77	23013	Knox	ME
77	23015	Lincoln	ME
77	23017	Oxford	ME
77	23023	Sagadahoc	ME
77	23031	York	ME
78	37001	Alamance	NC
78	37081	Guilford	NC
78	37151	Randolph	NC
79	28001	Adams	MS
79	28005	Amite	MS
79	28021	Claiborne	MS
79	28023	Clarke	MS
79	28029	Copiah	MS
79	28031	Covington	MS
79	28035	Forrest	MS
79	28037	Franklin	MS
79	28041	Greene	MS
79	28061	Jasper	MS
79	28063	Jefferson	MS
79	28065	Jefferson Davis	MS
79	28067	Jones	MS
79	28069	Kemper	MS
79	28073	Lamar	MS
79	28075	Lauderdale	MS
79	28077	Lawrence	MS
79	28079	Leake	MS
79	28085	Lincoln	MS
79	28091	Marion	MS
79	28099	Neshoba	MS
79	28101	Newton	MS
79	28111	Perry	MS
79	28113	Pike	MS
79	28123	Scott	MS
79	28127	Simpson	MS
79	28129	Smith	MS
79	28147	Walthall	MS
79	28153	Wayne	MS
80	19155	Pottawattamie	IA
80	31055	Douglas	NE
80	31153	Sarpy	NE
81	26001	Alcona	MI
81	26011	Arenac	MI
81	26017	Bay	MI
81	26035	Clare	MI
81	26051	Gladwin	MI
81	26057	Gratiot	MI
81	26063	Huron	MI
81	26069	Iosco	MI
81	26073	Isabella	MI
81	26111	Midland	MI
81	26129	Ogemaw	MI
81	26145	Saginaw	MI
81	26151	Sanilac	MI
81	26157	Tuscola	MI
82	22005	Ascension Parish	LA
82	22007	Assumption Parish	LA
82	22033	East Baton Rouge Parish	LA
82	22047	Iberville Parish	LA
82	22063	Livingston Parish	LA
82	22121	West Baton Rouge Parish	LA
83	18001	Adams	IN
83	18003	Allen	IN
83	18009	Blackford	IN
83	18033	De Kalb	IN
83	18053	Grant	IN
83	18069	Huntington	IN
83	18075	Jay	IN
83	18113	Noble	IN
83	18151	Steuben	IN
83	18169	Wabash	IN
83	18179	Wells	IN
83	18183	Whitley	IN
84	01003	Baldwin	AL
84	01025	Clarke	AL
84	01035	Conecuh	AL
84	01053	Escambia	AL
84	01097	Mobile	AL
84	01099	Monroe	AL
84	01129	Washington	AL
84	01131	Wilcox	AL

PEA No.	Federal Information Processing System No.	County name	State
85	45015	Berkeley	SC
85	45019	Charleston	SC
85	45029	Colleton	SC
85	45035	Dorchester	SC
86	21005	Anderson	KY
86	21011	Bath	KY
86	21017	Bourbon	KY
86	21049	Clark	KY
86	21067	Fayette	KY
86	21069	Fleming	KY
86	21073	Franklin	KY
86	21097	Harrison	KY
86	21113	Jessamine	KY
86	21165	Menifee	KY
86	21167	Mercer	KY
86	21173	Montgomery	KY
86	21181	Nicholas	KY
86	21187	Owen	KY
86	21201	Robertson	KY
86	21205	Rowan	KY
86	21209	Scott	KY
86	21239	Woodford	KY
87	12033	Escambia	FL
87	12091	Okaloosa	FL
87	12113	Santa Rosa	FL
87	12131	Walton	FL
88	24001	Allegany	MD
88	24021	Frederick	MD
88	24023	Garrett	MD
88	24043	Washington	MD
88	42055	Franklin	PA
88	42057	Fulton	PA
88	54057	Mineral	WV
89	45063	Lexington	SC
89	45079	Richland	SC
90	22025	Catahoula Parish	LA
90	22029	Concordia Parish	LA
90	22065	Madison Parish	LA
90	22107	Tensas Parish	LA
90	28007	Attala	MS
90	28049	Hinds	MS
90	28051	Holmes	MS
90	28089	Madison	MS
90	28121	Rankin	MS
90	28149	Warren	MS
90	28163	Yazoo	MS
91	08041	El Paso	CO
91	08119	Teller	CO
92	17019	Champaign	IL
92	17025	Clay	IL
92	17029	Coles	IL
92	17035	Cumberland	IL
92	17041	Douglas	IL
92	17045	Edgar	IL
92	17049	Effingham	IL
92	17051	Fayette	IL
92	17053	Ford	IL
92	17079	Jasper	IL
92	17115	Macon	IL
92	17139	Moultrie	IL
92	17147	Piatt	IL
92	17173	Shelby	IL
92	17183	Vermilion	IL
93	22001	Acadia Parish	LA
93	22039	Evangeline Parish	LA
93	22045	Iberia Parish	LA
93	22055	Lafayette Parish	LA
93	22097	St. Landry Parish	LA
93	22099	St. Martin Parish	LA
93	22101	St. Mary Parish	LA
93	22113	Vermilion Parish	LA
94	48027	Bell	TX
94	48099	Coryell	TX
94	48145	Falls	TX
94	48309	McLennan	TX
95	21025	Breathitt	KY
95	21065	Estill	KY
95	21071	Floyd	KY
95	21109	Jackson	KY
95	21115	Johnson	KY
95	21119	Knott	KY
95	21127	Lawrence	KY
95	21129	Lee	KY
95	21133	Letcher	KY
95	21153	Magoffin	KY
95	21159	Martin	KY
95	21175	Morgan	KY
95	21189	Owsley	KY
95	21193	Perry	KY
95	21195	Pike	KY
95	21197	Powell	KY
95	21237	Wolfe	KY
95	51021	Bland	VA
95	51027	Buchanan	VA
95	51051	Dickenson	VA
95	51105	Lee	VA
95	51720	Norton City	VA
95	51167	Russell	VA
95	51185	Tazewell	VA
95	51195	Wise	VA
95	54047	McDowell	WV
95	54055	Mercer	WV
95	54059	Mingo	WV
96	21001	Adair	KY
96	21013	Bell	KY
96	21021	Boyle	KY
96	21045	Casey	KY
96	21051	Clay	KY
96	21053	Clinton	KY
96	21079	Garrard	KY
96	21087	Green	KY
96	21095	Harlan	KY
96	21121	Knox	KY
96	21125	Laurel	KY
96	21131	Leslie	KY
96	21137	Lincoln	KY
96	21151	Madison	KY
96	21147	McCreary	KY
96	21199	Pulaski	KY
96	21203	Rockcastle	KY
96	21207	Russell	KY
96	21217	Taylor	KY
96	21231	Wayne	KY
96	21235	Whitley	KY
96	47025	Claiborne	TN
97	19143	Osceola	IA
97	27013	Blue Earth	MN
97	27015	Brown	MN
97	27023	Chippewa	MN
97	27033	Cottonwood	MN
97	27043	Faribault	MN
97	27047	Freeborn	MN
97	27063	Jackson	MN
97	27067	Kandiyohi	MN
97	27073	Lac qui Parle	MN
97	27079	Le Sueur	MN
97	27081	Lincoln	MN
97	27083	Lyon	MN
97	27091	Martin	MN
97	27085	McLeod	MN
97	27093	Meeker	MN
97	27101	Murray	MN
97	27103	Nicollet	MN
97	27105	Nobles	MN

PEA No.	Federal Information Processing System No.	County name	State
97	27127	Redwood	MN
97	27129	Renville	MN
97	27131	Rice	MN
97	27143	Sibley	MN
97	27147	Steele	MN
97	27161	Waseca	MN
97	27165	Watonwan	MN
97	27173	Yellow Medicine	MN
98	47019	Carter	TN
98	47059	Greene	TN
98	47073	Hawkins	TN
98	47163	Sullivan	TN
98	47171	Unicoi	TN
98	47179	Washington	TN
98	51520	Bristol City	VA
98	51169	Scott	VA
98	51173	Smyth	VA
98	51191	Washington	VA
99	28003	Alcorn	MS
99	28013	Calhoun	MS
99	28017	Chickasaw	MS
99	28019	Choctaw	MS
99	28025	Clay	MS
99	28043	Grenada	MS
99	28057	Itawamba	MS
99	28081	Lee	MS
99	28087	Lowndes	MS
99	28095	Monroe	MS
99	28097	Montgomery	MS
99	28103	Noxubee	MS
99	28105	Oktibbeha	MS
99	28115	Pontotoc	MS
99	28117	Prentiss	MS
99	28139	Tippah	MS
99	28141	Tishomingo	MS
99	28145	Union	MS
99	28155	Webster	MS
99	28159	Winston	MS
99	47071	Hardin	TN
99	47109	McNairy	TN
100 ..	37013	Beaufort	NC
100 ..	37031	Carteret	NC
100 ..	37049	Craven	NC
100 ..	37055	Dare	NC
100 ..	37079	Greene	NC
100 ..	37095	Hyde	NC
100 ..	37103	Jones	NC
100 ..	37107	Lenoir	NC
100 ..	37117	Martin	NC
100 ..	37137	Pamlico	NC
100 ..	37147	Pitt	NC
100 ..	37177	Tyrrell	NC
100 ..	37187	Washington	NC
101 ..	20015	Butler	KS
101 ..	20173	Sedgwick	KS
102 ..	08015	Chaffee	CO
102 ..	08019	Clear Creek	CO
102 ..	08027	Custer	CO
102 ..	08029	Delta	CO
102 ..	08037	Eagle	CO
102 ..	08043	Fremont	CO
102 ..	08045	Garfield	CO
102 ..	08049	Grand	CO
102 ..	08051	Gunnison	CO
102 ..	08053	Hinsdale	CO
102 ..	08057	Jackson	CO
102 ..	08065	Lake	CO
102 ..	08077	Mesa	CO
102 ..	08081	Moffat	CO
102 ..	08085	Montrose	CO
102 ..	08091	Ouray	CO
102 ..	08093	Park	CO
102 ..	08097	Pitkin	CO
102 ..	08103	Rio Blanco	CO
102 ..	08107	Routt	CO
102 ..	08113	San Miguel	CO
102 ..	08117	Summit	CO
103 ..	51043	Clarke	VA
103 ..	51061	Fauquier	VA
103 ..	51069	Frederick	VA
103 ..	51139	Page	VA
103 ..	51157	Rappahannock	VA
103 ..	51171	Shenandoah	VA
103 ..	51187	Warren	VA
103 ..	51840	Winchester City	VA
103 ..	54003	Berkeley	WV
103 ..	54023	Grant	WV
103 ..	54027	Hampshire	WV
103 ..	54031	Hardy	WV
103 ..	54037	Jefferson	WV
103 ..	54065	Morgan	WV
103 ..	54083	Randolph	WV
103 ..	54093	Tucker	WV
104 ..	08069	Larimer	CO
104 ..	08123	Weld	CO
105 ..	13073	Columbia	GA
105 ..	13181	Lincoln	GA
105 ..	13189	McDuffie	GA
105 ..	13245	Richmond	GA
105 ..	13317	Wilkes	GA
105 ..	45003	Aiken	SC
105 ..	45037	Edgefield	SC
106 ..	39009	Athens	OH
106 ..	39047	Fayette	OH
106 ..	39059	Guernsey	OH
106 ..	39073	Hocking	OH
106 ..	39079	Jackson	OH
106 ..	39115	Morgan	OH
106 ..	39119	Muskingum	OH
106 ..	39121	Noble	OH
106 ..	39127	Perry	OH
106 ..	39131	Pike	OH
106 ..	39141	Ross	OH
106 ..	39145	Scioto	OH
106 ..	39163	Vinton	OH
107 ..	23003	Aroostook	ME
107 ..	23009	Hancock	ME
107 ..	23011	Kennebec	ME
107 ..	23019	Penobscot	ME
107 ..	23021	Piscataquis	ME
107 ..	23025	Somerset	ME
107 ..	23027	Waldo	ME
107 ..	23029	Washington	ME
108 ..	19049	Dallas	IA
108 ..	19153	Polk	IA
108 ..	19181	Warren	IA
109 ..	37065	Edgecombe	NC
109 ..	37069	Franklin	NC
109 ..	37077	Granville	NC
109 ..	37083	Halifax	NC
109 ..	37127	Nash	NC
109 ..	37131	Northampton	NC
109 ..	37145	Person	NC
109 ..	37181	Vance	NC
109 ..	37185	Warren	NC
109 ..	37195	Wilson	NC
110 ..	21075	Fulton	KY
110 ..	21105	Hickman	KY
110 ..	47005	Benton	TN
110 ..	47017	Carroll	TN
110 ..	47023	Chester	TN
110 ..	47033	Crockett	TN
110 ..	47039	Decatur	TN
110 ..	47045	Dyer	TN

PEA No.	Federal Information Processing System No.	County name	State
110 ..	47047	Fayette	TN
110 ..	47053	Gibson	TN
110 ..	47069	Hardeman	TN
110 ..	47075	Haywood	TN
110 ..	47077	Henderson	TN
110 ..	47079	Henry	TN
110 ..	47095	Lake	TN
110 ..	47097	Lauderdale	TN
110 ..	47113	Madison	TN
110 ..	47131	Obion	TN
110 ..	47183	Weakley	TN
111 ..	05007	Benton	AR
111 ..	05087	Madison	AR
111 ..	05143	Washington	AR
111 ..	29119	McDonald	MO
111 ..	40001	Adair	OK
111 ..	40041	Delaware	OK
112 ..	21003	Allen	KY
112 ..	21009	Barren	KY
112 ..	21031	Butler	KY
112 ..	21057	Cumberland	KY
112 ..	21061	Edmonson	KY
112 ..	21099	Hart	KY
112 ..	21141	Logan	KY
112 ..	21169	Metcalfe	KY
112 ..	21171	Monroe	KY
112 ..	21213	Simpson	KY
112 ..	21219	Todd	KY
112 ..	21227	Warren	KY
112 ..	47027	Clay	TN
112 ..	47035	Cumberland	TN
112 ..	47049	Fentress	TN
112 ..	47087	Jackson	TN
112 ..	47111	Macon	TN
112 ..	47133	Overton	TN
112 ..	47137	Pickett	TN
112 ..	47141	Putnam	TN
112 ..	47169	Trousdale	TN
113 ..	42031	Clarion	PA
113 ..	42039	Crawford	PA
113 ..	42049	Erie	PA
113 ..	42053	Forest	PA
113 ..	42121	Venango	PA
113 ..	42123	Warren	PA
114 ..	42051	Fayette	PA
114 ..	42059	Greene	PA
114 ..	54001	Barbour	WV
114 ..	54017	Doddridge	WV
114 ..	54033	Harrison	WV
114 ..	54041	Lewis	WV
114 ..	54049	Marion	WV
114 ..	54061	Monongalia	WV
114 ..	54077	Preston	WV
114 ..	54091	Taylor	WV
114 ..	54097	Upshur	WV
115 ..	37021	Buncombe	NC
115 ..	37087	Haywood	NC
115 ..	37089	Henderson	NC
115 ..	37099	Jackson	NC
115 ..	37115	Madison	NC
115 ..	37173	Swain	NC
115 ..	37175	Transylvania	NC
116 ..	17007	Boone	IL
116 ..	17201	Winnebago	IL
116 ..	55105	Rock	WI
117 ..	13045	Carroll	GA
117 ..	13077	Coweta	GA
117 ..	13143	Haralson	GA
117 ..	13149	Heard	GA
117 ..	13171	Lamar	GA
117 ..	13199	Meriwether	GA
117 ..	13231	Pike	GA
117 ..	13255	Spalding	GA
117 ..	13263	Talbot	GA
117 ..	13285	Troup	GA
117 ..	13293	Upson	GA
118 ..	18005	Bartholomew	IN
118 ..	18013	Brown	IN
118 ..	18031	Decatur	IN
118 ..	18041	Fayette	IN
118 ..	18059	Hancock	IN
118 ..	18065	Henry	IN
118 ..	18071	Jackson	IN
118 ..	18079	Jennings	IN
118 ..	18135	Randolph	IN
118 ..	18139	Rush	IN
118 ..	18145	Shelby	IN
118 ..	18161	Union	IN
118 ..	18177	Wayne	IN
119 ..	53005	Benton	WA
119 ..	53021	Franklin	WA
119 ..	53077	Yakima	WA
120 ..	05027	Columbia	AR
120 ..	05073	Lafayette	AR
120 ..	22013	Bienville Parish	LA
120 ..	22015	Bossier Parish	LA
120 ..	22017	Caddo Parish	LA
120 ..	22027	Claiborne Parish	LA
120 ..	22119	Webster Parish	LA
120 ..	22127	Winn Parish	LA
121 ..	42009	Bedford	PA
121 ..	42013	Blair	PA
121 ..	42021	Cambria	PA
121 ..	42061	Huntingdon	PA
121 ..	42087	Mifflin	PA
121 ..	42111	Somerset	PA
122 ..	55025	Dane	WI
123 ..	39005	Ashland	OH
123 ..	39033	Crawford	OH
123 ..	39067	Harrison	OH
123 ..	39075	Holmes	OH
123 ..	39139	Richland	OH
123 ..	39157	Tuscarawas	OH
123 ..	39169	Wayne	OH
124 ..	53027	Grays Harbor	WA
124 ..	53041	Lewis	WA
124 ..	53045	Mason	WA
124 ..	53049	Pacific	WA
124 ..	53067	Thurston	WA
125 ..	17013	Calhoun	IL
125 ..	17083	Jersey	IL
125 ..	17117	Macoupin	IL
125 ..	17119	Madison	IL
125 ..	29073	Gasconade	MO
125 ..	29113	Lincoln	MO
125 ..	29139	Montgomery	MO
125 ..	29163	Pike	MO
125 ..	29219	Warren	MO
126 ..	04007	Gila	AZ
126 ..	04009	Graham	AZ
126 ..	04011	Greenlee	AZ
126 ..	04021	Pinal	AZ
127 ..	18027	Daviess	IN
127 ..	18037	Dubois	IN
127 ..	18051	Gibson	IN
127 ..	18083	Knox	IN
127 ..	18101	Martin	IN
127 ..	18123	Perry	IN
127 ..	18125	Pike	IN
127 ..	18129	Posey	IN
127 ..	18147	Spencer	IN
127 ..	18163	Vanderburgh	IN
127 ..	18173	Warrick	IN
128 ..	13009	Baldwin	GA

PEA No.	Federal Information Processing System No.	County name	State
128 ..	13021	Bibb	GA
128 ..	13023	Bleckley	GA
128 ..	13091	Dodge	GA
128 ..	13153	Houston	GA
128 ..	13169	Jones	GA
128 ..	13225	Peach	GA
128 ..	13235	Pulaski	GA
128 ..	13289	Twiggs	GA
128 ..	13315	Wilcox	GA
128 ..	13319	Wilkinson	GA
129 ..	17001	Adams	IL
129 ..	17009	Brown	IL
129 ..	17017	Cass	IL
129 ..	17021	Christian	IL
129 ..	17061	Greene	IL
129 ..	17107	Logan	IL
129 ..	17129	Menard	IL
129 ..	17135	Montgomery	IL
129 ..	17137	Morgan	IL
129 ..	17149	Pike	IL
129 ..	17167	Sangamon	IL
129 ..	17169	Schuyler	IL
129 ..	17171	Scott	IL
130 ..	53063	Spokane	WA
131 ..	37037	Chatham	NC
131 ..	37085	Harnett	NC
131 ..	37101	Johnston	NC
131 ..	37105	Lee	NC
131 ..	37163	Sampson	NC
132 ..	48007	Aransas	TX
132 ..	48025	Bee	TX
132 ..	48355	Nueces	TX
132 ..	48391	Refugio	TX
132 ..	48409	San Patricio	TX
133 ..	48005	Angelina	TX
133 ..	48161	Freestone	TX
133 ..	48225	Houston	TX
133 ..	48289	Leon	TX
133 ..	48293	Limestone	TX
133 ..	48313	Madison	TX
133 ..	48347	Nacogdoches	TX
133 ..	48373	Polk	TX
133 ..	48395	Robertson	TX
133 ..	48403	Sabine	TX
133 ..	48405	San Augustine	TX
133 ..	48407	San Jacinto	TX
133 ..	48419	Shelby	TX
133 ..	48455	Trinity	TX
133 ..	48471	Walker	TX
134 ..	39031	Coshocton	OH
134 ..	39083	Knox	OH
134 ..	39089	Licking	OH
134 ..	39091	Logan	OH
134 ..	39101	Marion	OH
134 ..	39117	Morrow	OH
134 ..	39159	Union	OH
135 ..	48199	Hardin	TX
135 ..	48241	Jasper	TX
135 ..	48245	Jefferson	TX
135 ..	48351	Newton	TX
135 ..	48361	Orange	TX
135 ..	48457	Tyler	TX
136 ..	42035	Clinton	PA
136 ..	42037	Columbia	PA
136 ..	42081	Lycoming	PA
136 ..	42093	Montour	PA
136 ..	42097	Northumberland	PA
136 ..	42109	Snyder	PA
136 ..	42113	Sullivan	PA
136 ..	42119	Union	PA
136 ..	42131	Wyoming	PA
137 ..	27049	Goodhue	MN
137 ..	55005	Barron	WI
137 ..	55013	Burnett	WI
137 ..	55017	Chippewa	WI
137 ..	55033	Dunn	WI
137 ..	55035	Eau Claire	WI
137 ..	55091	Pepin	WI
137 ..	55093	Pierce	WI
137 ..	55095	Polk	WI
137 ..	55107	Rusk	WI
137 ..	55113	Sawyer	WI
137 ..	55129	Washburn	WI
138 ..	50001	Addison	VT
138 ..	50005	Caledonia	VT
138 ..	50007	Chittenden	VT
138 ..	50011	Franklin	VT
138 ..	50013	Grand Isle	VT
138 ..	50015	Lamoille	VT
138 ..	50019	Orleans	VT
138 ..	50021	Rutland	VT
138 ..	50023	Washington	VT
139 ..	05001	Arkansas	AR
139 ..	05003	Ashley	AR
139 ..	05011	Bradley	AR
139 ..	05013	Calhoun	AR
139 ..	05017	Chicot	AR
139 ..	05019	Clark	AR
139 ..	05025	Cleveland	AR
139 ..	05039	Dallas	AR
139 ..	05041	Desha	AR
139 ..	05043	Drew	AR
139 ..	05051	Garland	AR
139 ..	05053	Grant	AR
139 ..	05057	Hempstead	AR
139 ..	05059	Hot Spring	AR
139 ..	05061	Howard	AR
139 ..	05079	Lincoln	AR
139 ..	05095	Monroe	AR
139 ..	05097	Montgomery	AR
139 ..	05099	Nevada	AR
139 ..	05103	Ouachita	AR
139 ..	05109	Pike	AR
139 ..	05139	Union	AR
140 ..	51033	Caroline	VA
140 ..	51047	Culpeper	VA
140 ..	51630	Fredericksburg City	VA
140 ..	51099	King George	VA
140 ..	51113	Madison	VA
140 ..	51137	Orange	VA
140 ..	51177	Spotsylvania	VA
140 ..	51179	Stafford	VA
140 ..	51193	Westmoreland	VA
141 ..	27001	Aitkin	MN
141 ..	27007	Beltrami	MN
141 ..	27021	Cass	MN
141 ..	27029	Clearwater	MN
141 ..	27035	Crow Wing	MN
141 ..	27041	Douglas	MN
141 ..	27051	Grant	MN
141 ..	27057	Hubbard	MN
141 ..	27059	Isanti	MN
141 ..	27065	Kanabec	MN
141 ..	27095	Mille Lacs	MN
141 ..	27097	Morrison	MN
141 ..	27115	Pine	MN
141 ..	27121	Pope	MN
141 ..	27149	Stevens	MN
141 ..	27151	Swift	MN
141 ..	27153	Todd	MN
141 ..	27159	Wadena	MN
142 ..	06009	Calaveras	CA
142 ..	06043	Mariposa	CA
142 ..	06047	Merced	CA

PEA No.	Federal Information Processing System No.	County name	State
142 ..	06069	San Benito	CA
142 ..	06109	Tuolumne	CA
143 ..	33003	Carroll	NH
143 ..	33005	Cheshire	NH
143 ..	33007	Coos	NH
143 ..	33009	Grafton	NH
143 ..	33019	Sullivan	NH
143 ..	50009	Essex	VT
143 ..	50017	Orange	VT
143 ..	50025	Windham	VT
143 ..	50027	Windsor	VT
144 ..	48063	Camp	TX
144 ..	48119	Delta	TX
144 ..	48147	Fannin	TX
144 ..	48159	Franklin	TX
144 ..	48223	Hopkins	TX
144 ..	48231	Hunt	TX
144 ..	48277	Lamar	TX
144 ..	48379	Rains	TX
144 ..	48387	Red River	TX
144 ..	48449	Titus	TX
144 ..	48459	Upshur	TX
144 ..	48467	Van Zandt	TX
144 ..	48499	Wood	TX
145 ..	47003	Bedford	TN
145 ..	47015	Cannon	TN
145 ..	47031	Coffee	TN
145 ..	47041	DeKalb	TN
145 ..	47051	Franklin	TN
145 ..	47055	Giles	TN
145 ..	47061	Grundy	TN
145 ..	47117	Marshall	TN
145 ..	47119	Maury	TN
145 ..	47127	Moore	TN
145 ..	47159	Smith	TN
145 ..	47175	Van Buren	TN
145 ..	47177	Warren	TN
145 ..	47185	White	TN
146 ..	37019	Brunswick	NC
146 ..	37047	Columbus	NC
146 ..	37129	New Hanover	NC
146 ..	37141	Pender	NC
147 ..	10005	Sussex	DE
147 ..	24039	Somerset	MD
147 ..	24045	Wicomico	MD
147 ..	24047	Worcester	MD
147 ..	51001	Accomack	VA
147 ..	51131	Northampton	VA
148 ..	53029	Island	WA
148 ..	53055	San Juan	WA
148 ..	53057	Skagit	WA
148 ..	53073	Whatcom	WA
149 ..	28039	George	MS
149 ..	28045	Hancock	MS
149 ..	28047	Harrison	MS
149 ..	28059	Jackson	MS
149 ..	28131	Stone	MS
150 ..	29029	Camden	MO
150 ..	29059	Dallas	MO
150 ..	29065	Dent	MO
150 ..	29085	Hickory	MO
150 ..	29105	Laclede	MO
150 ..	29125	Maries	MO
150 ..	29131	Miller	MO
150 ..	29141	Morgan	MO
150 ..	29149	Oregon	MO
150 ..	29161	Phelps	MO
150 ..	29167	Polk	MO
150 ..	29169	Pulaski	MO
150 ..	29203	Shannon	MO
150 ..	29215	Texas	MO
150 ..	29225	Webster	MO
150 ..	29229	Wright	MO
151 ..	37067	Forsyth	NC
151 ..	37169	Stokes	NC
152 ..	48183	Gregg	TX
152 ..	48203	Harrison	TX
152 ..	48423	Smith	TX
153 ..	55027	Dodge	WI
153 ..	55039	Fond du Lac	WI
153 ..	55047	Green Lake	WI
153 ..	55055	Jefferson	WI
153 ..	55127	Walworth	WI
154 ..	45033	Dillon	SC
154 ..	45043	Georgetown	SC
154 ..	45051	Horry	SC
154 ..	45067	Marion	SC
155 ..	55015	Calumet	WI
155 ..	55087	Outagamie	WI
155 ..	55139	Winnebago	WI
156 ..	16001	Ada	ID
157 ..	04012	La Paz	AZ
157 ..	04027	Yuma	AZ
157 ..	06025	Imperial	CA
158 ..	30029	Flathead	MT
158 ..	30039	Granite	MT
158 ..	30047	Lake	MT
158 ..	30049	Lewis and Clark	MT
158 ..	30053	Lincoln	MT
158 ..	30061	Mineral	MT
158 ..	30063	Missoula	MT
158 ..	30077	Powell	MT
158 ..	30081	Ravalli	MT
158 ..	30089	Sanders	MT
159 ..	13007	Baker	GA
159 ..	13017	Ben Hill	GA
159 ..	13019	Berrien	GA
159 ..	13027	Brooks	GA
159 ..	13037	Calhoun	GA
159 ..	13061	Clay	GA
159 ..	13071	Colquitt	GA
159 ..	13075	Cook	GA
159 ..	13101	Echols	GA
159 ..	13155	Irwin	GA
159 ..	13173	Lanier	GA
159 ..	13185	Lowndes	GA
159 ..	13205	Mitchell	GA
159 ..	13243	Randolph	GA
159 ..	13273	Terrell	GA
159 ..	13277	Tift	GA
159 ..	13287	Turner	GA
159 ..	13321	Worth	GA
160 ..	48015	Austin	TX
160 ..	48051	Burleson	TX
160 ..	48057	Calhoun	TX
160 ..	48089	Colorado	TX
160 ..	48123	DeWitt	TX
160 ..	48149	Fayette	TX
160 ..	48175	Goliad	TX
160 ..	48239	Jackson	TX
160 ..	48285	Lavaca	TX
160 ..	48321	Matagorda	TX
160 ..	48469	Victoria	TX
160 ..	48477	Washington	TX
160 ..	48481	Wharton	TX
161 ..	17003	Alexander	IL
161 ..	17055	Franklin	IL
161 ..	17059	Gallatin	IL
161 ..	17065	Hamilton	IL
161 ..	17069	Hardin	IL
161 ..	17077	Jackson	IL
161 ..	17081	Jefferson	IL
161 ..	17087	Johnson	IL
161 ..	17145	Perry	IL

PEA No.	Federal Information Processing System No.	County name	State
161 ..	17151	Pope	IL
161 ..	17153	Pulaski	IL
161 ..	17157	Randolph	IL
161 ..	17165	Saline	IL
161 ..	17181	Union	IL
161 ..	17189	Washington	IL
161 ..	17199	Williamson	IL
162 ..	18025	Crawford	IN
162 ..	18061	Harrison	IN
162 ..	18175	Washington	IN
162 ..	21027	Breckinridge	KY
162 ..	21085	Grayson	KY
162 ..	21093	Hardin	KY
162 ..	21123	Larue	KY
162 ..	21155	Marion	KY
162 ..	21163	Meade	KY
162 ..	21179	Nelson	KY
162 ..	21215	Spencer	KY
162 ..	21229	Washington	KY
163 ..	19163	Scott	IA
163 ..	17073	Henry	IL
163 ..	17161	Rock Island	IL
164 ..	01001	Autauga	AL
164 ..	01051	Elmore	AL
164 ..	01101	Montgomery	AL
165 ..	01017	Chambers	AL
165 ..	01019	Cherokee	AL
165 ..	01029	Cleburne	AL
165 ..	01111	Randolph	AL
165 ..	13015	Bartow	GA
165 ..	13055	Chattooga	GA
165 ..	13115	Floyd	GA
165 ..	13233	Polk	GA
166 ..	06049	Modoc	CA
166 ..	06089	Shasta	CA
166 ..	06093	Siskiyou	CA
166 ..	06103	Tehama	CA
166 ..	41035	Klamath	OR
167 ..	51005	Alleghany	VA
167 ..	51015	Augusta	VA
167 ..	51017	Bath	VA
167 ..	51530	Buena Vista City	VA
167 ..	51580	Covington City	VA
167 ..	51660	Harrisonburg City	VA
167 ..	51091	Highland	VA
167 ..	51678	Lexington City	VA
167 ..	51163	Rockbridge	VA
167 ..	51165	Rockingham	VA
167 ..	51790	Staunton City	VA
167 ..	51820	Waynesboro City	VA
167 ..	54025	Greenbrier	WV
167 ..	54071	Pendleton	WV
167 ..	54075	Pocahontas	WV
168 ..	17143	Peoria	IL
168 ..	17179	Tazewell	IL
168 ..	17203	Woodford	IL
169 ..	37061	Duplin	NC
169 ..	37133	Onslow	NC
169 ..	37191	Wayne	NC
170 ..	01005	Barbour	AL
170 ..	01031	Coffee	AL
170 ..	01039	Covington	AL
170 ..	01045	Dale	AL
170 ..	01061	Geneva	AL
170 ..	01067	Henry	AL
170 ..	01069	Houston	AL
170 ..	12059	Holmes	FL
170 ..	12133	Washington	FL
170 ..	13239	Quitman	GA
171 ..	05033	Crawford	AR
171 ..	05047	Franklin	AR
171 ..	05083	Logan	AR
171 ..	05127	Scott	AR
171 ..	05131	Sebastian	AR
171 ..	40061	Haskell	OK
171 ..	40077	Latimer	OK
171 ..	40079	Le Flore	OK
171 ..	40135	Sequoyah	OK
172 ..	27017	Carlton	MN
172 ..	27031	Cook	MN
172 ..	27061	Itasca	MN
172 ..	27071	Koochiching	MN
172 ..	27075	Lake	MN
172 ..	27137	St. Louis	MN
172 ..	55031	Douglas	WI
173 ..	51019	Bedford	VA
173 ..	51515	Bedford City	VA
173 ..	51035	Carroll	VA
173 ..	51063	Floyd	VA
173 ..	51067	Franklin	VA
173 ..	51071	Giles	VA
173 ..	51121	Montgomery	VA
173 ..	51155	Pulaski	VA
173 ..	51750	Radford City	VA
173 ..	54063	Monroe	WV
174 ..	29043	Christian	MO
174 ..	29077	Greene	MO
175 ..	28009	Benton	MS
175 ..	28033	DeSoto	MS
175 ..	28071	Lafayette	MS
175 ..	28093	Marshall	MS
175 ..	28107	Panola	MS
175 ..	28119	Quitman	MS
175 ..	28137	Tate	MS
175 ..	28143	Tunica	MS
175 ..	28161	Yalobusha	MS
176 ..	19015	Boone	IA
176 ..	19025	Calhoun	IA
176 ..	19027	Carroll	IA
176 ..	19047	Crawford	IA
176 ..	19073	Greene	IA
176 ..	19075	Grundy	IA
176 ..	19079	Hamilton	IA
176 ..	19083	Hardin	IA
176 ..	19091	Humboldt	IA
176 ..	19127	Marshall	IA
176 ..	19161	Sac	IA
176 ..	19169	Story	IA
176 ..	19171	Tama	IA
176 ..	19187	Webster	IA
176 ..	19197	Wright	IA
177 ..	13029	Bryan	GA
177 ..	13051	Chatham	GA
177 ..	13103	Effingham	GA
178 ..	20003	Anderson	KS
178 ..	20011	Bourbon	KS
178 ..	20059	Franklin	KS
178 ..	20107	Linn	KS
178 ..	20121	Miami	KS
178 ..	29013	Bates	MO
178 ..	29015	Benton	MO
178 ..	29039	Cedar	MO
178 ..	29083	Henry	MO
178 ..	29101	Johnson	MO
178 ..	29107	Lafayette	MO
178 ..	29159	Pettis	MO
178 ..	29195	Saline	MO
178 ..	29185	St. Clair	MO
178 ..	29217	Vernon	MO
179 ..	19007	Appanoose	IA
179 ..	19051	Davis	IA
179 ..	19057	Des Moines	IA
179 ..	19087	Henry	IA
179 ..	19099	Jasper	IA

PEA No.	Federal Information Processing System No.	County name	State
179 ..	19101	Jefferson	IA
179 ..	19107	Keokuk	IA
179 ..	19111	Lee	IA
179 ..	19123	Mahaska	IA
179 ..	19125	Marion	IA
179 ..	19135	Monroe	IA
179 ..	19157	Poweshiek	IA
179 ..	19177	Van Buren	IA
179 ..	19179	Wapello	IA
179 ..	17067	Hancock	IL
179 ..	17071	Henderson	IL
179 ..	29045	Clark	MO
179 ..	29199	Scotland	MO
180 ..	04005	Coconino	AZ
180 ..	04025	Yavapai	AZ
181 ..	05081	Little River	AR
181 ..	05091	Miller	AR
181 ..	05113	Polk	AR
181 ..	05133	Sevier	AR
181 ..	40013	Bryan	OK
181 ..	40023	Choctaw	OK
181 ..	40089	McCurtain	OK
181 ..	40127	Pushmataha	OK
181 ..	48037	Bowie	TX
181 ..	48067	Cass	TX
181 ..	48315	Marion	TX
181 ..	48343	Morris	TX
182 ..	19103	Johnson	IA
182 ..	19113	Linn	IA
183 ..	29019	Boone	MO
183 ..	29027	Callaway	MO
183 ..	29051	Cole	MO
183 ..	29053	Cooper	MO
183 ..	29089	Howard	MO
183 ..	29135	Moniteau	MO
183 ..	29151	Osage	MO
184 ..	22021	Caldwell Parish	LA
184 ..	22035	East Carroll Parish	LA
184 ..	22041	Franklin Parish	LA
184 ..	22049	Jackson Parish	LA
184 ..	22061	Lincoln Parish	LA
184 ..	22067	Morehouse Parish	LA
184 ..	22073	Ouachita Parish	LA
184 ..	22083	Richland Parish	LA
184 ..	22111	Union Parish	LA
184 ..	22123	West Carroll Parish	LA
185 ..	26013	Baraga	MI
185 ..	26043	Dickinson	MI
185 ..	26053	Gogebic	MI
185 ..	26061	Houghton	MI
185 ..	26071	Iron	MI
185 ..	26083	Keweenaw	MI
185 ..	26103	Marquette	MI
185 ..	26109	Menominee	MI
185 ..	26131	Ontonagon	MI
185 ..	55037	Florence	WI
185 ..	55051	Iron	WI
185 ..	55075	Marinette	WI
185 ..	55078	Menominee	WI
185 ..	55083	Oconto	WI
185 ..	55115	Shawano	WI
186 ..	45023	Chester	SC
186 ..	45057	Lancaster	SC
186 ..	45091	York	SC
187 ..	16005	Bannock	ID
187 ..	16011	Bingham	ID
187 ..	16019	Bonneville	ID
187 ..	16033	Clark	ID
187 ..	16043	Fremont	ID
187 ..	16051	Jefferson	ID
187 ..	16065	Madison	ID
187 ..	16077	Power	ID
187 ..	16081	Teton	ID
188 ..	36003	Allegany	NY
188 ..	36009	Cattaraugus	NY
188 ..	36013	Chautauqua	NY
188 ..	42083	McKean	PA
188 ..	42105	Potter	PA
189 ..	22003	Allen Parish	LA
189 ..	22009	Avoyelles Parish	LA
189 ..	22011	Beauregard Parish	LA
189 ..	22043	Grant Parish	LA
189 ..	22059	La Salle Parish	LA
189 ..	22079	Rapides Parish	LA
189 ..	22115	Vernon Parish	LA
190 ..	30019	Daniels	MT
190 ..	30021	Dawson	MT
190 ..	30031	Gallatin	MT
190 ..	30033	Garfield	MT
190 ..	30037	Golden Valley	MT
190 ..	30057	Madison	MT
190 ..	30055	McCone	MT
190 ..	30065	Musselshell	MT
190 ..	30067	Park	MT
190 ..	30069	Petroleum	MT
190 ..	30083	Richland	MT
190 ..	30085	Roosevelt	MT
190 ..	30091	Sheridan	MT
190 ..	30095	Stillwater	MT
190 ..	30097	Sweet Grass	MT
190 ..	30105	Valley	MT
190 ..	30111	Yellowstone	MT
191 ..	51007	Amelia	VA
191 ..	51025	Brunswick	VA
191 ..	51029	Buckingham	VA
191 ..	51037	Charlotte	VA
191 ..	51570	Colonial Heights City	VA
191 ..	51049	Cumberland	VA
191 ..	51053	Dinwiddie	VA
191 ..	51595	Emporia City	VA
191 ..	51081	Greensville	VA
191 ..	51670	Hopewell City	VA
191 ..	51111	Lunenburg	VA
191 ..	51117	Mecklenburg	VA
191 ..	51135	Nottoway	VA
191 ..	51730	Petersburg City	VA
191 ..	51147	Prince Edward	VA
191 ..	51149	Prince George	VA
191 ..	51183	Sussex	VA
192 ..	37051	Cumberland	NC
193 ..	20005	Atchison	KS
193 ..	20043	Doniphan	KS
193 ..	20045	Douglas	KS
193 ..	20103	Leavenworth	KS
193 ..	29003	Andrew	MO
193 ..	29021	Buchanan	MO
194 ..	42023	Cameron	PA
194 ..	42027	Centre	PA
194 ..	42033	Clearfield	PA
194 ..	42047	Elk	PA
194 ..	42065	Jefferson	PA
195 ..	16009	Benewah	ID
195 ..	16017	Bonner	ID
195 ..	16021	Boundary	ID
195 ..	16035	Clearwater	ID
195 ..	16049	Idaho	ID
195 ..	16055	Kootenai	ID
195 ..	16057	Latah	ID
195 ..	16061	Lewis	ID
195 ..	16069	Nez Perce	ID
195 ..	16079	Shoshone	ID
196 ..	29017	Bollinger	MO
196 ..	29023	Butler	MO
196 ..	29031	Cape Girardeau	MO

PEA No.	Federal Information Processing System No.	County name	State
196 ..	29035	Carter	MO
196 ..	29093	Iron	MO
196 ..	29123	Madison	MO
196 ..	29133	Mississippi	MO
196 ..	29143	New Madrid	MO
196 ..	29157	Perry	MO
196 ..	29179	Reynolds	MO
196 ..	29181	Ripley	MO
196 ..	29201	Scott	MO
196 ..	29207	Stoddard	MO
196 ..	29223	Wayne	MO
197 ..	39013	Belmont	OH
197 ..	39081	Jefferson	OH
197 ..	39111	Monroe	OH
197 ..	54009	Brooke	WV
197 ..	54029	Hancock	WV
197 ..	54051	Marshall	WV
197 ..	54069	Ohio	WV
197 ..	54095	Tyler	WV
197 ..	54103	Wetzel	WV
198 ..	05021	Clay	AR
198 ..	05031	Craighead	AR
198 ..	05055	Greene	AR
198 ..	05075	Lawrence	AR
198 ..	05093	Mississippi	AR
198 ..	05111	Poinsett	AR
198 ..	05121	Randolph	AR
198 ..	29069	Dunklin	MO
198 ..	29155	Pemiscot	MO
199 ..	13111	Fannin	GA
199 ..	13123	Gilmer	GA
199 ..	13129	Gordon	GA
199 ..	13213	Murray	GA
199 ..	13227	Pickens	GA
199 ..	13281	Towns	GA
199 ..	13291	Union	GA
199 ..	13313	Whitfield	GA
200 ..	37033	Caswell	NC
200 ..	37157	Rockingham	NC
200 ..	51590	Danville City	VA
200 ..	51089	Henry	VA
200 ..	51690	Martinsville City	VA
200 ..	51141	Patrick	VA
200 ..	51143	Pittsylvania	VA
201 ..	48019	Bandera	TX
201 ..	48127	Dimmit	TX
201 ..	48163	Frio	TX
201 ..	48171	Gillespie	TX
201 ..	48259	Kendall	TX
201 ..	48265	Kerr	TX
201 ..	48283	La Salle	TX
201 ..	48323	Maverick	TX
201 ..	48325	Medina	TX
201 ..	48385	Real	TX
201 ..	48463	Uvalde	TX
201 ..	48507	Zavala	TX
202 ..	01113	Russell	AL
202 ..	13053	Chattahoochee	GA
202 ..	13145	Harris	GA
202 ..	13197	Marion	GA
202 ..	13215	Muscogee	GA
202 ..	13259	Stewart	GA
202 ..	13307	Webster	GA
203 ..	26009	Antrim	MI
203 ..	26019	Benzie	MI
203 ..	26055	Grand Traverse	MI
203 ..	26079	Kalkaska	MI
203 ..	26085	Lake	MI
203 ..	26089	Leelanau	MI
203 ..	26101	Manistee	MI
203 ..	26105	Mason	MI
203 ..	26113	Missaukee	MI
203 ..	26133	Osceola	MI
203 ..	26165	Wexford	MI
204 ..	21055	Crittenden	KY
204 ..	21059	Daviess	KY
204 ..	21091	Hancock	KY
204 ..	21101	Henderson	KY
204 ..	21107	Hopkins	KY
204 ..	21149	McLean	KY
204 ..	21177	Muhlenberg	KY
204 ..	21183	Ohio	KY
204 ..	21225	Union	KY
204 ..	21233	Webster	KY
205 ..	06023	Humboldt	CA
205 ..	06033	Lake	CA
205 ..	06045	Mendocino	CA
205 ..	06105	Trinity	CA
206 ..	53001	Adams	WA
206 ..	53007	Chelan	WA
206 ..	53017	Douglas	WA
206 ..	53025	Grant	WA
206 ..	53037	Kittitas	WA
206 ..	53047	Okanogan	WA
207 ..	13003	Atkinson	GA
207 ..	13005	Bacon	GA
207 ..	13025	Brantley	GA
207 ..	13039	Camden	GA
207 ..	13049	Charlton	GA
207 ..	13065	Clinch	GA
207 ..	13069	Coffee	GA
207 ..	13127	Glynn	GA
207 ..	13191	McIntosh	GA
207 ..	13229	Pierce	GA
207 ..	13299	Ware	GA
208 ..	37097	Iredell	NC
208 ..	37159	Rowan	NC
209 ..	55009	Brown	WI
209 ..	55029	Door	WI
209 ..	55061	Kewaunee	WI
210 ..	36007	Broome	NY
210 ..	36107	Tioga	NY
210 ..	42115	Susquehanna	PA
211 ..	40005	Atoka	OK
211 ..	40019	Carter	OK
211 ..	40029	Coal	OK
211 ..	40033	Cotton	OK
211 ..	40049	Garvin	OK
211 ..	40063	Hughes	OK
211 ..	40067	Jefferson	OK
211 ..	40069	Johnston	OK
211 ..	40085	Love	OK
211 ..	40095	Marshall	OK
211 ..	40099	Murray	OK
211 ..	40107	Okfuskee	OK
211 ..	40123	Pontotoc	OK
211 ..	40133	Seminole	OK
211 ..	40137	Stephens	OK
212 ..	02020	Anchorage Borough	AK
213 ..	41013	Crook	OR
213 ..	41017	Deschutes	OR
213 ..	41027	Hood River	OR
213 ..	41031	Jefferson	OR
213 ..	41037	Lake	OR
213 ..	41055	Sherman	OR
213 ..	41065	Wasco	OR
213 ..	53039	Klickitat	WA
213 ..	53059	Skamania	WA
214 ..	31109	Lancaster	NE
215 ..	37003	Alexander	NC
215 ..	37023	Burke	NC
215 ..	37035	Catawba	NC
216 ..	20021	Cherokee	KS
216 ..	20037	Crawford	KS

PEA No.	Federal Information Processing System No.	County name	State
216 ..	29011	Barton	MO
216 ..	29097	Jasper	MO
216 ..	29145	Newton	MO
216 ..	40115	Ottawa	OK
217 ..	48303	Lubbock	TX
218 ..	55073	Marathon	WI
218 ..	55097	Portage	WI
218 ..	55141	Wood	WI
219 ..	19019	Buchanan	IA
219 ..	19021	Buena Vista	IA
219 ..	19023	Butler	IA
219 ..	19033	Cerro Gordo	IA
219 ..	19037	Chickasaw	IA
219 ..	19041	Clay	IA
219 ..	19059	Dickinson	IA
219 ..	19063	Emmet	IA
219 ..	19065	Fayette	IA
219 ..	19067	Floyd	IA
219 ..	19069	Franklin	IA
219 ..	19081	Hancock	IA
219 ..	19109	Kossuth	IA
219 ..	19131	Mitchell	IA
219 ..	19147	Palo Alto	IA
219 ..	19151	Pocahontas	IA
219 ..	19189	Winnebago	IA
219 ..	19195	Worth	IA
220 ..	48135	Ector	TX
220 ..	48329	Midland	TX
221 ..	48247	Jim Hogg	TX
221 ..	48479	Webb	TX
221 ..	48505	Zapata	TX
222 ..	47029	Cocke	TN
222 ..	47057	Grainger	TN
222 ..	47063	Hamblen	TN
222 ..	47067	Hancock	TN
222 ..	47089	Jefferson	TN
222 ..	47155	Sevier	TN
223 ..	19061	Dubuque	IA
223 ..	19097	Jackson	IA
223 ..	17085	Jo Daviess	IL
223 ..	55043	Grant	WI
223 ..	55045	Green	WI
223 ..	55049	Iowa	WI
223 ..	55065	Lafayette	WI
224 ..	17015	Carroll	IL
224 ..	17037	DeKalb	IL
224 ..	17103	Lee	IL
224 ..	17141	Ogle	IL
224 ..	17177	Stephenson	IL
225 ..	27055	Houston	MN
225 ..	55053	Jackson	WI
225 ..	55063	La Crosse	WI
225 ..	55081	Monroe	WI
225 ..	55121	Trempealeau	WI
225 ..	55123	Vernon	WI
226 ..	39003	Allen	OH
226 ..	39011	Auglaize	OH
226 ..	39107	Mercer	OH
226 ..	39137	Putnam	OH
226 ..	39161	Van Wert	OH
227 ..	36045	Jefferson	NY
227 ..	36049	Lewis	NY
227 ..	36089	St. Lawrence	NY
228 ..	51023	Botetourt	VA
228 ..	51045	Craig	VA
228 ..	51161	Roanoke	VA
228 ..	51770	Roanoke City	VA
228 ..	51775	Salem City	VA
229 ..	32009	Esmeralda	NV
229 ..	32017	Lincoln	NV
229 ..	32021	Mineral	NV
229 ..	32023	Nye	NV
229 ..	49001	Beaver	UT
229 ..	49017	Garfield	UT
229 ..	49021	Iron	UT
229 ..	49031	Piute	UT
229 ..	49053	Washington	UT
230 ..	37017	Bladen	NC
230 ..	37093	Hoke	NC
230 ..	37155	Robeson	NC
230 ..	37165	Scotland	NC
231 ..	31003	Antelope	NE
231 ..	31011	Boone	NE
231 ..	31021	Burt	NE
231 ..	31023	Butler	NE
231 ..	31025	Cass	NE
231 ..	31037	Colfax	NE
231 ..	31039	Cuming	NE
231 ..	31053	Dodge	NE
231 ..	31119	Madison	NE
231 ..	31125	Nance	NE
231 ..	31139	Pierce	NE
231 ..	31141	Platte	NE
231 ..	31143	Polk	NE
231 ..	31155	Saunders	NE
231 ..	31167	Stanton	NE
231 ..	31177	Washington	NE
231 ..	31179	Wayne	NE
232 ..	20013	Brown	KS
232 ..	20031	Coffey	KS
232 ..	20085	Jackson	KS
232 ..	20087	Jefferson	KS
232 ..	20139	Osage	KS
232 ..	20177	Shawnee	KS
233 ..	37045	Cleveland	NC
233 ..	37109	Lincoln	NC
233 ..	37161	Rutherford	NC
234 ..	37057	Davidson	NC
234 ..	37059	Davie	NC
234 ..	37197	Yadkin	NC
235 ..	48375	Potter	TX
235 ..	48381	Randall	TX
236 ..	31001	Adams	NE
236 ..	31015	Boyd	NE
236 ..	31017	Brown	NE
236 ..	31019	Buffalo	NE
236 ..	31035	Clay	NE
236 ..	31041	Custer	NE
236 ..	31047	Dawson	NE
236 ..	31071	Garfield	NE
236 ..	31077	Greeley	NE
236 ..	31079	Hall	NE
236 ..	31081	Hamilton	NE
236 ..	31089	Holt	NE
236 ..	31093	Howard	NE
236 ..	31103	Keya Paha	NE
236 ..	31115	Loup	NE
236 ..	31121	Merrick	NE
236 ..	31129	Nuckolls	NE
236 ..	31149	Rock	NE
236 ..	31163	Sherman	NE
236 ..	31175	Valley	NE
236 ..	31181	Webster	NE
236 ..	31183	Wheeler	NE
237 ..	13031	Bulloch	GA
237 ..	13043	Candler	GA
237 ..	13109	Evans	GA
237 ..	13179	Liberty	GA
237 ..	13183	Long	GA
237 ..	13251	Screven	GA
237 ..	13267	Tattnall	GA
237 ..	13305	Wayne	GA
238 ..	45031	Darlington	SC
238 ..	45041	Florence	SC

PEA No.	Federal Information Processing System No.	County name	State
238 ..	45089	Williamsburg	SC
239 ..	37025	Cabarrus	NC
239 ..	37167	Stanly	NC
240 ..	51003	Albemarle	VA
240 ..	51540	Charlottesville City	VA
240 ..	51065	Fluvanna	VA
240 ..	51079	Greene	VA
240 ..	51109	Louisa	VA
240 ..	51125	Nelson	VA
241 ..	13001	Appling	GA
241 ..	13107	Emanuel	GA
241 ..	13141	Hancock	GA
241 ..	13161	Jeff Davis	GA
241 ..	13167	Johnson	GA
241 ..	13175	Laurens	GA
241 ..	13209	Montgomery	GA
241 ..	13237	Putnam	GA
241 ..	13271	Telfair	GA
241 ..	13279	Toombs	GA
241 ..	13283	Treutlen	GA
241 ..	13303	Washington	GA
241 ..	13309	Wheeler	GA
242 ..	22019	Calcasieu Parish	LA
242 ..	22023	Cameron Parish	LA
242 ..	22053	Jefferson Davis Parish	LA
243 ..	17127	Massac	IL
243 ..	21007	Ballard	KY
243 ..	21033	Caldwell	KY
243 ..	21035	Calloway	KY
243 ..	21039	Carlisle	KY
243 ..	21083	Graves	KY
243 ..	21139	Livingston	KY
243 ..	21143	Lyon	KY
243 ..	21157	Marshall	KY
243 ..	21145	McCracken	KY
244 ..	20017	Chase	KS
244 ..	20027	Clay	KS
244 ..	20041	Dickinson	KS
244 ..	20061	Geary	KS
244 ..	20111	Lyon	KS
244 ..	20117	Marshall	KS
244 ..	20127	Morris	KS
244 ..	20131	Nemaha	KS
244 ..	20149	Pottawatomie	KS
244 ..	20161	Riley	KS
244 ..	20197	Wabaunsee	KS
244 ..	20201	Washington	KS
245 ..	29009	Barry	MO
245 ..	29057	Dade	MO
245 ..	29067	Douglas	MO
245 ..	29091	Howell	MO
245 ..	29109	Lawrence	MO
245 ..	29153	Ozark	MO
245 ..	29209	Stone	MO
245 ..	29213	Taney	MO
246 ..	01027	Clay	AL
246 ..	01037	Coosa	AL
246 ..	01081	Lee	AL
246 ..	01087	Macon	AL
246 ..	01123	Tallapoosa	AL
247 ..	16027	Canyon	ID
247 ..	16039	Elmore	ID
247 ..	16073	Owyhee	ID
248 ..	45027	Clarendon	SC
248 ..	45055	Kershaw	SC
248 ..	45061	Lee	SC
248 ..	45085	Sumter	SC
249 ..	48041	Brazos	TX
249 ..	48185	Grimes	TX
250 ..	35013	Dona Ana	NM
250 ..	35051	Sierra	NM
251 ..	20007	Barber	KS
251 ..	20009	Barton	KS
251 ..	20033	Comanche	KS
251 ..	20047	Edwards	KS
251 ..	20051	Ellis	KS
251 ..	20053	Ellsworth	KS
251 ..	20097	Kiowa	KS
251 ..	20115	Marion	KS
251 ..	20113	McPherson	KS
251 ..	20135	Ness	KS
251 ..	20145	Pawnee	KS
251 ..	20151	Pratt	KS
251 ..	20159	Rice	KS
251 ..	20165	Rush	KS
251 ..	20167	Russell	KS
251 ..	20169	Saline	KS
251 ..	20185	Stafford	KS
251 ..	20195	Trego	KS
252 ..	19035	Cherokee	IA
252 ..	19093	Ida	IA
252 ..	19133	Monona	IA
252 ..	19141	O'Brien	IA
252 ..	19149	Plymouth	IA
252 ..	19167	Sioux	IA
252 ..	19193	Woodbury	IA
252 ..	46127	Union	SD
253 ..	55001	Adams	WI
253 ..	55021	Columbia	WI
253 ..	55023	Crawford	WI
253 ..	55057	Juneau	WI
253 ..	55077	Marquette	WI
253 ..	55103	Richland	WI
253 ..	55111	Sauk	WI
254 ..	55003	Ashland	WI
254 ..	55007	Bayfield	WI
254 ..	55019	Clark	WI
254 ..	55041	Forest	WI
254 ..	55067	Langlade	WI
254 ..	55069	Lincoln	WI
254 ..	55085	Oneida	WI
254 ..	55099	Price	WI
254 ..	55119	Taylor	WI
254 ..	55125	Vilas	WI
255 ..	28011	Bolivar	MS
255 ..	28015	Carroll	MS
255 ..	28027	Coahoma	MS
255 ..	28053	Humphreys	MS
255 ..	28055	Issaquena	MS
255 ..	28083	Leflore	MS
255 ..	28125	Sharkey	MS
255 ..	28133	Sunflower	MS
255 ..	28135	Tallahatchie	MS
255 ..	28151	Washington	MS
256 ..	51009	Amherst	VA
256 ..	51011	Appomattox	VA
256 ..	51031	Campbell	VA
256 ..	51083	Halifax	VA
256 ..	51680	Lynchburg City	VA
257 ..	56001	Albany	WY
257 ..	56005	Campbell	WY
257 ..	56009	Converse	WY
257 ..	56011	Crook	WY
257 ..	56021	Laramie	WY
257 ..	56027	Niobrara	WY
257 ..	56031	Platte	WY
257 ..	56045	Weston	WY
258 ..	01009	Blount	AL
258 ..	01043	Cullman	AL
258 ..	01057	Fayette	AL
258 ..	01093	Marion	AL
258 ..	01133	Winston	AL
259 ..	35005	Chaves	NM
259 ..	35015	Eddy	NM

PEA No.	Federal Information Processing System No.	County name	State
259 ..	35025	Lea	NM
259 ..	48165	Gaines	TX
259 ..	48501	Yoakum	TX
260 ..	26007	Alpena	MI
260 ..	26029	Charlevoix	MI
260 ..	26031	Cheboygan	MI
260 ..	26039	Crawford	MI
260 ..	26047	Emmet	MI
260 ..	26119	Montmorency	MI
260 ..	26135	Oscoda	MI
260 ..	26137	Otsego	MI
260 ..	26141	Presque Isle	MI
260 ..	26143	Roscommon	MI
261 ..	27027	Clay	MN
261 ..	38017	Cass	ND
262 ..	45013	Beaufort	SC
262 ..	45049	Hampton	SC
262 ..	45053	Jasper	SC
263 ..	35019	Guadalupe	NM
263 ..	35028	Los Alamos	NM
263 ..	35033	Mora	NM
263 ..	35047	San Miguel	NM
263 ..	35049	Santa Fe	NM
264 ..	02013	Aleutians East Borough	AK
264 ..	02016	Aleutians West Census Area	AK
264 ..	02050	Bethel Census Area	AK
264 ..	02060	Bristol Bay Borough	AK
264 ..	02070	Dillingham Census Area	AK
264 ..	02122	Kenai Peninsula Borough	AK
264 ..	02150	Kodiak Island Borough	AK
264 ..	02164	Lake and Peninsula Borough	AK
264 ..	02170	Matanuska-Susitna Borough	AK
264 ..	02261	Valdez-Cordova Census Area	AK
265 ..	19089	Howard	IA
265 ..	19191	Winneshiek	IA
265 ..	27039	Dodge	MN
265 ..	27045	Fillmore	MN
265 ..	27099	Mower	MN
265 ..	27157	Wabasha	MN
265 ..	27169	Winona	MN
265 ..	55011	Buffalo	WI
266 ..	37009	Ashe	NC
266 ..	37011	Avery	NC
266 ..	37027	Caldwell	NC
266 ..	37189	Watauga	NC
266 ..	47091	Johnson	TN
267 ..	55071	Manitowoc	WI
267 ..	55117	Sheboygan	WI
268 ..	19031	Cedar	IA
268 ..	19045	Clinton	IA
268 ..	19115	Louisa	IA
268 ..	19139	Muscatine	IA
268 ..	17131	Mercer	IL
268 ..	17195	Whiteside	IL
269 ..	55101	Racine	WI
270 ..	17011	Bureau	IL
270 ..	17099	La Salle	IL
270 ..	17105	Livingston	IL
270 ..	17155	Putnam	IL
271 ..	36015	Chemung	NY
271 ..	42015	Bradford	PA
271 ..	42117	Tioga	PA
272 ..	48035	Bosque	TX
272 ..	48049	Brown	TX
272 ..	48083	Coleman	TX
272 ..	48093	Comanche	TX
272 ..	48133	Eastland	TX
272 ..	48143	Erath	TX
272 ..	48193	Hamilton	TX
272 ..	48217	Hill	TX
272 ..	48333	Mills	TX
272 ..	48425	Somervell	TX
273 ..	17039	De Witt	IL
273 ..	17113	McLean	IL
274 ..	16013	Blaine	ID
274 ..	16025	Camas	ID
274 ..	16031	Cassia	ID
274 ..	16047	Gooding	ID
274 ..	16053	Jerome	ID
274 ..	16063	Lincoln	ID
274 ..	16067	Minidoka	ID
274 ..	16083	Twin Falls	ID
275 ..	48001	Anderson	TX
275 ..	48213	Henderson	TX
275 ..	48349	Navarro	TX
276 ..	30011	Carter	MT
276 ..	38001	Adams	ND
276 ..	46019	Butte	SD
276 ..	46033	Custer	SD
276 ..	46047	Fall River	SD
276 ..	46063	Harding	SD
276 ..	46081	Lawrence	SD
276 ..	46093	Meade	SD
276 ..	46103	Pennington	SD
276 ..	46105	Perkins	SD
277 ..	20035	Cowley	KS
277 ..	20049	Elk	KS
277 ..	20073	Greenwood	KS
277 ..	20077	Harper	KS
277 ..	20079	Harvey	KS
277 ..	20095	Kingman	KS
277 ..	20155	Reno	KS
277 ..	20191	Sumner	KS
278 ..	20001	Allen	KS
278 ..	20019	Chautauqua	KS
278 ..	20099	Labette	KS
278 ..	20125	Montgomery	KS
278 ..	20133	Neosho	KS
278 ..	20205	Wilson	KS
278 ..	20207	Woodson	KS
278 ..	40035	Craig	OK
278 ..	40105	Nowata	OK
278 ..	40147	Washington	OK
279 ..	16041	Franklin	ID
279 ..	16071	Oneida	ID
279 ..	49003	Box Elder	UT
279 ..	49005	Cache	UT
280 ..	20025	Clark	KS
280 ..	20055	Finney	KS
280 ..	20057	Ford	KS
280 ..	20067	Grant	KS
280 ..	20069	Gray	KS
280 ..	20071	Greeley	KS
280 ..	20075	Hamilton	KS
280 ..	20081	Haskell	KS
280 ..	20083	Hodgeman	KS
280 ..	20093	Kearny	KS
280 ..	20101	Lane	KS
280 ..	20119	Meade	KS
280 ..	20129	Morton	KS
280 ..	20171	Scott	KS
280 ..	20175	Seward	KS
280 ..	20187	Stanton	KS
280 ..	20189	Stevens	KS
280 ..	20203	Wichita	KS
280 ..	40007	Beaver	OK
280 ..	40025	Cimarron	OK
280 ..	40139	Texas	OK
281 ..	40091	McIntosh	OK
281 ..	40101	Muskogee	OK
281 ..	40111	Okmulgee	OK
281 ..	40121	Pittsburg	OK
282 ..	17057	Fulton	IL
282 ..	17095	Knox	IL

PEA No.	Federal Information Processing System No.	County name	State
282 ..	17123	Marshall	IL
282 ..	17125	Mason	IL
282 ..	17109	McDonough	IL
282 ..	17175	Stark	IL
282 ..	17187	Warren	IL
283 ..	36019	Clinton	NY
283 ..	36031	Essex	NY
283 ..	36033	Franklin	NY
284 ..	45001	Abbeville	SC
284 ..	45047	Greenwood	SC
284 ..	45059	Laurens	SC
284 ..	45065	McCormick	SC
285 ..	04001	Apache	AZ
285 ..	35006	Cibola	NM
285 ..	35031	McKinley	NM
286 ..	46099	Minnehaha	SD
287 ..	55059	Kenosha	WI
288 ..	48059	Callahan	TX
288 ..	48253	Jones	TX
288 ..	48441	Taylor	TX
289 ..	49007	Carbon	UT
289 ..	49013	Duchesne	UT
289 ..	49015	Emery	UT
289 ..	49019	Grand	UT
289 ..	49029	Morgan	UT
289 ..	49043	Summit	UT
289 ..	49047	Uintah	UT
289 ..	49051	Wasatch	UT
289 ..	49055	Wayne	UT
290 ..	27011	Big Stone	MN
290 ..	27117	Pipestone	MN
290 ..	27133	Rock	MN
290 ..	27155	Traverse	MN
290 ..	46005	Beadle	SD
290 ..	46011	Brookings	SD
290 ..	46025	Clark	SD
290 ..	46029	Codington	SD
290 ..	46039	Deuel	SD
290 ..	46051	Grant	SD
290 ..	46057	Hamlin	SD
290 ..	46077	Kingsbury	SD
290 ..	46079	Lake	SD
290 ..	46097	Miner	SD
290 ..	46101	Moody	SD
290 ..	46109	Roberts	SD
290 ..	46111	Sanborn	SD
291 ..	37123	Montgomery	NC
291 ..	37125	Moore	NC
291 ..	37153	Richmond	NC
292 ..	08101	Pueblo	CO
293 ..	21221	Trigg	KY
293 ..	47081	Hickman	TN
293 ..	47083	Houston	TN
293 ..	47085	Humphreys	TN
293 ..	47099	Lawrence	TN
293 ..	47101	Lewis	TN
293 ..	47135	Perry	TN
293 ..	47161	Stewart	TN
293 ..	47181	Wayne	TN
294 ..	19013	Black Hawk	IA
294 ..	19017	Bremer	IA
295 ..	40071	Kay	OK
295 ..	40103	Noble	OK
295 ..	40117	Pawnee	OK
295 ..	40119	Payne	OK
296 ..	42107	Schuylkill	PA
297 ..	41001	Baker	OR
297 ..	41021	Gilliam	OR
297 ..	41023	Grant	OR
297 ..	41049	Morrow	OR
297 ..	41059	Umatilla	OR
297 ..	41061	Union	OR
297 ..	41063	Wallowa	OR
297 ..	41069	Wheeler	OR
298 ..	02068	Denali Borough	AK
298 ..	02090	Fairbanks North Star Borough	AK
298 ..	02180	Nome Census Area	AK
298 ..	02185	North Slope Borough	AK
298 ..	02188	Northwest Arctic Borough	AK
298 ..	02240	Southeast Fairbanks Census Area.	AK
298 ..	02270	Wade Hampton Census Area	AK
298 ..	02290	Yukon-Koyukuk Census Area	AK
299 ..	29001	Adair	MO
299 ..	29025	Caldwell	MO
299 ..	29033	Carroll	MO
299 ..	29049	Clinton	MO
299 ..	29061	Daviess	MO
299 ..	29063	DeKalb	MO
299 ..	29079	Grundy	MO
299 ..	29081	Harrison	MO
299 ..	29103	Knox	MO
299 ..	29117	Livingston	MO
299 ..	29129	Mercer	MO
299 ..	29171	Putnam	MO
299 ..	29197	Schuyler	MO
299 ..	29211	Sullivan	MO
300 ..	01011	Bullock	AL
300 ..	01013	Butler	AL
300 ..	01041	Crenshaw	AL
300 ..	01047	Dallas	AL
300 ..	01085	Lowndes	AL
300 ..	01105	Perry	AL
300 ..	01109	Pike	AL
301 ..	27109	Olmsted	MN
302 ..	40003	Alfalfa	OK
302 ..	40011	Blaine	OK
302 ..	40015	Caddo	OK
302 ..	40047	Garfield	OK
302 ..	40053	Grant	OK
302 ..	40073	Kingfisher	OK
302 ..	40093	Major	OK
302 ..	40151	Woods	OK
303 ..	30005	Blaine	MT
303 ..	30013	Cascade	MT
303 ..	30015	Chouteau	MT
303 ..	30035	Glacier	MT
303 ..	30041	Hill	MT
303 ..	30051	Liberty	MT
303 ..	30073	Pondera	MT
303 ..	30099	Teton	MT
303 ..	30101	Toole	MT
304 ..	37171	Surry	NC
304 ..	37193	Wilkes	NC
305 ..	40009	Beckham	OK
305 ..	40039	Custer	OK
305 ..	40043	Dewey	OK
305 ..	40045	Ellis	OK
305 ..	40055	Greer	OK
305 ..	40057	Harmon	OK
305 ..	40059	Harper	OK
305 ..	40065	Jackson	OK
305 ..	40075	Kiowa	OK
305 ..	40129	Roger Mills	OK
305 ..	40149	Washita	OK
305 ..	40153	Woodward	OK
306 ..	48077	Clay	TX
306 ..	48485	Wichita	TX
307 ..	19119	Lyon	IA
307 ..	31027	Cedar	NE
307 ..	31107	Knox	NE
307 ..	46009	Bon Homme	SD
307 ..	46027	Clay	SD
307 ..	46061	Hanson	SD

PEA No.	Federal Information Processing System No.	County name	State
307 ..	46067	Hutchinson	SD
307 ..	46083	Lincoln	SD
307 ..	46087	McCook	SD
307 ..	46125	Turner	SD
307 ..	46135	Yankton	SD
308 ..	13079	Crawford	GA
308 ..	13081	Crisp	GA
308 ..	13093	Dooly	GA
308 ..	13193	Macon	GA
308 ..	13207	Monroe	GA
308 ..	13249	Schley	GA
308 ..	13261	Sumter	GA
308 ..	13269	Taylor	GA
309 ..	37015	Bertie	NC
309 ..	37029	Camden	NC
309 ..	37041	Chowan	NC
309 ..	37073	Gates	NC
309 ..	37091	Hertford	NC
309 ..	37139	Pasquotank	NC
309 ..	37143	Perquimans	NC
310 ..	29055	Crawford	MO
310 ..	29187	St. Francois	MO
310 ..	29186	Ste. Genevieve	MO
310 ..	29221	Washington	MO
311 ..	08003	Alamosa	CO
311 ..	08009	Baca	CO
311 ..	08011	Bent	CO
311 ..	08017	Cheyenne	CO
311 ..	08021	Conejos	CO
311 ..	08023	Costilla	CO
311 ..	08025	Crowley	CO
311 ..	08055	Huerfano	CO
311 ..	08061	Kiowa	CO
311 ..	08071	Las Animas	CO
311 ..	08079	Mineral	CO
311 ..	08089	Otero	CO
311 ..	08099	Prowers	CO
311 ..	08105	Rio Grande	CO
311 ..	08109	Saguache	CO
311 ..	35007	Colfax	NM
312 ..	35045	San Juan	NM
313 ..	48021	Bastrop	TX
313 ..	48055	Caldwell	TX
313 ..	48287	Lee	TX
314 ..	48073	Cherokee	TX
314 ..	48365	Panola	TX
314 ..	48401	Rusk	TX
315 ..	30003	Big Horn	MT
315 ..	30009	Carbon	MT
315 ..	30017	Custer	MT
315 ..	30025	Fallon	MT
315 ..	30075	Powder River	MT
315 ..	30079	Prairie	MT
315 ..	30087	Rosebud	MT
315 ..	30103	Treasure	MT
315 ..	56003	Big Horn	WY
315 ..	56019	Johnson	WY
315 ..	56029	Park	WY
315 ..	56033	Sheridan	WY
316 ..	16007	Bear Lake	ID
316 ..	16029	Caribou	ID
316 ..	49009	Daggett	UT
316 ..	49033	Rich	UT
316 ..	56007	Carbon	WY
316 ..	56023	Lincoln	WY
316 ..	56035	Sublette	WY
316 ..	56037	Sweetwater	WY
316 ..	56041	Uinta	WY
317 ..	31059	Fillmore	NE
317 ..	31067	Gage	NE
317 ..	31095	Jefferson	NE
317 ..	31097	Johnson	NE
317 ..	31127	Nemaha	NE
317 ..	31131	Otoe	NE
317 ..	31133	Pawnee	NE
317 ..	31147	Richardson	NE
317 ..	31151	Saline	NE
317 ..	31159	Seward	NE
317 ..	31169	Thayer	NE
317 ..	31185	York	NE
318 ..	27069	Kittson	MN
318 ..	27077	Lake of the Woods	MN
318 ..	27089	Marshall	MN
318 ..	27113	Pennington	MN
318 ..	27125	Red Lake	MN
318 ..	27135	Roseau	MN
318 ..	38005	Benson	ND
318 ..	38019	Cavalier	ND
318 ..	38027	Eddy	ND
318 ..	38063	Nelson	ND
318 ..	38067	Pembina	ND
318 ..	38071	Ramsey	ND
318 ..	38079	Rolette	ND
318 ..	38091	Steele	ND
318 ..	38095	Towner	ND
318 ..	38097	Traill	ND
318 ..	38099	Walsh	ND
319 ..	13095	Dougherty	GA
319 ..	13177	Lee	GA
320 ..	48235	Irion	TX
320 ..	48413	Schleicher	TX
320 ..	48435	Sutton	TX
320 ..	48451	Tom Green	TX
321 ..	18029	Dearborn	IN
321 ..	18047	Franklin	IN
321 ..	18115	Ohio	IN
321 ..	18137	Ripley	IN
321 ..	18155	Switzerland	IN
322 ..	38009	Bottineau	ND
322 ..	38013	Burke	ND
322 ..	38023	Divide	ND
322 ..	38049	McHenry	ND
322 ..	38053	McKenzie	ND
322 ..	38061	Mountrail	ND
322 ..	38075	Renville	ND
322 ..	38101	Ward	ND
322 ..	38105	Williams	ND
323 ..	35003	Catron	NM
323 ..	35053	Socorro	NM
323 ..	35057	Torrance	NM
323 ..	35061	Valencia	NM
324 ..	42103	Pike	PA
324 ..	42127	Wayne	PA
325 ..	38015	Burleigh	ND
325 ..	38059	Morton	ND
326 ..	27005	Becker	MN
326 ..	27087	Mahnomen	MN
326 ..	27107	Norman	MN
326 ..	27111	Otter Tail	MN
326 ..	27167	Wilkin	MN
327 ..	45017	Calhoun	SC
327 ..	45075	Orangeburg	SC
328 ..	04017	Navajo	AZ
329 ..	48047	Brooks	TX
329 ..	48131	Duval	TX
329 ..	48249	Jim Wells	TX
329 ..	48261	Kenedy	TX
329 ..	48273	Kleberg	TX
329 ..	48297	Live Oak	TX
329 ..	48311	McMullen	TX
330 ..	17033	Crawford	IL
330 ..	17047	Edwards	IL
330 ..	17101	Lawrence	IL
330 ..	17159	Richland	IL

PEA No.	Federal Information Processing System No.	County name	State
330 ..	17185	Wabash	IL
330 ..	17191	Wayne	IL
330 ..	17193	White	IL
331 ..	48079	Cochran	TX
331 ..	48189	Hale	TX
331 ..	48219	Hockley	TX
331 ..	48279	Lamb	TX
331 ..	48305	Lynn	TX
331 ..	48437	Swisher	TX
331 ..	48445	Terry	TX
332 ..	37007	Anson	NC
332 ..	45025	Chesterfield	SC
332 ..	45069	Marlboro	SC
333 ..	39037	Darke	OH
333 ..	39149	Shelby	OH
334 ..	48011	Armstrong	TX
334 ..	48065	Carson	TX
334 ..	48075	Childress	TX
334 ..	48087	Collingsworth	TX
334 ..	48101	Cottle	TX
334 ..	48129	Donley	TX
334 ..	48179	Gray	TX
334 ..	48191	Hall	TX
334 ..	48195	Hansford	TX
334 ..	48211	Hemphill	TX
334 ..	48233	Hutchinson	TX
334 ..	48295	Lipscomb	TX
334 ..	48357	Ochiltree	TX
334 ..	48393	Roberts	TX
334 ..	48483	Wheeler	TX
335 ..	22031	De Soto Parish	LA
335 ..	22069	Natchitoches Parish	LA
335 ..	22081	Red River Parish	LA
335 ..	22085	Sabine Parish	LA
336 ..	27119	Polk	MN
336 ..	38035	Grand Forks	ND
337 ..	48097	Cooke	TX
337 ..	48237	Jack	TX
337 ..	48337	Montague	TX
337 ..	48363	Palo Pinto	TX
338 ..	08007	Archuleta	CO
338 ..	08033	Dolores	CO
338 ..	08067	La Plata	CO
338 ..	08083	Montezuma	CO
338 ..	08111	San Juan	CO
339 ..	31007	Banner	NE
339 ..	31013	Box Butte	NE
339 ..	31033	Cheyenne	NE
339 ..	31045	Dawes	NE
339 ..	31105	Kimball	NE
339 ..	31123	Morrill	NE
339 ..	31157	Scotts Bluff	NE
339 ..	31165	Sioux	NE
339 ..	56015	Goshen	WY
340 ..	35009	Curry	NM
340 ..	35011	DeBaca	NM
340 ..	35021	Harding	NM
340 ..	35037	Quay	NM
340 ..	35041	Roosevelt	NM
340 ..	35059	Union	NM
341 ..	35027	Lincoln	NM
341 ..	35035	Otero	NM
342 ..	46003	Aurora	SD
342 ..	46015	Brule	SD
342 ..	46017	Buffalo	SD
342 ..	46023	Charles Mix	SD
342 ..	46035	Davison	SD
342 ..	46043	Douglas	SD
342 ..	46053	Gregory	SD
342 ..	46059	Hand	SD
342 ..	46065	Hughes	SD
342 ..	46069	Hyde	SD
342 ..	46073	Jerauld	SD
342 ..	46085	Lyman	SD
342 ..	46117	Stanley	SD
342 ..	46119	Sully	SD
342 ..	46123	Tripp	SD
343 ..	48043	Brewster	TX
343 ..	48103	Crane	TX
343 ..	48105	Crockett	TX
343 ..	48243	Jeff Davis	TX
343 ..	48301	Loving	TX
343 ..	48371	Pecos	TX
343 ..	48377	Presidio	TX
343 ..	48383	Reagan	TX
343 ..	48389	Reeves	TX
343 ..	48443	Terrell	TX
343 ..	48461	Upton	TX
343 ..	48475	Ward	TX
343 ..	48495	Winkler	TX
344 ..	01007	Bibb	AL
344 ..	01021	Chilton	AL
344 ..	01065	Hale	AL
345 ..	45039	Fairfield	SC
345 ..	45071	Newberry	SC
345 ..	45081	Saluda	SC
346 ..	37039	Cherokee	NC
346 ..	37043	Clay	NC
346 ..	37075	Graham	NC
346 ..	37113	Macon	NC
347 ..	22037	East Feliciana Parish	LA
347 ..	22077	Pointe Coupee Parish	LA
347 ..	22091	St. Helena Parish	LA
347 ..	22125	West Feliciana Parish	LA
347 ..	28157	Wilkinson	MS
348 ..	46013	Brown	SD
348 ..	46021	Campbell	SD
348 ..	46037	Day	SD
348 ..	46041	Dewey	SD
348 ..	46045	Edmunds	SD
348 ..	46049	Faulk	SD
348 ..	46091	Marshall	SD
348 ..	46089	McPherson	SD
348 ..	46107	Potter	SD
348 ..	46115	Spink	SD
348 ..	46129	Walworth	SD
348 ..	46137	Ziebach	SD
349 ..	37111	McDowell	NC
349 ..	37121	Mitchell	NC
349 ..	37199	Yancey	NC
350 ..	05037	Cross	AR
350 ..	05077	Lee	AR
350 ..	05107	Phillips	AR
350 ..	05123	St. Francis	AR
351 ..	30109	Wibaux	MT
351 ..	38007	Billings	ND
351 ..	38011	Bowman	ND
351 ..	38025	Dunn	ND
351 ..	38029	Emmons	ND
351 ..	38033	Golden Valley	ND
351 ..	38037	Grant	ND
351 ..	38041	Hettinger	ND
351 ..	38043	Kidder	ND
351 ..	38047	Logan	ND
351 ..	38051	McIntosh	ND
351 ..	38055	McLean	ND
351 ..	38057	Mercer	ND
351 ..	38065	Oliver	ND
351 ..	38085	Sioux	ND
351 ..	38087	Slope	ND
351 ..	38089	Stark	ND
351 ..	46031	Corson	SD
352 ..	48177	Gonzales	TX
352 ..	48255	Karnes	TX

PEA No.	Federal Information Processing System No.	County name	State
352 ..	48493	Wilson	TX
353 ..	17075	Iroquois	IL
353 ..	18073	Jasper	IN
353 ..	18111	Newton	IN
354 ..	55135	Waupaca	WI
354 ..	55137	Waushara	WI
355 ..	56025	Natrona	WY
356 ..	53019	Ferry	WA
356 ..	53043	Lincoln	WA
356 ..	53051	Pend Oreille	WA
356 ..	53065	Stevens	WA
357 ..	35039	Rio Arriba	NM
357 ..	35055	Taos	NM
358 ..	48031	Blanco	TX
358 ..	48053	Burnet	TX
358 ..	48299	Llano	TX
359 ..	08075	Logan	CO
359 ..	08087	Morgan	CO
359 ..	08095	Phillips	CO
359 ..	08121	Washington	CO
359 ..	08125	Yuma	CO
359 ..	31057	Dundy	NE
360 ..	02100	Haines Borough	AK
360 ..	02105	Hoonah-Angoon Census Area	AK
360 ..	02110	Juneau Borough	AK
360 ..	02130	Ketchikan Gateway Borough ..	AK
360 ..	02195	Petersburg	AK
360 ..	02198	Prince of Wales-Hyder	AK
360 ..	02220	Sitka Borough	AK
360 ..	02230	Skagway Municipality	AK
360 ..	02275	Wrangell	AK
360 ..	02282	Yakutat Borough	AK
361 ..	49023	Juab	UT
361 ..	49027	Millard	UT
361 ..	49039	Sanpete	UT
361 ..	49041	Sevier	UT
362 ..	16003	Adams	ID
362 ..	16015	Boise	ID
362 ..	16045	Gem	ID
362 ..	16075	Payette	ID
362 ..	16085	Valley	ID
362 ..	16087	Washington	ID
363 ..	48003	Andrews	TX
363 ..	48033	Borden	TX
363 ..	48115	Dawson	TX
363 ..	48173	Glasscock	TX
363 ..	48227	Howard	TX
363 ..	48317	Martin	TX
364 ..	30001	Beaverhead	MT
364 ..	30007	Broadwater	MT
364 ..	30023	Deer Lodge	MT
364 ..	30043	Jefferson	MT
364 ..	30093	Silver Bow	MT
365 ..	40141	Tillman	OK
365 ..	48009	Archer	TX
365 ..	48023	Baylor	TX
365 ..	48155	Foard	TX
365 ..	48197	Hardeman	TX
365 ..	48429	Stephens	TX
365 ..	48447	Throckmorton	TX
365 ..	48487	Wilbarger	TX
365 ..	48503	Young	TX
366 ..	53003	Asotin	WA
366 ..	53023	Garfield	WA
366 ..	53075	Whitman	WA
367 ..	29007	Audrain	MO
367 ..	29137	Monroe	MO
367 ..	29175	Randolph	MO
367 ..	29205	Shelby	MO
368 ..	20029	Cloud	KS
368 ..	20039	Decatur	KS
368 ..	20065	Graham	KS
368 ..	20089	Jewell	KS
368 ..	20105	Lincoln	KS
368 ..	20123	Mitchell	KS
368 ..	20137	Norton	KS
368 ..	20141	Osborne	KS
368 ..	20143	Ottawa	KS
368 ..	20147	Phillips	KS
368 ..	20153	Rawlins	KS
368 ..	20157	Republic	KS
368 ..	20163	Rooks	KS
368 ..	20183	Smith	KS
369 ..	19003	Adams	IA
369 ..	19071	Fremont	IA
369 ..	19129	Mills	IA
369 ..	19137	Montgomery	IA
369 ..	19145	Page	IA
369 ..	19173	Taylor	IA
369 ..	29005	Atchison	MO
370 ..	19011	Benton	IA
370 ..	19095	Iowa	IA
370 ..	19183	Washington	IA
371 ..	37005	Alleghany	NC
371 ..	51640	Galax City	VA
371 ..	51077	Grayson	VA
371 ..	51197	Wythe	VA
372 ..	08039	Elbert	CO
372 ..	08063	Kit Carson	CO
372 ..	08073	Lincoln	CO
372 ..	20023	Cheyenne	KS
372 ..	20063	Gove	KS
372 ..	20109	Logan	KS
372 ..	20179	Sheridan	KS
372 ..	20181	Sherman	KS
372 ..	20193	Thomas	KS
372 ..	20199	Wallace	KS
373 ..	53013	Columbia	WA
373 ..	53071	Walla Walla	WA
374 ..	08115	Sedgwick	CO
374 ..	31005	Arthur	NE
374 ..	31009	Blaine	NE
374 ..	31029	Chase	NE
374 ..	31049	Deuel	NE
374 ..	31069	Garden	NE
374 ..	31091	Hooker	NE
374 ..	31101	Keith	NE
374 ..	31111	Lincoln	NE
374 ..	31113	Logan	NE
374 ..	31117	McPherson	NE
374 ..	31135	Perkins	NE
374 ..	31171	Thomas	NE
375 ..	35017	Grant	NM
375 ..	35023	Hidalgo	NM
375 ..	35029	Luna	NM
376 ..	48111	Dallam	TX
376 ..	48117	Deaf Smith	TX
376 ..	48205	Hartley	TX
376 ..	48341	Moore	TX
376 ..	48359	Oldham	TX
376 ..	48421	Sherman	TX
377 ..	01023	Choctaw	AL
377 ..	01063	Greene	AL
377 ..	01091	Marengo	AL
377 ..	01119	Sumter	AL
378 ..	13033	Burke	GA
378 ..	13125	Glascock	GA
378 ..	13163	Jefferson	GA
378 ..	13165	Jenkins	GA
378 ..	13301	Warren	GA
379 ..	26033	Chippewa	MI
379 ..	26095	Luce	MI
379 ..	26097	Mackinac	MI
380 ..	26003	Alger	MI

PEA No.	Federal Information Processing System No.	County name	State
380 ..	26041	Delta	MI
380 ..	26153	Schoolcraft	MI
381 ..	48137	Edwards	TX
381 ..	48271	Kinney	TX
381 ..	48465	Val Verde	TX
382 ..	56013	Fremont	WY
382 ..	56017	Hot Springs	WY
382 ..	56043	Washakie	WY
383 ..	19039	Clarke	IA
383 ..	19053	Decatur	IA
383 ..	19117	Lucas	IA
383 ..	19159	Ringgold	IA
383 ..	19175	Union	IA
383 ..	19185	Wayne	IA
384 ..	19005	Allamakee	IA
384 ..	19043	Clayton	IA
384 ..	19055	Delaware	IA
385 ..	29111	Lewis	MO
385 ..	29127	Marion	MO
385 ..	29173	Ralls	MO
386 ..	45005	Allendale	SC
386 ..	45009	Bamberg	SC
386 ..	45011	Barnwell	SC
387 ..	38003	Barnes	ND
387 ..	38021	Dickey	ND
387 ..	38039	Griggs	ND
387 ..	38045	LaMoure	ND
387 ..	38073	Ransom	ND
387 ..	38077	Richland	ND
387 ..	38081	Sargent	ND
388 ..	19009	Audubon	IA
388 ..	19029	Cass	IA
388 ..	19085	Harrison	IA
388 ..	19165	Shelby	IA
389 ..	31061	Franklin	NE
389 ..	31063	Frontier	NE
389 ..	31065	Furnas	NE
389 ..	31073	Gosper	NE
389 ..	31083	Harlan	NE
389 ..	31085	Hayes	NE
389 ..	31087	Hitchcock	NE
389 ..	31099	Kearney	NE
389 ..	31137	Phelps	NE
389 ..	31145	Red Willow	NE
390 ..	48151	Fisher	TX
390 ..	48335	Mitchell	TX
390 ..	48353	Nolan	TX
390 ..	48415	Scurry	TX
391 ..	41025	Harney	OR
391 ..	41045	Malheur	OR
392 ..	29075	Gentry	MO
392 ..	29087	Holt	MO
392 ..	29147	Nodaway	MO
392 ..	29227	Worth	MO
393 ..	29041	Chariton	MO
393 ..	29115	Linn	MO
393 ..	29121	Macon	MO
394 ..	46007	Bennett	SD
394 ..	46055	Haakon	SD
394 ..	46071	Jackson	SD
394 ..	46075	Jones	SD
394 ..	46095	Mellette	SD
394 ..	46113	Shannon	SD
394 ..	46121	Todd	SD
395 ..	38031	Foster	ND
395 ..	38069	Pierce	ND
395 ..	38083	Sheridan	ND
395 ..	38093	Stutsman	ND
395 ..	38103	Wells	ND
396 ..	19001	Adair	IA
396 ..	19077	Guthrie	IA
396 ..	19121	Madison	IA
397 ..	01075	Lamar	AL
397 ..	01107	Pickens	AL
398 ..	31043	Dakota	NE
398 ..	31051	Dixon	NE
398 ..	31173	Thurston	NE
399 ..	48281	Lampasas	TX
399 ..	48411	San Saba	TX
400 ..	48017	Bailey	TX
400 ..	48069	Castro	TX
400 ..	48369	Parmer	TX
401 ..	48045	Briscoe	TX
401 ..	48107	Crosby	TX
401 ..	48125	Dickens	TX
401 ..	48153	Floyd	TX
401 ..	48169	Garza	TX
401 ..	48263	Kent	TX
401 ..	48345	Motley	TX
402 ..	48095	Concho	TX
402 ..	48267	Kimble	TX
402 ..	48319	Mason	TX
402 ..	48307	McCulloch	TX
402 ..	48327	Menard	TX
403 ..	30027	Fergus	MT
403 ..	30045	Judith Basin	MT
403 ..	30059	Meagher	MT
403 ..	30071	Phillips	MT
403 ..	30107	Wheatland	MT
404 ..	49025	Kane	UT
404 ..	49037	San Juan	UT
405 ..	56039	Teton	WY
406 ..	19105	Jones	IA
407 ..	16023	Butte	ID
407 ..	16037	Custer	ID
407 ..	16059	Lemhi	ID
408 ..	48081	Coke	TX
408 ..	48399	Runnels	TX
408 ..	48431	Sterling	TX
409 ..	48207	Haskell	TX
409 ..	48269	King	TX
409 ..	48275	Knox	TX
409 ..	48417	Shackelford	TX
409 ..	48433	Stonewall	TX
410 ..	31031	Cherry	NE
410 ..	31075	Grant	NE
410 ..	31161	Sheridan	NE
411 ..	48109	Culberson	TX
411 ..	48229	Hudspeth	TX
412 ..	72001	Adjuntas	PR
412 ..	72003	Aguada	PR
412 ..	72005	Aguadilla	PR
412 ..	72007	Aguas Buenas	PR
412 ..	72009	Aibonito	PR
412 ..	72011	Anasco	PR
412 ..	72013	Arecibo	PR
412 ..	72015	Arroyo	PR
412 ..	72017	Barceloneta	PR
412 ..	72019	Barranquitas	PR
412 ..	72021	Bayamon	PR
412 ..	72023	Cabo Rojo	PR
412 ..	72025	Caguas	PR
412 ..	72027	Camuy	PR
412 ..	72029	Canovanas	PR
412 ..	72031	Carolina	PR
412 ..	72033	Catano	PR
412 ..	72035	Cayey	PR
412 ..	72037	Ceiba	PR
412 ..	72039	Ciales	PR
412 ..	72041	Cidra	PR
412 ..	72043	Coamo	PR
412 ..	72045	Comerio	PR
412 ..	72047	Corozal	PR
412 ..	72049	Culebra	PR

PEA No.	Federal Information Processing System No.	County name	State
412 ..	72051	Dorado	PR
412 ..	72053	Fajardo	PR
412 ..	72054	Florida	PR
412 ..	72055	Guanica	PR
412 ..	72057	Guayama	PR
412 ..	72059	Guayanilla	PR
412 ..	72061	Guaynabo	PR
412 ..	72063	Gurabo	PR
412 ..	72065	Hatillo	PR
412 ..	72067	Hormigueros	PR
412 ..	72069	Humacao	PR
412 ..	72071	Isabela	PR
412 ..	72073	Jayuya	PR
412 ..	72075	Juana Diaz	PR
412 ..	72077	Juncos	PR
412 ..	72079	Lajas	PR
412 ..	72081	Lares	PR
412 ..	72083	Las Marias	PR
412 ..	72085	Las Piedras	PR
412 ..	72087	Loiza	PR
412 ..	72089	Luquillo	PR
412 ..	72091	Manati	PR
412 ..	72093	Maricao	PR
412 ..	72095	Maunabo	PR
412 ..	72097	Mayaguez	PR
412 ..	72099	Moca	PR
412 ..	72101	Morovis	PR
412 ..	72103	Naguabo	PR
412 ..	72105	Naranjito	PR
412 ..	72107	Orocovis	PR
412 ..	72109	Patillas	PR
412 ..	72111	Penuelas	PR
412 ..	72113	Ponce	PR
412 ..	72115	Quebradillas	PR
412 ..	72117	Rincon	PR
412 ..	72119	Rio Grande	PR
412 ..	72121	Sabana Grande	PR
412 ..	72123	Salinas	PR
412 ..	72125	San German	PR
412 ..	72127	San Juan	PR
412 ..	72129	San Lorenzo	PR
412 ..	72131	San Sebastian	PR
412 ..	72133	Santa Isabel	PR
412 ..	72135	Toa Alta	PR
412 ..	72137	Toa Baja	PR
412 ..	72139	Trujillo Alto	PR
412 ..	72141	Utuado	PR
412 ..	72143	Vega Alta	PR
412 ..	72145	Vega Baja	PR
412 ..	72147	Vieques	PR
412 ..	72149	Villalba	PR
412 ..	72151	Yabucoa	PR
412 ..	72153	Yauco	PR
413 ..	66010	Guam	GU.
413 ..	69085	Northern Islands	MP
413 ..	69100	Rota	MP
413 ..	69110	Saipan	MP
413 ..	69120	Tinian	MP
414 ..	78010	St. Croix	VI
414 ..	78020	St. John	VI
414 ..	78030	St. Thomas	VI
415 ..	60010	Eastern District	AS
415 ..	60020	Manu'a District	AS
415 ..	60030	Rose Island	AS
415 ..	60040	Swains Island	AS
415 ..	60050	Western District	AS
416 ..	99023	Gulf of Mexico Central and East.	GM
416 ..	99001	Gulf of Mexico West	GM

[85 FR 22865, Apr. 23, 2020]

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 (617–652 MHz), paired with a 5 megahertz channel block in the 600 MHz uplink band (663–698 MHz), based on the frequency blocks specified in § 27.5(l).

(l) *3700–3980 MHz band.* Authorizations for licenses in the 3.7 GHz Service will be based on Partial Economic Areas (PEAs), as specified in § 27.6(m), and the frequency sub-blocks specified in § 27.5(m).

(m) *3450–3550 MHz band.* Authorizations for licenses in the 3.45 GHz Service will be based on Partial Economic Areas (PEAs), as specified in § 27.6(n), and the frequency blocks specified in § 27.5(o).

[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; 82 FR 47160, Oct. 11, 2017; 85 FR 22881, Apr. 23, 2020; 86 FR 17952, Apr. 7, 2021]

§ 27.12 Eligibility.

(a) Except as provided in paragraph (b) of this section and in §§ 27.604, 27.1201, 27.1202, and 27.1503, 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, as amended at 85 FR 43134, July 16, 2020]

§ 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.

(m) *3700–3980 MHz band.* Authorizations for licenses in the 3.7 GHz Service in the 3700–3980 MHz band will have a term not to exceed 15 years from the date of issuance or renewal.

(n) *900 MHz broadband.* Authorizations for broadband licenses in the 897.5–900.5 MHz and 936.5–939.5 MHz bands will have a term not to exceed 15 years from the date of initial issuance and ten (10) years from the date of any subsequent renewal.

(o) *3450–3550 MHz Band.* Authorizations for licenses in the 3.45 GHz Service in the 3450–3550 MHz band will have a term not to exceed fifteen (15) years from the date of issuance.

[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.govinfo.gov*.

§ 27.14 Construction requirements.

(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, Block D in the 2345–2350 MHz band, in the 3450–3550 MHz band, and in the 3700–3980 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)–(f) [Reserved]

(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), (t), (v), and (w) 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) 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. With respect to EBS licenses issued after October 25, 2019, the licensee must comply with paragraph (u) of this section. ''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), (2), or (3) of this section. If a licensee has not met the requirements of paragraph (o)(1), (2), or (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 (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 license initially issued prior to October 25, 2019 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 contained in the edition of 47 CFR parts 20 through 39, revised as of October 1, 2017.

(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.

(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.

(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.

(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.

(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.

(u) This section enumerates performance requirements for EBS licenses initially issued after October 25, 2019. Licensees 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.

(1) All EBS licenses initially issued after October 25, 2019, must demonstrate compliance with the performance requirements described in this paragraph (u). All equipment used to demonstrate compliance must be in use and actually providing service, either for internal use or to unaffiliated customers, as of the interim deadline or final deadline, whichever is applicable.

(2) Except for licensees with licenses applied for in the Tribal Priority Window, licensees providing mobile or point-to-multipoint service must demonstrate reliable signal coverage of 50% of the population of the geographic service area within four years of initial license grant, and 80% of the population of the geographic service area within eight years of initial license grant.

(3) Except for licensees with licenses applied for in the Tribal Priority Window, licensees providing fixed point-to-point service must demonstrate operation of one link for each 50,000 persons in the geographic service area within four years of initial license grant, and one link for each 25,000 persons in the

geographic service area within eight years of initial license grant.

(4) Licensees with licenses applied for in the Tribal Priority Window must make an interim showing under paragraph (u)(2) or (3) of this section within two years of initial license grant. Licensees with licenses applied for in the Tribal Priority Window must make a final showing under paragraph (u)(2) or (3) of this section within five years of initial license grant.

(5) If an EBS licensee (other than the licensee of a license issued pursuant to the Tribal Priority Window) fails to meet interim performance requirements described in paragraph (u)(2) or (3) of this section, the deadline for that authorization to meet its final performance requirement will be advanced by two years. If an EBS licensee of a license issued pursuant to the Tribal Priority Window fails to meet interim performance requirements described in paragraph (u)(2) or (3) of this section, the deadline for that authorization to meet its final performance requirement will be advanced by one year. If an EBS licensee fails to meet its final performance requirement, its license shall automatically terminate without specific Commission action.

(v) The following provisions apply to any licensee holding an authorization in the 3700–3980 MHz band:

(1) Licensees relying on mobile or point-to-multipoint service shall provide reliable signal coverage and offer service within eight (8) years from the date of the initial license to at least forty-five (45) percent of the population in each of its license areas (''First Buildout Requirement''). Licensee shall provide reliable signal coverage and offer service within twelve (12) years from the date of the initial license to at least eighty (80) percent of the population in each of its license areas (''Second Buildout Requirement''). Licensees relying on point-to-point service shall demonstrate within eight years of the license issue date that they have four links operating and providing service to customers or for internal use if the population within the license area is equal to or less than 268,000 and, if the population is greater than 268,000, that they have at least one link in operation and providing service to customers, or for internal use, per every 67,000 persons within a license area (''First Buildout Requirement''). Licensees relying on point-to-point service shall demonstrate within 12 years of the license issue date that they have eight links operating and providing service to customers or for internal use if the population within the license area is equal to or less than 268,000 and, if the population within the license area is greater than 268,000, shall demonstrate they are providing service and have at least two links in operation per every 67,000 persons within a license area (''Second Buildout Requirement'').

(2) In the alternative, a licensee offering Internet of Things-type services shall provide geographic area coverage within eight (8) years from the date of the initial license to thirty-five (35) percent of the license (''First Buildout Requirement''). A licensee offering Internet of Things-type services shall provide geographic area coverage within twelve (12) years from the date of the initial license to sixty-five (65) percent of the license (''Second Buildout Requirement'').

(3) If a licensee fails to establish that it meets the First Buildout Requirement for a particular license area, the licensee's Second Buildout Requirement deadline and license term will be reduced by two years. If a licensee fails to establish that it meets the Second Buildout Requirement for a particular license area, its authorization for each license area in which it fails to meet the Second 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.

(4) 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 or geographic area served on areas no larger than the Census Tract level. The population or area 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 or geographic area within the Census Tract (or other acceptable identifier) towards meeting the performance requirement of a single, individual license. If a licensee does not provide reliable signal coverage to an entire license area, the license must provide a map that accurately depicts 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 licensed area 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.

(w) The following provisions apply to any licensee holding an authorization in the 3450–3550 MHz band:

(1) *Performance requirements.* Licensees in the 3.45 GHz Service must meet the following benchmarks, based on the type of service they provide.

(i) *Mobile/point-to-multipoint service.* Licensees relying on mobile or point-to-multipoint service shall provide reliable signal coverage and offer service within four (4) years from the date of the initial license to at least forty-five (45) percent of the population in each of its license areas (''First Performance Benchmark''). Licensees shall provide reliable signal coverage and offer service within eight (8) years from the date of the initial license to at least eighty (80) percent of the population in each of its license areas (''Second Performance Benchmark'').

(ii) *Point-to-point service.* Licensees relying on point-to-point service shall demonstrate within four (4) years of the license issue date that, if the population within the license area is equal to or less than 268,000, they have four links operating and either provide service to customers or for internal use. If the population is greater than 268,000, they shall demonstrate they have at least one link in operation and either provide service to customers or for internal use per every 67,000 persons within a license area (''First Performance Benchmark''). Licensees shall demonstrate within eight (8) years of the license issue date that, if the population within license area is equal to or less than 268,000, they have eight links operating and either provide service to customers or for internal use. If the population within the license area is greater than 268,000, they shall demonstrate they have at least two links in operation and either provide service to customers or for internal use per every 67,000 persons within a license area (''Second Performance Benchmark'').

(iii) *Internet of Things service.* Licensees offering Internet of Things-type services shall provide geographic area coverage within four (4) years from the date of the initial license to thirty-five (35) percent of the license (''First Performance Benchmark''). Licensees shall provide geographic area coverage within eight (8) years from the date of the initial license to sixty-five (65) percent of the license (''Second Performance Benchmark'').

(2) *Failure to meet performance requirements.* If a licensee fails to establish that it meets the First Performance Benchmark for a particular license area in paragraph (w)(1) of this section, the licensee's Second Performance Benchmark deadline and license term in paragraph (w)(1) of this section will be reduced by one year. If a licensee fails to establish that it meets the Second Performance Benchmark for a particular license area, its authorization for each license area in which it fails to meet the Second Performance Benchmark 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.

(3) *Compliance procedures.* To demonstrate compliance with the performance requirements in paragraph (w)(1) of this section, licensees shall use the

most recently available decennial U.S. Census Data at the time of measurement and shall base their measurements of population or geographic area served on areas no larger than the Census Tract level. The population or area 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 or geographic area within the Census Tract (or other acceptable identifier) towards meeting the performance requirement of a single, individual license. If a licensee does not provide reliable signal coverage to an entire license area, the license must provide a map that accurately depicts 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 licensed area 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.

[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.govinfo.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.

[62 FR 9658, Mar. 3, 1997, as amended at 63 FR 68954, Dec. 14, 1998; 65 FR 3146, Jan. 20, 2000; 65 FR 57268, Sept. 21, 2000; 67 FR 45373, July 9, 2002; 69 FR 5715, Feb. 6, 2004; 72 FR 48848, Aug. 24, 2007; 78 FR 8268, Feb. 5, 2013; 78 FR 50255, Aug. 16, 2013; 79 FR 596, Jan. 6, 2014; 79 FR 32412, June 4, 2014; 79 FR 48537, Aug. 15, 2014; 82 FR 41548, Sept. 1, 2017]

§ 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 nonproprietary, 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]

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.

(j) The following power requirements apply to stations transmitting in the 3700–3980 MHz band:

(1) The power of each fixed or base station transmitting in the 3700–3980 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 an equivalent isotropically radiated power (EIRP) of 3280 Watts/MHz. This limit applies to

the aggregate power of all antenna elements in any given sector of a base station.

(2) The power of each fixed or base station transmitting in the 3700–3980 MHz band and situated in any geographic location other than that described in paragraph (j)(1) of this section is limited to an EIRP of 1640 Watts/MHz. This limit applies to the aggregate power of all antenna elements in any given sector of a base station.

(3) Mobile and portable stations are limited to 1 Watt EIRP. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

(4) Equipment employed must be authorized in accordance with the provisions of §27.51. 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 (j)(5) 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.

(5) 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, and any other relevant factors, so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

(k) The following power requirements apply to stations transmitting in the 3450–3550 MHz band:

(1) The power of each fixed or base station transmitting in the 3450–3550 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 an equivalent isotropically radiated power (EIRP) of 3280 Watts/MHz. This limit applies to the aggregate power of all antenna elements in any given sector of a base station.

(2) The power of each fixed or base station transmitting in the 3450–3550 MHz band and situated in any geographic location other than that described in paragraph (k)(1) of this section is limited to an EIRP of 1640 Watts/MHz. This limit applies to the aggregate power of all antenna elements in any given sector of a base station.

(3) Mobile devices are limited to 1Watt (30 dBm) EIRP. Mobile devices operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

(4) Equipment employed must be authorized in accordance with the provisions of §27.51. 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 (k)(5) 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.

(5) 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, and any other relevant factors, 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

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—Continued

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) per MHz (watts/MHz)
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.govinfo.gov*.

§ 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 exposure.

Licensees and manufacturers shall ensure compliance with the Commission's radio frequency exposure requirements 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. Technical information showing the basis for this statement must be submitted to the Commission upon request.

[85 FR 18151, Apr. 1, 2020]

§ 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
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

25 kHz Mobile Transmitter ACP Requirements—Continued

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
>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
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

12.5 kHz Base Transmitter ACP Requirements—Continued

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
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)(5) 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, 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)(5) of this section.

(l) *3.7 GHz Service.* The following emission limits apply to stations transmitting in the 3700–3980 MHz band:

(1) For base station operations in the 3700–3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz. Compliance with this paragraph (l)(1) 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.

(2) For mobile operations in the 3700–3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz. Compliance with this paragraph (l)(2) 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, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. 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.

(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 co-located, 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) *3.45 GHz Service.* The following emission limits apply to stations transmitting in the 3450–3550 MHz band:

(1) For base station operations in the 3450–3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz. Compliance with the provisions of this paragraph (n)(1) 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, but limited to a maximum of 200 kHz. 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. Notwithstanding the channel edge requirement of −13 dBm per megahertz, for base station operations in the 3450–3550 MHz band, the conducted power of any emission below 3440 MHz or above 3560 MHz shall not exceed −25 dBm/MHz, and the conducted power of emissions below 3430 MHz or above 3570 MHz shall not exceed −40 dBm/MHz.

(2) For mobile operations in the 3450–3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz. Compliance with this paragraph (n)(2) 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, but limited to a maximum of 200 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. 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.

(o) 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.govinfo.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 pre-transition 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.

(d) *Power flux density for stations operating in the 3700–3980 MHz band.* For base and fixed stations operation in the 3700–3980 MHz band in accordance with the provisions of § 27.50(j), the power flux density (PFD) at any location on the geographical border of a licensee's service area shall not exceed −76 dBm/m^2/MHz. This power flux density will be measured at 1.5 meters above ground. Licensees in adjacent geographic areas may voluntarily agree to operate under a higher PFD at their common boundary.

(e) *Power flux density for stations operating in the 3450–3550 MHz band.* For base and fixed stations operation in the 3450–3550 MHz band in accordance with the provisions of § 27.50(k), the power flux density (PFD) at any location on the geographical border of a licensee's service area shall not exceed −76 dBm/m^2/MHz. This power flux density will be measured at 1.5 meters above ground. Licensees in adjacent geographic areas may voluntarily agree to operate under a higher PFD at their common boundary.

[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; 85 FR 22882, Apr. 23, 2020; 86 FR 17954, Apr. 7, 2021]

§ 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, 2180–2200 MHz, 3450–3550 MHz, and 3700–3980 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; 86 FR 17954, Apr. 7, 2021]

§ 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]

§§ 27.59–27.62 [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 Space 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; 88 FR 21442, Apr. 10, 2023]

§ 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. ITU–R M.1459 is 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. This incorporation by reference (IBR) material is available for inspection at the FCC and at the National Archives and Records Administration (NARA). Contact the FCC through the Federal Communications Commission's Reference Information Center, phone: (202) 418–0270. For information on the availability of this material at NARA, visit *www.archives.gov/federal-register/cfr/ibr-locations.html* or email *fr.inspection@nara.gov*. The material may be obtained from ITU, Place des Nations, 1211 Geneva 20, Switzerland; website: *www.itu.int/en/publications/Pages/default.aspx*.

(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; 85 FR 64407, Oct. 13, 2020; 88 FR 21442, Apr. 10, 2023]

§ 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.

(3) Mobile and portable stations that operate on any portion of frequencies in the 3700–3980 MHz band must be capable of operating on all frequencies in the 3700–3980 MHz band using the same air interfaces that the equipment utilizes on any frequencies in the 3700–3980 MHz band.

(4) Mobile and portable stations that operate on any portion of frequencies in the 3450–3550 MHz band must be capable of operating on all frequencies in the 3450–3550 MHz band using the same air interfaces that the equipment utilizes on any frequencies in the 3450–3550 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; 85 FR 22882, Apr. 23, 2020; 86 FR 17954, Apr. 7, 2021]

§ 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, 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.

(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 50257, Aug. 16, 2013, as amended at 80 FR 56816, Sept. 18, 2015]

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, 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.

(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, as amended at 80 FR 56816, Sept. 18, 2015]

§ 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, 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.

(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, as amended at 80 FR 56816, Sept. 18, 2015]

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.

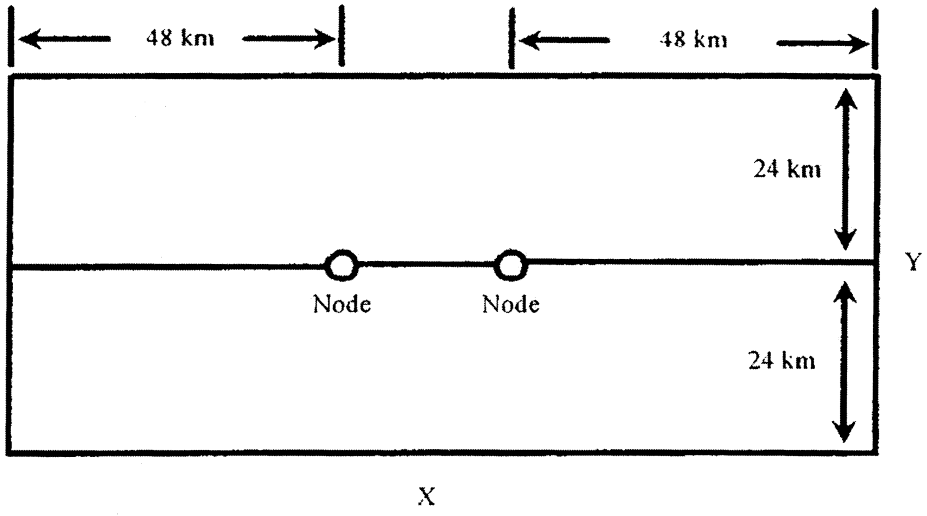
(a) The clearinghouse will apply the following test to determine when an AWS entity has triggered a cost-sharing obligation and therefore must pay an AWS relocator, MSS relocator, or a voluntarily relocating microwave incumbent in accordance with the formula detailed in §27.1164:

(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 [Reserved]

§ 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 [Reserved]

§ 27.1204 EBS Tribal priority filing window.

(a) The Commission will specify by public notice a window filing period for applications for new EBS stations on rural Tribal Lands. EBS applications for new facilities will be accepted only during this window. Applications submitted prior to the window opening date identified in the public notice will be returned as premature. Applications submitted after the deadline will be dismissed with prejudice as untimely.

(b) Applicants in the Tribal priority filing window must demonstrate that they are eligible to file in that window. To be considered eligible for the Tribal priority window, an applicant must be:

(1) A federally recognized American Indian Tribe or Alaska Native Village; or an entity that is owned and controlled by a federally-recognized Tribe or a consortium of federally-recognized Tribes;

(2) Requesting a license on Tribal Land, which is defined to be any federally recognized Indian Tribe's reservation, pueblo or colony, including former reservations in Oklahoma, Alaska Native regions established pursuant to the Alaska Native Claims Settlement Act (85 Stat. 688) and Indian Allotments, see § 54.400(e) of this chapter, as well as Hawaiian Home Lands—areas held in trust for native Hawaiians by the State of Hawaii, pursuant to the Hawaiian Homes Commission Act, 1920, July 9, 1921, 42 Stat 108, *et seq.*, as amended; and any lands designated prior to July 10, 2019, as Tribal Lands pursuant to the designation process contained in § 54.412 of this chapter;

(3) Requesting a GSA in a rural area, which is defined to be lands that are not part of an urbanized area or urban cluster area with a population equal to or greater than 50,000; and

(4) Have a local presence on the Tribal Land for which they are applying.

(c) Following the close of the Tribal priority window, the Commission will issue a public notice of acceptance for filing of applications submitted pursuant to paragraph (b) of this section that meet technical and legal requirements and that are not in conflict with any other application filed during the window. Petitions to deny such applications may be filed within 30 days of such public notice. A copy of any petition to deny must be served on the applicant.

(d) If applications are filed in the Tribal priority window that are mutually exclusive, the Commission will use competitive bidding to resolve the mutual exclusivity. 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 in this chapter.

(e) For non-mutually exclusive applications, the applications will be processed in accordance with procedures to be specified by the Wireless Telecommunications Bureau.

[84 FR 57365, Oct. 25, 2019, as amended at 85 FR 1284, Jan. 10, 2020]

§ 27.1205 EBS renewal standard.

In applying the renewal standard contained in § 1.949 of this chapter to EBS, for licenses initially issued after October 25, 2019, the applicable safe harbors are the buildout standards contained in § 27.14(u). For licenses initially issued before October 25, 2019, the applicable safe harbors are the buildout standards contained in § 27.14(o); provided, however, that the educational use safe harbor contained in § 27.14(o)(2) may only be used by a licensee that

meets the eligibility requirements to hold an EBS license pursuant to the provisions of §27.1201(a) contained in the edition of 47 CFR parts 20 through 39, revised as of October 1, 2017.

[84 FR 57365, Oct. 25, 2019]

§ 27.1206 Geographic service area.

(a) BRS:

(1) For BRS incumbent licenses granted before September 15, 1995, the geographic service area (GSA) is the area 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;

(2) For BRS BTA authorization holders, the GSA for a channel is the BTA, subject to the exclusion of overlapping, co-channel incumbent GSAs created on January 10, 2005.

(3) If an incumbent BRS license is cancelled 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.

(b) EBS:

(1) *Existing EBS licensees.* (i) The GSA of EBS licenses on the E and F channel groups is defined in §27.1216. EBS licensees on the E and F channel groups are prohibited from expanding their GSAs.

(ii) For incumbent EBS licenses not in the E and F channel groups in effect as of October 25, 2019, the geographic service area (GSA) is the area 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.

(2) *New initial EBS licenses.* (i) For EBS licenses issued in the Tribal Priority Window, the GSA consists of the rural Tribal Land (as defined in §27.1204(b)(3)) specified in the application.

(ii) For all other new initial licenses issued after April 27, 2020, the GSA is the county for which the license is issued, subject to the exclusion of overlapping, co-channel incumbent GSAs.

[84 FR 57365, Oct. 25, 2019]

§ 27.1207 Service areas and authorizations.

(a) Initial authorizations for BRS granted after January 1, 2008, shall be blanket licenses for all BRS frequencies identified in §27.5(i)(2). Except for incumbent BRS licenses, BRS service areas are the 1992 version of Basic Trading Areas (BTAs) defined by Rand McNally, or additional service areas similar to BTAs adopted by the Commission. The market area for each license will be listed on the license authorization. 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.

(b) For EBS initial licenses issued after October 25, 2019, except for licenses issued in the Tribal Priority Window, the GSA is the county for which the license is issued, subject to the exclusion of overlapping, co-channel incumbent GSAs. For purposes of this subpart, counties are defined using the United States Census Bureau's data reflecting county legal boundaries and names valid through January 1, 2017. Except for licenses issued in the Tribal Priority Window, there shall be three initial authorizations issued in each county: One authorization for channels A1, A2, A3, B1, B2, B3, C1, C2, and C3; the second authorization for channels D1, D2, D3, JA1, JA2, JA3, JB1, JB2, JB3, JC1, JC2, JC3, JD1, JD2, JD3, A4, B4, C4, D4, and G4; the third authorization for channels G1, G2, G3, KG1, KG2, and KG3.

[84 FR 57366, Oct. 25, 2019]

§ 27.1208 Geographic area licensing.

(a) All BRS and EBS licenses are geographic area licenses. Blanket licenses cover all mobile and response stations. Pursuant to that geographic area license, incumbent licensees may modify their systems provided the modified system complies with the applicable rules in this chapter. The blanket license covers all fixed stations anywhere within the authorized service area, except a station must be individually licensed if:

(1) International agreements require coordination;

(2) Submission of an Environmental Assessment is required under §1.1307 of this chapter; and

(3) The station would affect the radio quiet zones under §1.924 of this chapter.

(b) 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.

[84 FR 57366, Oct. 25, 2019]

§ 27.1209 Reversion and overlay rights.

(a) The frequencies associated with BRS incumbent authorizations that have cancelled automatically or otherwise recovered by the Commission automatically revert to the applicable BRS BTA licensee.

(b) The frequencies associated with EBS incumbent authorizations with a geographic service area that have cancelled automatically or otherwise recovered by the Commission automatically revert to a co-channel EBS county-based licensee, except that if the area in question is Tribal Land as defined in §27.1204(b)(3) and is contiguous to the GSA of a co-channel authorization issued in the Tribal Priority Window, the area consisting of Tribal Land reverts to the co-channel license issued in the Tribal Priority Window.

(c) The frequencies associated with EBS authorizations issued in the Tribal Priority Window with a geographic service area that have cancelled automatically or otherwise recovered by the Commission automatically revert to a co-channel EBS county-based authorization.

[84 FR 57366, Oct. 25, 2019]

§ 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 grandfathered leases.

All leases of current EBS spectrum entered into prior to January 10, 2005 and in compliance with leasing rules contained in 47 CFR part 74, revised as of October 1, 2004, 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 rules formerly contained in 47 CFR part 74 may be renewed and assigned in accordance with the terms of such lease. All spectrum leasing arrangements leases entered into after January 10, 2005, under the rules set forth in part 1 of this chapter and this part, must comply with the rules in those parts.

[84 FR 57366, Oct. 25, 2019]

§ 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 and the Educational Broadband Service.

Mutually exclusive initial applications for BRS and EBS licenses are

subject to competitive bidding. For BRS auctions, the designated entity provisions of §27.1218 apply. For EBS auctions, the designated entity provisions of §27.1219 apply. The general competitive bidding procedures set forth in part 1, subpart Q, of this chapter apply unless otherwise provided in this subpart.

[84 FR 57366, Oct. 25, 2019]

§ 27.1218 Broadband Radio Service designated entity provisions.

(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]

§ 27.1219 Educational Broadband Service designated entity provisions.

(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 $55 million for the preceding five (5) 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 $20 million for the preceding five (5) 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 a bidding credit of 15 percent, as 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 a bidding credit of 25 percent, as specified in §1.2110(f)(2)(i)(B) of this chapter.

(c) *Rural service provider credit.* A rural service provider, as defined in §1.2110(f)(4) of this chapter, who has not claimed a small business bidding credit may use a bidding credit of 15 percent bidding credit, as specified in §1.2110(f)(4)(i) of this chapter.

[84 FR 57366, Oct. 25, 2019; 84 FR 64209, Nov. 21, 2019]

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.

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.

COMPETITIVE BIDDING PROVISIONS

§ 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.

(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.

[80 FR 56817, Sept. 18, 2015]

COORDINATION/NOTIFICATION REQUIREMENTS

§ 27.1320 Notification to white space database administrators.

To receive interference protection, 600 MHz licensees shall notify one of the white space database administrators of the areas where they have commenced operation pursuant to §§15.713(j)(10) and 15.715(n) of this chapter.

[80 FR 73085, Nov. 23, 2015]

§ 27.1321 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: Division of Astronomical Sciences, Electromagnetic Spectrum Management Unit, 2415 Eisenhower Avenue, Alexandria, VA 22314; 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. Redesignated at 81 FR 4975, Jan. 29, 2016; 85 FR 38740, June 26, 2020]

Subpart O—3.7 GHz Service (3700–3980 MHz)

SOURCE: 85 FR 22882, Apr. 23, 2020, unless otherwise noted.

§ 27.1401 Licenses in the 3.7 GHz Service are subject to competitive bidding.

Mutually exclusive initial applications for licenses in the 3.7 GHz Service 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.

§ 27.1402 Designated entities in the 3.7 GHz Service.

(a) *Eligibility for small business provisions*—(1) *Definitions*—(i) *Small business*. 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 five (5) years.

(ii) *Very small business*. 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 five (5) years.

(2) *Bidding credits*. A winning bidder that qualifies as a small business, as defined in this section, or a consortium of such small businesses as provided in § 1.2110(c)(6) of this chapter, may use a bidding credit of 15 percent, subject to the cap specified in § 1.2110(f)(2)(ii) of this chapter. A winning bidder that qualifies as a very small business, as defined in this section, or a consortium of such very small businesses as provided in § 1.2110(c)(6) of this chapter, may use a bidding credit of 25 percent, subject to the cap specified in § 1.2110(f)(2)(ii) of this chapter.

(b) *Eligibility for rural service provider bidding credit*. A rural service provider, as defined in § 1.2110(f)(4)(i) of this chapter, that has not claimed a small business bidding credit may use the bidding credit of 15 percent specified in § 1.2110(f)(4) of this chapter.

§ 27.1411 Transition of the 3700–3980 MHz band to the 3.7 GHz Service.

(a) *Transition of the 3700–3798 MHz Band*. The 3700–3980 MHz band is being transitioned in the lower 48 contiguous states and the District of Columbia from geostationary satellite orbit (GSO) fixed-satellite service (space-to-Earth) and fixed service operations to the 3.7 GHz Service.

(b) *Definitions*—(1) *Incumbent space station operator*. An incumbent space station operator is defined as a space station operator authorized to provide C-band service to any part of the contiguous United States pursuant to an FCC-issued license or grant of market access as of June 21, 2018.

(2) *Eligible space station operator*. For purposes of determining eligibility to receive reimbursement for relocation costs incurred as a result of the transition of FSS operations to the 4000–4200 MHz band, an eligible space station operators may receive reimbursement for relocation costs incurred as a result of the transition of FSS operations to the 4000–4200 MHz band. An eligible space station operator is defined as an incumbent space station operator that has demonstrated as of February 1, 2020, that it has an existing relationship to provide service via C-band satellite transmission to one or more incumbent earth stations in the contiguous United States. Such existing relationships may be directly with the incumbent earth station, or indirectly through content distributors or other entities, so long as the relationship requires the provision of C-band satellite services to one or more specific incumbent earth stations in the contiguous United States.

(3) *Incumbent earth station*. An incumbent earth station for this subpart is defined as an earth station that is entitled to interference protection pursuant to § 25.138(c) of this chapter. An incumbent earth station must transition above 4000 MHz pursuant to this subpart. An incumbent earth station will be able to continue receiving uninterrupted service both during and after the transition.

(4) *Earth station migration*. Earth station migration includes any necessary changes that allow the uninterrupted reception of service by an incumbent

earth station on new frequencies in the upper portion of the band, including, but not limited to retuning and repointing antennas, ''dual illumination'' during which the same programming is simultaneously downlinked over the original and new frequencies, and the installation of new equipment or software at earth station uplink and/or downlink locations for customers identified for technology upgrades necessary to facilitate the repack, such as compression technology or modulation.

(5) *Earth station filtering*. A passband filter must be installed at the site of each incumbent earth station at the same time or after it has been migrated to new frequencies to block signals from adjacent channels and to prevent harmful interference from licensees in the 3.7 GHz Service. Earth station filtering can occur either simultaneously with, or after, the earth station migration, or can occur at any point after the earth station migration so long as all affected earth stations in a given Partial Economic Area and surrounding areas are filtered prior to a licensee in the 3.7 GHz Service commencing operations.

(6) *Contiguous United States* (CONUS). For the purposes of the rules established in this subpart, contiguous United States consists of the contiguous 48 states and the District of Columbia as defined by Partial Economic Areas Nos. 1–41, 43–211, 213–263, 265–297, 299–359, and 361–411, which includes areas within 12 nautical miles of the U.S. Gulf coastline (*see* §27.6(m)). In this context, the rest of the United States includes the Honolulu, Anchorage, Kodiak, Fairbanks, Juneau, Puerto Rico, Guam-Northern Mariana Islands, U.S. Virgin Islands, American Samoa, and the Gulf of Mexico PEAs.

(7) *Relocation Payment Clearinghouse*. A Relocation Payment Clearinghouse is a neutral, independent third-party to administer the cost management for the transition of the 3700–4000 MHz band from the Fixed Satellite Service and Fixed Service to the 3.7 GHz Service.

(8) *Relocation Coordinator*. A Relocation Coordinator is a third party that will ensure that all incumbent space station operators are relocating in a timely matter, and that is selected consistent with §27.1413. The Relocation Coordinator will have technical experience in understanding and working on earth stations and will manage the migration and filtering of incumbent earth stations of eligible space station operators that decline accelerated relocation payment.

§ 27.1412 Transition Plan.

(a) *Relocation deadlines*. Eligible space station operators are responsible for all necessary actions to clear their transponders from the 3700–4000 MHz band (*e.g.*, launching new satellites, reprogramming transponders, exchanging customers) and to migrate the existing services of incumbent earth stations in CONUS to the 4000–4200 MHz band (unless the incumbent earth station opts out of the formal relocation process, per paragraph (e) of this section), as of December 5, 2025. Eligible space station operators that fail to do so will be in violation of the conditions of their license authorization and potentially subject to forfeitures and other sanctions.

(b) *Accelerated relocation deadlines*. An eligible space station operator shall qualify for accelerated relocation payments by completing an early transition of the band to the 3.7 GHz Service.

(1) *Phase I deadline*. An eligible space station operator shall receive an accelerated relocation payment if it clears its transponders from the 3700–3820 MHz band and migrates all associated incumbent earth stations in CONUS above 3820 MHz no later than December 5, 2021 (Phase I deadline). To satisfy the Phase I deadline, an eligible space station operator must also provide passband filters to block signals from the 3700–3820 MHz band on all associated incumbent earth stations in PEAs 1–4, 6–10, 12–19, 21–41, and 43–50 no later than December 5, 2021 (see §27.6(m)). If an eligible space station operator receives an accelerated relocation payment for meeting this deadline, it must also satisfy the second early clearing deadline of December 5, 2023.

(2) *Phase II deadline*. An eligible space station operator shall receive an accelerated relocation payment if it clears its transponders from the 3700–4000 MHz band and migrates incumbent earth stations in CONUS above 4000 MHz no

later than December 5, 2023 (Phase II deadline). To satisfy the Phase II deadline, an eligible space station operator must also provide passband filters on all associated incumbent earth stations in CONUS no later than December 5, 2023.

(3) *Transition delays.* An eligible space station operator shall not be held responsible for circumstances beyond their control related to earth station migration or filtering.

(i) An eligible space station operator must submit a notice of any incumbent earth station transition delays to the Wireless Telecommunications Bureau within 7 days of discovering an inability to accomplish the assigned earth station transition task. Such a request must include supporting documentation to allow for resolution as soon as practicable and must be submitted before the accelerated relocation deadlines.

(ii) [Reserved]

(4) *Responsibility for meeting accelerated relocation deadlines.* An eligible space station operator's satisfaction of the accelerated relocation deadlines shall be determined on an individual basis.

(c) *Accelerated relocation election.* An eligible space station operator may elect to receive accelerated relocation payments to transition the 3700–4000 MHz band to the 3.7 GHz Service according to the Phase I and Phase II deadlines via a written commitment by filing an accelerated relocation election in GN Docket No. 18–122 no later than May 29, 2020.

(1) The Wireless Telecommunications Bureau will prescribe the precise form of such election via Public Notice no later than May 12, 2020.

(2) Each eligible space station operator that that makes an accelerated relocation election will be required, as part of its filing of this accelerated relocation election, to commit to paying the administrative costs of the Clearinghouse until the Commission awards licenses to the winning bidders in the auction, at which time those administrative costs will be repaid to those space station operators.

(d) *Transition Plan.* Eligible space station operators must file with the Commission in GN Docket No. 18–122 no later than June 12, 2020, a Transition Plan that describes the actions that must be taken to clear transponders on space stations and to migrate and filter earth stations. Eligible space station operators must make any necessary updates or resolve any deficiencies in their individual Transition Plans by August 14, 2020.

(1) The Transition Plan must detail the eligible space station operator's individual timeline and necessary actions for clearing its transponders from the 3700–4000 MHz band, including:

(i) All existing space stations with operations that will need to be transitioned to operations above 4000 MHz;

(ii) The number of new satellites, if any, that the space station operator will need to launch in order to maintain sufficient capacity post-transition, including detailed descriptions of why such new satellites are necessary;

(iii) The specific grooming plan for migrating existing services above 4000 MHz, including the pre- and post-transition frequencies that each customer will occupy;

(iv) Any necessary technology upgrades or other solutions, such as video compression or modulation, that the space station operator intends to implement;

(v) The number and location of incumbent earth stations antennas currently receiving the space station operator's transmissions that will need to be transitioned above 4000 MHz;

(vi) An estimate of the number and location of incumbent earth station antennas that will require retuning and/or repointing in order to receive content on new transponder frequencies post-transition; and

(vii) The specific timeline by which the space station operator will implement the actions described in its plan including any commitments to satisfy an early clearing.

(2) To the extent that incumbent earth stations are not accounted for in eligible space station operators' Transition Plans, the Relocation Coordinator must prepare an Earth Station Transition Plan for such incumbent earth stations and may require each associated space station operator to

file the information needed for such a plan with the Relocation Coordinator.

(i) Where space station operators do not elect to clear by the accelerated relocation deadlines and therefore are not responsible for earth station relocation, the Earth Station Transition Plan must provide timelines that ensure all earth station relocation is completed no later than the relocation deadline.

(ii) The Relocation Coordinator will describe and recommend the respective responsibility of each party for earth station migration and filtering obligations in the Earth Station Transition Plan and assist incumbent earth stations in transitioning including, for example, by installing filters or hiring a third party to install such filters to the extent necessary.

(e) *Incumbent earth station opt-out.* An incumbent earth station within the contiguous United States may opt out of the formal relocation process and accept a lump sum payment equal to the estimated reasonable transition costs of earth station migration and filtering, as determined by the Wireless Telecommunications Bureau, in lieu of actual relocation costs. Such an incumbent earth station is responsible for coordinating with the relevant space station operator as necessary and performing all relocation actions on its own, including switching to alternative transmission mechanisms such as fiber, and it will not receive further reimbursement for any costs exceeding the lump sum payment. An incumbent earth station electing to opt out must inform the appropriate space station operator(s) and the Relocation Coordinator that earth station migration and filtering will not be necessary for the relevant earth station site and must coordinate with operators to avoid any disruption of video and radio programming.

(f) *Space station status reports.* On a quarterly basis, beginning December 31, 2020: Each eligible space station operator must provide a status report of its clearing efforts. Eligible space station operators may file joint status reports.

(g) *Certification of accelerated relocation.* Each eligible space station operator must file a timely certification that it has completed the necessary clearing actions to satisfy each accelerated relocation deadline. The certification must be filed once the eligible space station operator completes its obligations but no later than the applicable accelerated relocation deadline. The Wireless Telecommunication Bureau will prescribe the form of such certification.

(1) The Bureau, Clearinghouse, and relevant stakeholders will have the opportunity to review the certification of accelerated relocation and identify potential deficiencies. The Wireless Telecommunications Bureau will prescribe the form of any challenges by relevant stakeholders as to the validity of the certification and will establish the process for how such challenges will impact the incremental decreases in the accelerated relocation payment as set- forth in § 27.1422(d).

(2) If credible challenges as to the space station operator's satisfaction of the relevant deadline are made, the Bureau will issue a public notice identifying such challenges and will render a final decision as to the validity of the certification no later than 60 days from its filing. Absent notice from the Bureau of any such deficiencies within 30 days of the filing of the certification, the certification of accelerated relocation will be deemed validated.

(h) *Delegated authority.* The Wireless Telecommunications Bureau is delegated the role of providing clarifications or interpretations to eligible space station operators of the Commission's orders for all aspects of the transition.

§ 27.1413 Relocation Coordinator.

(a) *Search committee.* If eligible space station operators elect to receive accelerated relocation payments no later than May 29, 2020, so that a supermajority (80%) of accelerated relocation payments are accepted, each such electing eligible space station operator shall be eligible to appoint one member to a search committee that will seek proposals for a third-party with technical experience in understanding and working on earth stations to serve as a Relocation Coordinator and to manage the migration and filtering of incumbent earth stations of eligible space

station operators that decline accelerated relocation payment.

(1) The search committee should proceed by consensus; however, if a vote on selection of a Relocation Coordinator is required, it shall be by a supermajority (80%).

(i) The search committee shall notify the Commission of its choice of Relocation Coordinator.

(ii) The Wireless Telecommunications Bureau shall issue a Public Notice inviting comment on whether the entity selected satisfies the criteria established in paragraph (b) of this section and issue a final order announcing whether the criteria has been satisfied;

(iii) Should the Wireless Telecommunications Bureau be unable to find the criteria have been satisfied, the selection process will start over and the search committee will submit a new proposed entity.

(2) If eligible space station operators select a Relocation Coordinator, they shall be responsible for paying its costs.

(3) In the event that the search committee fails to select a Relocation Coordinator and to notify the Commission by July 31, 2020, or in the case that at least 80% of accelerated relocation payments are not accepted (and thus accelerated relocation is not triggered):

(i) The search committee will be dissolved without further action by the Commission.

(ii) The Commission will initiate a procurement of a Relocation Coordinator to facilitate the transition. Specifically, the Office of the Managing Director will initiate the procurement, and the Wireless Telecommunications Bureau will take all other necessary actions to meet the accelerated relocation deadlines (to the extent applicable to any given operator) and the relocation deadline.

(iii) In the case that the Wireless Telecommunications Bureau selects the Relocation Coordinator, overlay licensees will, collectively, pay for the services of the Relocation Coordinator and staff. The Relocation Coordinator shall submit its own reasonable costs to the Relocation Clearinghouse, who will then collect payments from overlay licensees. It shall also provide additional financial information as requested by the Bureau to satisfy the Commission's oversight responsibilities and/or agency specific/government-wide reporting obligations.

(b) *Relocation Coordinator criteria.* The Relocation Coordinator must be able to demonstrate that it has the requisite expertise to perform the duties required, which will include:

(1) Coordinating the schedule for clearing the band;

(2) Performing engineering analysis, as necessary to determine necessary earth station migration actions;

(3) Assigning obligations, as necessary, for earth station migrations and filtering;

(4) Coordinating with overlay licensees throughout the transition process;

(5) Assessing the completion of the transition in each PEA and determining overlay licensees' ability to commence operations; and

(6) Mediating scheduling disputes.

(c) *Relocation Coordinator duties.* The Relocation Coordinator shall:

(1) Establish a timeline and take actions necessary to migrate and filter incumbent earth stations to ensure uninterrupted service during and following the transition.

(2) Review the Transition Plans filed by all eligible space station operators and recommend any changes to those plans to the Commission to the extent needed to ensure a timely transition.

(3) To the extent that incumbent earth stations are not accounted for in eligible space station operators' Transition Plans, the Relocation Coordinator must include those incumbent earth stations in an Earth Station Transition Plan.

(i) May require each associated space station operator to file the information needed for such a plan with the Relocation Coordinator.

(ii) Will describe and recommend the respective responsibility of each party for earth station migration obligations in the Earth Station Transition Plan and assist incumbent earth stations in transitioning including, for example, by installing filters or hiring a third party to install such filters to the extent necessary.

(4) Coordinate its operations with overlay licensees.

(5) Be responsible for receiving notice from earth station operators or other satellite customers of any disputes related to comparability of facilities, workmanship, or preservation of service during the transition and shall subsequently notify the Wireless Telecommunications Bureau of the dispute and provide recommendations for resolution.

(6) Must make real time disclosures of the content and timing of and the parties to communications, if any, from or to applicants to participate in the competitive bidding, as defined by §1.2105(c)(5)(i) of this chapter whenever the prohibition in §1.2105(c) of this chapter applies to competitive bidding for licenses in the 3.7 GHz Service.

(7) Incumbent space station operators must cooperate in good faith with the Relocation Coordinator throughout the transition.

(d) *Status reports.* On a quarterly basis, beginning December 31, 2020, the Relocation Coordinator must provide a report on the overall status of clearing efforts.

(e) *Document requests.* The Wireless Telecommunications Bureau, in consultation with the Office of Managing Director, may request any documentation from the Relocation Coordinator necessary to provide guidance or carry out oversight.

§ 27.1414 Relocation Payment Clearinghouse.

A Relocation Payment Clearinghouse shall be selected and serve to administer the cost-related aspects of the transition in a fair, transparent manner, pursuant to Commission rules and oversight, to mitigate financial disputes among stakeholders, and to collect and distribute payments in a timely manner for the transition of the 3700–4000 MHz band to the 3.7 GHz Service.

(a) *Selection process.* (1) A search committee will select the Relocation Payment Clearinghouse. The search committee shall consist of member appointed by each of following nine entities: ACA Connects, Intelsat, SES, Eutelsat S.A., National Association Broadcasters, National Cable Television Association, CTIA, Competitive Carriers Association, and WISPA.

(2) The search committee shall convene no later than June 22, 2020 and shall notify the Commission of the detailed selection criteria for the position of Relocation Payment Clearinghouse no later than June 1, 2020. Such criteria must be consistent with the qualifications, roles, and duties of the Relocation Payment Clearinghouse specified in this subpart. The Wireless Telecommunications Bureau (Bureau) is directed, on delegated authority, to issue a Public Notice notifying the public that the search committee has published criteria, outlining submission requirements, and providing the closing dates for the selection of the Relocation Payment Clearinghouse and source (*i.e.*, web page).

(3) The search committee should proceed by consensus; however, if a vote on selection of a Relocation Payment Clearinghouse is required, it shall be by a majority.

(4) In the event that the search committee fails to select a Relocation Payment Clearinghouse and to notify the Commission by July 31, 2020, the search committee will be dissolved without further action by the Commission. In the event that the search committee fails to select a Clearinghouse and to notify the Commission by July 31, 2020, two of the nine members of the search committee will be dropped therefrom by lot, and the remaining seven members of the search committee shall select a Clearinghouse by majority vote by August 14, 2020.

(5) During the course of the Relocation Payment Clearinghouse's tenure, the Commission will take such measures as are necessary to ensure timely compliance, including, should it become necessary, issuing subsequent public notices to select new Relocation Payment Clearinghouses(s).

(b) *Selection criteria.* (1) The Relocation Payment Clearinghouse must be a neutral, independent entity with no conflicts of interest (organizational or personal) on the part of the organization or its officers, directors, employees, contractors, or significant subcontractors.

(i) Organizational conflicts of interest means that because of other activities or relationships with other entities, the Relocation Payment Clearinghouse, its contractors, or significant subcontractors are unable or potentially unable to render impartial services, assistance or advice; the Relocation Payment Clearinghouse's objectivity in performing its function is or might be otherwise impaired; or the Relocation Payment Clearinghouse might gain an unfair competitive advantage.

(ii) Personal conflict of interest means a situation in which an employee, officer, or director of the Relocation Payment Clearinghouse, the Relocation Payment Clearinghouse's contractors or significant subcontractors has a financial interest, personal activity, or relationship that could impair that person's ability to act impartially and in the best interest of the transition when performing their assigned role, or is engaged in self-dealing.

(2) The Relocation Payment Clearinghouse must be able to demonstrate that it has the requisite expertise to perform the duties required, which will include collecting and distributing relocation and accelerated relocation payments, auditing incoming and outgoing estimates, mitigating cost disputes among parties, and generally acting as clearinghouse.

(3) The search committee should ensure that the Relocation Payment Clearinghouse meets relevant best practices and standards in its operation to ensure an effective and efficient transition. First, the Relocation Payment Clearinghouse should be required, in administering the transition, to:

(i) Engage in strategic planning and adopt goals and metrics to evaluate its performance;

(ii) Adopt internal controls for its operations;

(iii) Utilize enterprise risk management practices; and

(iv) Use best practices to protect against improper payments and to prevent fraud, waste and abuse in its handling of funds. The Relocation Payment Clearinghouse must be required to create written procedures for its operations, using the Government Accountability Office's Green Book to serve as a guide in satisfying such requirements.

(4) The search committee must also ensure that the Relocation Payment Clearinghouse adopts robust privacy and data security best practices in its operations, given that it will receive and process information critical to ensuring a successful and expeditious transition.

(i) When the prohibition in §1.2105(c) of this chapter applies to competitive bidding for licenses in the 3.7 GHz service, the Relocation Payment Clearinghouse must make real time disclosures of the content and timing of and the parties to communications, if any, from or to applicants to participate in the competitive bidding, as defined by §1.2105(c)(5)(i) of this chapter.

(ii) The Relocation Payment Clearinghouse should also comply with, on an ongoing basis, all applicable laws and Federal Government guidance on privacy and information security requirements such as relevant provisions in the Federal Information Security Management Act, National Institute of Standards and Technology publications, and Office of Management and Budget guidance.

(iii) The Relocation Payment Clearinghouse must hire a third-party firm to independently audit and verify, on an annual basis, the Relocation Payment Clearinghouse's compliance with privacy and information security requirements and to provide recommendations based on any audit findings; to correct any negative audit findings and adopt any additional practices suggested by the auditor; and to report the results to the Bureau.

(c) *Reports and information.* (1) The Relocation Payment Clearinghouse must provide quarterly reports that detail the status of reimbursement funds available for clearing obligations, the relocation and accelerated relocation payments issued, the amounts collected from overlay licensees, and any certifications filed by incumbents. The reports must account for all funds spent to transition the 3.7 GHz Service Band, including the Relocation Payment Clearinghouse's own expenses, *e.g.*, salaries and fees paid to law firms,

accounting firms, and other consultants. The report shall include descriptions of any disputes and the manner in which they were resolved.

(2) The Relocation Payment Clearinghouse shall provide to the Office of the Managing Director and the Wireless Telecommunications Bureau, by March 1 of each year, an audited statement of funds expended to date, including salaries and expenses of the Clearinghouse.

(3) The Relocation Clearing House shall provide to the Wireless Telecommunications Bureau additional information upon request.

§ 27.1415 Documentation of expenses.

Parties seeking reimbursement of compensable relocation costs must document their actual expenses and the Relocation Payment Clearinghouse, or a third-party on behalf of the Relocation Payment Clearinghouse, may conduct audits of entities that receive reimbursements. Entities receiving reimbursements must make available all relevant documentation upon request from the Relocation Payment Clearinghouse or its contractor.

§ 27.1416 Reimbursable costs.

(a) *Determining reimbursable costs.* The Relocation Payment Clearinghouse shall review reimbursement requests to determine whether they are reasonable and to ensure they comply with the requirements adopted in this sub-part. The Relocation Payment Clearinghouse shall give parties the opportunity to supplement any reimbursement claims that the Relocation Payment Clearinghouse deems deficient. Reimbursement submissions that fall within the estimated range of costs in the cost category schedule issued by the Wireless Telecommunications Bureau shall be presumed reasonable. If the Relocation Payment Clearinghouse determines that the amount sought for reimbursement is unreasonable, it shall notify the party of the amount it deems eligible for reimbursement. The Wireless Telecommunications Bureau shall make further determinations related to reimbursable costs, as necessary, throughout the transition process.

(b) *Payment procedures.* Following a determination of the reimbursable amount, the Relocation Payment Clearinghouse shall incorporate approved claims into invoices, which it shall issue to each licensee indicating the amount to be paid. The Relocation Payment Clearinghouse shall pay approved claims within 30 days of invoice submission. The Relocation Payment Clearinghouse shall also include its own reasonable costs in the invoices.

§ 27.1417 Reimbursement fund.

The Relocation Payment Clearinghouse will establish and administer an account that will fund the costs for the transition of this band to the 3.7 GHz Service after an auction for the 3.7 GHz Service concludes. Licensees in the 3.7 GHz Service shall pay their *pro rata* share of six months' worth of estimated transition costs into a reimbursement fund, administered by the Relocation Payment Clearinghouse, shortly after the auction and then every six months until the transition is complete. The Relocation Payment Clearinghouse shall draw from the reimbursement fund to pay approved, invoiced claims, consistent with § 27.1418. If the reimbursement fund does not have sufficient funds to pay approved claims before a six-month replenishment, the Relocation Payment Clearinghouse shall provide 3.7 GHz Service licensees with 30 days' notice of the additional *pro rata* shares they must contribute. At the end of the transition, the Relocation Payment Clearinghouse shall refund any unused amounts to 3.7 GHz Service licensees according to their *pro rata* shares.

§ 27.1418 Payment obligations.

(a) Each eligible space station operator is responsible for the payment of its own satellite transition costs until the auction winners have been announced.

(b) Licensees in the 3.7 GHz Service shall pay their *pro rata* share of:

(1) The reasonable costs of the Relocation Payment Clearinghouse and, in the event the Wireless Telecommunications Bureau selects the Relocation Coordinator, the services of the Relocation Coordinator and its staff;

(2) The actual relocation costs, provided that they are not unreasonable, for eligible space station operators and incumbent fixed service licensees; the actual transition costs, provided they are not unreasonable, associated with the necessary migration and filtering of incumbent earth stations;

(3) Any lump sum payments, if elected by incumbent earth station operators in lieu of actual relocation costs; and

(4) Specified accelerated relocation payments for space station operators that clear on an accelerated timeframe. Licensees in the 3.7 GHz Service shall be responsible for the full costs of space station transition, the Relocation Payment Clearinghouse, and, if selected and established by the Wireless Telecommunications Bureau, the Relocation Coordinator, based on their *pro rata* share of the total auction bids of each licensee's gross winning bids in the auction overall; they shall be responsible for incumbent earth station and incumbent fixed service transition costs in a Partial Economic Area based on their *pro rata* share of the total gross bids for that Partial Economic Area.

(c) Following the auction, and every six months until the close of the transition, licensees in the 3.7 GHz Service shall submit their portion of estimated transition costs to a reimbursement fund, and the Relocation Payment Clearinghouse will reimburse parties incurring transition costs. If actual costs exceed estimated costs, the Relocation Payment Clearinghouse shall perform a true-up for additional funds from 3.7 GHz Service licensees.

(d) If 3.7 GHz band license is relinquished to the Commission prior to all relocation cost reimbursements and accelerated relocation payments being paid, the remaining payments will be distributed among other similarly situated 3.7 GHz band licensees. If a new license is issued for the previously relinquished rights prior to final payments becoming due, the new 3.7 GHz band licensee will be responsible for the same *pro rata* share of relocation costs and accelerated relocation payments as the initial 3.7 GHz band license. If a 3.7 GHz band licensee sells its rights on the secondary market, the new 3.7 GHz band licensee will be obligated to fulfill all payment obligations associated with the license.

§ 27.1419 Lump sum payment for earth station opt out.

The Wireless Telecommunications Bureau shall announce a lump sum that will be available per each incumbent earth station that elects to opt out from the formal relocation process, per § 27.1412(e), as well as the process for electing lump sum payments. Incumbent earth station owners must make the lump sum payment election no later than 30 days after the Bureau announces the lump sum payment amounts, and must indicate whether each incumbent earth station for which it elects the lump sum payment will be transitioned to the upper 200 megahertz in order to maintain C-band services or will discontinue C-band services.

§ 27.1420 Cost-sharing formula.

(a) For space station transition and Relocation Payment Clearinghouse costs, and in the event the Wireless Telecommunications Bureau selects a Relocation Coordinator pursuant to § 27.1413(a), Relocation Coordinator costs, the *pro rata* share of each flexible-use licensee will be the sum of the final clock phase prices (P) for the set of all license blocks that a bidder wins divided by the total final clock phase prices for all N license blocks sold in the auction. To determine a licensee's reimbursement obligation (RO), that *pro rata* share would then be multiplied by the total eligible reimbursement costs (RC). Mathematically, this is represented as:

$$RO = \left(\frac{\sum_{i \in I} P_i}{\sum_{j=1}^{N} P_j} \right) \times RC$$

(b) For incumbent earth stations and fixed service incumbent licensee transition costs, a flexible-use licensee's *pro rata* share will be determined on a PEA-specific basis, based on the final clock phase prices for the license blocks it won in each PEA. To calculate the *pro rata* share for incumbent earth station transition costs in a given PEA, the same formula identified in §27.1412(a) will be used, except *I* is the set of licenses a bidder won in the PEA, *N* is the total blocks sold in the PEA and *RC* is the PEA-specific earth station and fixed service relocation costs.

(c) For the Phase I accelerated relocation payments, the *pro rata* share of each flexible use licensee of the 3.7 to 3.8 MHz in the 46 PEAs that are cleared by December 5, 2021, will be the sum of the final clock phase prices (*P*) that the licensee won divided by the total final clock phase prices for all *M* license blocks sold in those 46 PEAs. To determine a licensee's *RO* the *pro rata* share would then be multiplied by the total accelerated relocation payment due for Phase I, *A1*. Mathematically, this is represented as:

$$RO = \left(\frac{\sum_{i \in I} P_i}{\sum_{j=1}^{M} P_j}\right) \times A1$$

(d) For Phase II accelerated relocation payments, the *pro rata* share of each flexible use licensee will be the sum of the final clock phase prices (*P*) that the licensee won in the entire auction, divided by the total final clock phase prices for all *N* license blocks sold in the auction. To determine a licensee's *RO* the *pro rata* share would then be multiplied by the total accelerated relocation payment due for Phase II, *A2*. Mathematically, this is represented as:

$$RO = \left(\frac{\sum_{i \in I} P_i}{\sum_{j=1}^{N} P_j}\right) \times A2$$

§ 27.1421 Disputes over costs and cost-sharing.

(a) Parties disputing a cost estimate, cost invoice, or payment or cost-sharing obligation must file an objection with the Relocation Payment Clearinghouse.

(b) The Relocation Payment Clearinghouse may mediate any disputes regarding cost estimates or payments that may arise in the course of band reconfiguration; or refer the disputant parties to alternative dispute resolution fora.

(1) Any dispute submitted to the Relocation Payment Clearinghouse, or other mediator, shall be decided within 30 days after the Relocation Payment Clearinghouse has received a submission by one party and a response from the other party.

(2) Thereafter, any party may seek expedited non-binding arbitration, which must be completed within 30 days of the recommended decision or advice of the Relocation Payment Clearinghouse or other mediator.

(3) The parties will share the cost of this arbitration if it is before the Relocation Payment Clearinghouse.

(c) Should any issues still remain unresolved, they may be referred to the Bureau within ten days of recommended decision or advice of the Relocation Payment Clearinghouse or other mediator and any decision of the Relocation Payment Clearinghouse can be appealed to the Chief of the Bureau.

(1) When referring an unresolved matter, the Relocation Payment Clearinghouse shall forward the entire record on any disputed issues, including such dispositions thereof that the Relocation Payment Clearinghouse has considered.

(2) Upon receipt of such record and advice, the Bureau will decide the disputed issues based on the record submitted. The Bureau is directed to resolve such disputed issues or designate them for an evidentiary hearing before an Administrative Law Judge. If the Bureau decides an issue, any party to the dispute wishing to appeal the decision may do so by filing with the Commission, within ten days of the effective date of the initial decision, a Petition for *de novo* review; whereupon the matter will be set for an evidentiary hearing before an Administrative Law Judge.

(3) Parties seeking *de novo* review of a decision by the Bureau are advised that, in the course of the evidentiary hearing, the Commission may require complete documentation relevant to any disputed matters; and, where necessary, and at the presiding judge's discretion, require expert engineering, economic or other reports or testimony. Parties may therefore wish to consider possibly less burdensome and expensive resolution of their disputes through means of alternative dispute resolution.

§ 27.1422 Accelerated relocation payment.

(a) Eligible space station operators that meet the applicable early-clearing benchmark(s), as confirmed in their Certification of Accelerated Relocation set-forth in § 27.1412(g), will be eligible for their respective accelerated relocation payment.

(b) The Relocation Payment Clearinghouse will distribute the accelerated relocation payments accordingly:

TABLE 1 TO PARAGRAPH (b)—ACCLERATED RELOCATION PAYMENT BY OPERATOR

	Payment	Phase I payment	Phase II payment
Intelsat	$4,865,366,000	$1,197,842,000	$3,667,524,000
SES	3,968,133,000	976,945,000	2,991,188,000
Eutelsat	506,978,000	124,817,000	382,161,000
Telesat	344,400,000	84,790,000	259,610,000
Star One	15,124,000	3,723,000	11,401,000
Totals	9,700,001,000	2,388,117,000	7,311,884,000

(c) The Relocation Payment Clearinghouse shall promptly notify 3.7 GHz Service licensees following validation of the certification of accelerated relocations as set-forth in Section 27.1412(g). 3.7 GHz Service licensees shall pay the accelerated relocation payments to the Clearinghouse within 60 days of the notice that eligible space station operators have met their respective accelerated clearing benchmark. The Clearinghouse shall disburse accelerated relocation payments to relevant space station operators within seven days of receiving the payment from overlay licensees.

(d) For eligible space station operators that fail to meet either the Phase I or Phase II benchmarks as of the relevant accelerated relocation deadline, the accelerated relocation payment will be reduced according to the following schedule of declining accelerated relocation payments for the six months following the relevant deadline:

TABLE 2 TO PARAGRAPH (d)

Date of completion	Incremental reduction (percent)	Accelerated relocation payment (percent)
By Deadline		100
1–30 Days Late	5	95
31–60 Days Late	5	90
61–90 Days Late	10	80
91–120 Days Late	10	70
121–150 Days Late	20	50
151–180 Days Late	20	30
181+ Days Late	30	0

§ 27.1423 Protection of incumbent operations.

(a) To protect incumbent earth stations from out-of-band emissions from fixed stations, base stations and mobiles, the power flux density (PFD) of any emissions within the 4000–4200 MHz band must not exceed −124 dBW/m²/MHz as measured at the earth station antenna.

(b) To protect incumbent earth stations from blocking, the power flux density (PFD) of any emissions within the 3700–3980 MHz band must not exceed −16 dBW/m²/MHz as measured at the earth station antenna.

(c) All 3.7 GHz Service licensees, prior to initiating operations from any base or fixed station, must coordinate cochannel frequency usage with all incumbent Telemetry, Tracking, and Command (TT&C) earth stations within a 70 km radius. The licensee must ensure that the aggregated power from its operations meets an interference to noise ratio (I/N) of −6 dB to the TT&C earth station receiver. A base station's operation will be defined as cochannel when any of the 3.7 GHz Service licensee's authorized frequencies are separated from the center frequency of the TT&C earth station by less than 150% of the maximum emission bandwidth in use by the TT&C earth station.

(d) All 3.7 GHz Service licensees operating on an adjacent channel to an incumbent TT&C earth station must ensure that the aggregated power from its operations meets an interference to noise ratio (I/N) of −6 dB to the TT&C earth station receiver.

(e) To protect incumbent TT&C earth stations from blocking, the power flux density (PFD) of any emissions within the 3700–3980 MHz band must not exceed −16 dBW/m²/MHz as measured at the TT&C earth station antenna.

§ 27.1424 Agreements between 3.7 GHz Service licensees and C-Band earth station operators.

The PFD limits in § 27.1423 may be modified by the private agreement of licensees of 3.7 GHz Service and entities operating earth stations in the 4000–4200 MHz band or TT&C operations in the 3700–3980 MHz band. A licensee of the 3.7 GHz Service 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 license assignees, transferees, or spectrum lessees, and to the Commission.

Subpart P—Regulations Governing Licensing and Use of 900 MHz Broadband Service in the 897.5–900.5 MHz and 936.5–939.5 MHz Bands

SOURCE: 85 FR 43134, July 16, 2020, unless otherwise noted.

§ 27.1500 Scope.

This subpart sets out the regulations governing the licensing and operations of 900 MHz broadband systems operating in the 897.5–900.5/936.5–939.5 MHz band. It includes eligibility requirements and operational and technical standards for stations licensed in this band. It also supplements the rules regarding application procedures contained in part 1, subpart F of this chapter. The rules in this subpart are to be read in conjunction with the applicable requirements contained elsewhere in this part; however, in case of conflict, the provisions of this subpart shall govern with respect to licensing and operation in this frequency band.

§ 27.1501 Definitions.

Terms used in this subpart shall have the following meanings:

900 MHz broadband. The 900 MHz broadband systems in the 897.5–900.5/936.5–939.5 MHz band licensed by the Commission pursuant to the provisions of this subpart.

900 MHz broadband licensee. An entity that holds a 900 MHz broadband license issued pursuant to this subpart.

900 MHz broadband segment. The segment of realigned 900 MHz spectrum (*i.e.,* the 897.5–900.5/936.5–939.5 MHz band) licensed by the Commission pursuant to the provisions of this subpart.

900 MHz narrowband segment. The segments of realigned 900 MHz spectrum (*i.e.,* the 896–897.5/935–936.5 MHz and 900.5–901/939.5–940 MHz bands (Paired channels 1–119 and 361–399)) designated for narrowband operations and licensed pursuant to 47 CFR part 90, subpart S.

Complex system. A covered incumbent's system that consists of 45 or more functionally integrated sites.

County. For purposes of this part, counties shall be defined using the United States Census Bureau's data reflecting county legal boundaries and names valid through January 1, 2017.

Covered incumbent. Any 900 MHz site-based licensee in the broadband segment that is required under § 90.621(b) to be protected by a broadband licensee with a base station at any location within the county, or any 900 MHz geographic-based SMR licensee in the broadband segment whose license area completely or partially overlaps the county.

Eligibility Certification. A filing made to the Commission as part of the prospective broadband licensee's application for a 900 MHz broadband license that demonstrates satisfaction of the eligibility restrictions.

License area. The geographic component of a 900 MHz broadband license. A license area consists of one county.

Power spectral density (PSD). The power of an emission in the frequency domain, such as in terms of ERP or EIRP, stated per unit bandwidth, *e.g.*, watts/MHz.

Site-channel. A channel licensed at a particular location.

Transition plan. A filing made to the Commission as part of the prospective broadband licensee's application for a 900 MHz broadband license that includes a plan for transitioning the band in the particular county.

Transitioned market. See section 90.7 of part 90 of this chapter.

§ 27.1502 Permanent discontinuance of 900 MHz broadband licenses.

A 900 MHz broadband licensee that permanently discontinues service as defined in § 1.953 must notify the Commission of the discontinuance within 10 days by filing FCC Form 601 requesting license cancelation. An authorization will automatically terminate, without specific Commission action, if service is permanently discontinued as defined in this chapter, even if a licensee fails to file the required form requesting license cancelation.

§ 27.1503 Broadband license eligibility and application requirements.

(a) *Eligibility.* For an applicant to be eligible for a broadband license in a county, it must:

(1) Hold the licenses for more than 50% of the total amount of licensed 900 MHz SMR (site-based or geographically licensed) and B/ILT (site-based) spectrum for the relevant county including credit for spectrum included in an application to acquire or relocate covered incumbents filed with the Commission on or after March 14, 2019;

(2) Hold spectrum in the broadband segment or reach an agreement to clear through acquisition or relocation, including credit for spectrum included in an application to acquire or relocate covered incumbents filed with the Commission on or after March 14, 2019, or demonstrate how it will provide interference protection to, covered incumbent licensees collectively holding licenses in the broadband segment for at least 90% of the site-channels in the county and within 70 miles of the county boundary, and geographically licensed channels where the license area completely or partially overlaps the county. To provide interference protection, an applicant may:

(i) Protect site-based covered incumbent(s) through compliance with minimum spacing criteria set forth in § 90.621(b) of this chapter;

(ii) Protect site-based covered incumbent(s) through new or existing letters of concurrence agreeing to lesser base station separations as set forth in § 90.621(b); and/or

(iii) Protect geographically based covered incumbent(s) through a private contractual agreement.

(3) If any site of a complex system is located within the county and/or within 70 miles of the county boundary, an applicant must either hold the license for that site or reach an agreement to acquire, relocate, or protect it in order to demonstrate eligibility.

(4) The applicant may use its current 900 MHz holdings in the narrowband segment to relocate covered incumbents. Spectrum used for the purpose of relocating incumbent(s) may not exceed the incumbent's current spectrum holdings in the relevant county, unless additional channels are necessary to

achieve equivalent coverage and/or capacity.

(b) *Application.* (1) Applications must be filed in accordance with part 1, subpart F of this chapter.

(2) An applicant for a 900 MHz broadband license must submit with its application an Eligibility Certification that:

(i) Lists the licenses the applicant holds in the 900 MHz band to demonstrate that it holds the licenses for more than 50% of the total licensed 900 MHz spectrum, whether SMR or B/ILT, for the relevant county including credit for spectrum included in an application to acquire or relocate any covered incumbents filed on or after March 14, 2019;

(ii) A statement that it has filed a Transition Plan detailing how it holds spectrum in the broadband segment and/or has reached an agreement to clear through acquisition or relocation (including credit for spectrum included in an application to acquire or relocate covered incumbents filed with the Commission on or after March 14, 2019), or demonstrate how it will provide interference protection to, covered incumbent licensees collectively holding licenses in the broadband segment for at least 90% of the site-channels in the county and within 70 miles of the county boundary, and geographically licensed channels where the license area completely or partially overlaps the county.

(3) An applicant for a 900 MHz broadband license must submit with its application a Transition Plan that provides:

(i) A showing of one or more of the following:

(A) Agreement by covered incumbents to relocate from the broadband segment;

(B) Protection of site-based covered incumbents through compliance with minimum spacing criteria;

(C) Protection of site-based covered incumbents through new or existing letters of concurrence agreeing to lesser base station separations;

(D) Protection of geographically-based covered incumbents through private contractual agreements; and/or

(E) Evidence that it holds licenses for the site-channels and/or geographically licensed channels.

(ii) Descriptions of the agreements between the prospective broadband licensee and all covered incumbents collectively holding licenses for at least 90% of site-channels within the county and within 70 miles of the county boundary, and geographically licensed channels where the license area completely or partially overlaps the county.

(iii) Descriptions in detail of all information and actions necessary to accomplish the realignment, as follows:

(A) The applications that the parties to the agreements will file for spectrum in the narrowband segment in order to relocate or repack licensees;

(B) A description of how the applicant will provide interference protection to, and/or acquire or relocate from the broadband segment covered incumbents collectively holding licenses for at least 90% of site-channels within 70 miles of the county and within 70 miles of the county boundary and/or evidence that it holds licenses for the site-channels and/or geographically licensed channels.

(C) Any rule waivers or other actions necessary to implement an agreement with a covered incumbent; and

(D) Such additional information as may be required.

(iv) A certification from an FCC-certified frequency coordinator that the Transition Plan's representations can be implemented consistent with Commission rules. The certification must establish that the relocations proposed therein take into consideration all relevant covered incumbents and are consistent with the existing part 90 interference protection criteria if the covered incumbent is site-based, and include any private contractual agreements between the prospective broadband licensee and a geographically-licensed covered incumbent.

(4) Applicants seeking to transition multiple counties may simultaneously file a single Transition Plan with each of its county-based applications.

(c) *Anti-windfall provisions.* (1) The applicant must return to the Commission all of its licensed 900 MHz SMR and B/ILT spectrum, up to six megahertz, for

the county in which it seeks a broadband license. The applicant will be required to file, within 15 days of filing its broadband license application, an application(s) to cancel all of its 900 MHz SMR and B/ILT spectrum, up to six megahertz, conditioned upon Commission grant of its application.

(2) If the applicant relinquishes less than six megahertz of spectrum in accordance with paragraph (c)(1) of this section, then the applicant must remit an anti-windfall payment prior to the grant of the 900 MHz broadband license. Payment must be made through a monetary payment to the U.S. Treasury.

§ 27.1504 Mandatory relocation.

(a) Subject to paragraph (b) of this section, broadband licensees may require mandatory relocation from the broadband segment covered incumbents' remaining site-channels in a given county and within 70 miles of the county boundary, and geographically licensed channels where the license area completely or partially overlaps the county, that were not covered by § 27.1503(a)(2).

(b) Complex systems are exempt from mandatory relocation. To qualify as exempt from mandatory relocation, a complex system must have at least one site (of its 45 or more functionally integrated sites) located within the county license area or within 70 miles of the county boundary.

(c) A broadband licensee seeking to relocate a covered incumbent pursuant to this section is required to pay all reasonable relocation costs, including providing the relocated covered incumbent with comparable facilities. To be comparable, the replacement system provided to a covered incumbent during a mandatory relocation must be at least equivalent to the existing 900 MHz system with respect to the following four factors:

(1) System;

(2) Capacity;

(3) Quality of service; and

(4) Operating costs.

(d) Having met the 90% success threshold, a 900 MHz broadband licensee seeking to trigger the mandatory relocation process shall serve notice on applicable covered incumbent(s).

(e) Following the service of notice, a 900 MHz broadband licensee may request information from the covered incumbent reasonably required to craft its offer of comparable facilities.

(f) We expect all parties to negotiate with the utmost ''good faith'' in the negotiation process. Factors relevant to a ''good-faith'' determination include:

(1) Whether the party responsible for paying the cost of band reconfiguration has made a *bona fide* offer to relocate the incumbent to comparable facilities;

(2) The steps the parties have taken to determine the actual cost of relocation to comparable facilities; and

(3) Whether either party has unreasonably withheld information, essential to the accurate estimation of relocation costs and procedures, requested by the other party.

(g) A party seeking Commission resolution of a dispute must submit in writing to the Chief, Wireless Telecommunications Bureau:

(1) The name, address, telephone number, and email address of the 900 MHz broadband licensee or covered incumbent making the allegation;

(2) The name of the 900 MHz broadband licensee or covered incumbent about which the allegation is made;

(3) A complete statement of the facts supporting the broadband licensee's or incumbent's claim; and

(4) The specific relief sought.

(h) If an incumbent fails to negotiate in good faith, its facilities may be mandatorily relocated, and its license modified accordingly by the Commission pursuant to section 316 of the Act. If the Wireless Telecommunications Bureau finds bad faith on the part of the broadband licensee, the broadband licensee may lose the right to relocate the incumbent or the Wireless Telecommunications Bureau may refer the matter to the Enforcement Bureau for action (which could include a range of sanctions, such as imposition of forfeitures).

§ 27.1505 Performance requirements.

(a) 900 MHz broadband licensees 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.

(1) 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 and supporting technical documentation regarding the type of service it is providing for each licensed area within its service territory and the type of technology used to provide such service, and certify the accuracy of such documentation. 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.

(2) To demonstrate compliance with the population coverage requirement, licensees shall use the most recently available decennial U.S. Census Bureau 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.

(b) A 900 MHz broadband licensee must meet either a population coverage requirement or geographic coverage as follows:

(1) *Population metric.* (i) A 900 MHz broadband licensee shall provide reliable signal coverage and offer broadband service to at least 45% of the population in its license area within six years of license grant.

(ii) A 900 MHz broadband licensee shall provide reliable signal coverage and offer broadband service to at least 80% of the population in its license area within 12 years of license grant.

(2) *Geographic coverage.* Alternatively, a 900 MHz broadband licensee may:

(i) Demonstrate it provides reliable signal coverage and offers broadband service covering at least 25% of the geographic license area within six years of license grant.

(ii) Demonstrate it provides reliable signal coverage and offers broadband service covering at least 50% of the geographic license area within twelve years of license grant.

(c) *Penalties.* (1) If a 900 MHz broadband licensee fails to meet the first performance benchmark, we require the licensee to meet the final performance benchmark two years sooner (*i.e.*, at 10 years into the license term) and reduce the license term from 15 years to 13 years.

(2) If a 900 MHz broadband licensee fails to meet the final performance benchmark, its authorization for that license area will terminate automatically without Commission action.

(d) *License renewal.* After satisfying the 12-year, final performance benchmark, a licensee must continue to provide coverage and offer broadband service at or above that level for the remaining three years of the 15-year license term in order to warrant license renewal.

§ 27.1506 Frequencies.

The 897.5–900.5 MHz and 936.5–939.5 MHz band segments are available for licensing with an authorized bandwidth up to 3 megahertz paired channels. The 897.5–900.5 MHz segment must only be used for uplink transmissions. The 936.5–939.5 MHz segments must only be used for downlink transmissions.

§ 27.1507 Effective radiated power limits for 900 MHz broadband systems.

(a) *Maximum ERP.* The power limits specified in this section are applicable to operations in areas more than 110 km (68.4 miles) from the U.S./Mexico border and 140 km (87 miles) from the U.S./Canada border.

(1) *General limit.* (i) The ERP for base and repeater stations must not exceed 400 watts/megahertz power spectral

density (PSD) per sector and an antenna height of 304 m height above average terrain (HAAT), except that antenna heights greater than 304 m HAAT are permitted if power levels are reduced below 400 watts/megahertz ERP in accordance with Table 1 of this section.

(ii) Provided that they also comply with paragraphs (b) and (c) of this section, licensees are permitted to operate base and repeater stations with up to a maximum ERP of 1000 watts/megahertz power spectral density (PSD) per sector and an antenna height of 304 m height above average terrain (HAAT), except that antenna heights greater than 304 m HAAT are permitted if power levels are reduced below 1000 watts/megahertz ERP in accordance with Table 2 of this section.

(2) *Rural areas.* For systems 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:

(i) The ERP for base and repeater stations must not exceed 800 watts/megahertz power spectral density (PSD) per sector and an antenna height of 304 m height above average terrain (HAAT), except that antenna heights greater than 304 m HAAT are permitted if power levels are reduced below 800 watts/megahertz ERP in accordance with Table 3 of this section.

(ii) Provided that they also comply with paragraphs (b) and (c) of this section, base and repeater stations may operate with up to a maximum ERP of 2000 watts/megahertz power spectral density (PSD) per sector and an antenna height of 304 m height above average terrain (HAAT), except that antenna heights greater than 304 m HAAT are permitted if power levels are reduced below 2000 watts/megahertz ERP in accordance with Table 4 of this section.

(3) *Mobile, control and auxiliary test stations.* Mobile, control and auxiliary test stations must not exceed 10 watts ERP.

(4) *Portable stations.* Portable stations must not exceed 3 watts ERP.

(b) *Power flux density (PFD).* Each 900 MHz broadband base or repeater station that exceeds the ERP limit of paragraph (a)(1)(i) or (a)(2)(i) of this section must be designed and deployed so as not to exceed a modeled PFD of 3000 microwatts/m^2/MHz over at least 98% of the area within 1 km of the base or repeater station antenna, at 1.6 meters above ground level. To ensure compliance with this requirement, the licensee must perform predictive modeling of the PFD values within at least 1 km of each base or repeater station antenna prior to commencing such operations and, thereafter, prior to making any site modifications that may increase the PFD levels around the base or repeater station. The modeling must take into consideration terrain and other local conditions and must use good engineering practices for the 900 MHz band.

(c) *Power measurement.* Measurement of 900 MHz broadband base transmitter and repeater ERP must be made using an average power measurement technique. Power measurements for base transmitters and repeaters must be made in accordance with either of the following:

(1) A Commission-approved average power technique (see FCC Laboratory's Knowledge Database); or

(2) For purposes of this section, peak transmit power must be measured over an 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.

(d) *PAR limit.* The peak-to-average ratio (PAR) of the transmission must not exceed 13 dB.

(e) *Height-power limit.* As specified in paragraph (a) of this section, the following tables specify the maximum base station power for antenna heights above average terrain (HAAT) that exceed 304 meters.

TABLE 1 TO § 27.1507—PERMISSIBLE POWER AND ANTENNA HEIGHTS FOR BASE STATIONS AND REPEATERS PERMITTED TO TRANSMIT WITH UP TO 400 WATTS/MEGAHERTZ

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) (watts/megahertz)
Above 1372 (4500)	26
Above 1220 (4000) To 1372 (4500)	28
Above 1067 (3500) To 1220 (4000)	30
Above 915 (3000) To 1067 (3500)	40
Above 763 (2500) To 915 (3000)	56
Above 610 (2000) To 763 (2500)	80
Above 458 (1500) To 610 (2000)	140
Above 305 (1000) To 458 (1500)	240
Up to 305 (1000)	400

TABLE 2 TO § 27.1507—PERMISSIBLE POWER AND ANTENNA HEIGHTS FOR BASE STATIONS AND REPEATERS PERMITTED TO TRANSMIT WITH UP TO 1000 WATTS/MEGAHERTZ

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) (watts/megahertz)
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 3 TO § 27.1507—PERMISSIBLE POWER AND ANTENNA HEIGHTS FOR BASE STATIONS AND REPEATERS PERMITTED TO TRANSMIT WITH UP TO 800 WATTS/MEGAHERTZ

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) (watts/megahertz)
Above 1372 (4500)	52
Above 1220 (4000) To 1372 (4500)	56

TABLE 3 TO § 27.1507—PERMISSIBLE POWER AND ANTENNA HEIGHTS FOR BASE STATIONS AND REPEATERS PERMITTED TO TRANSMIT WITH UP TO 800 WATTS/MEGAHERTZ—Continued

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) (watts/megahertz)
Above 1067 (3500) To 1220 (4000)	60
Above 915 (3000) To 1067 (3500)	80
Above 763 (2500) To 915 (3000)	112
Above 610 (2000) To 763 (2500)	160
Above 458 (1500) To 610 (2000)	280
Above 305 (1000) To 458 (1500)	480
Up to 305 (1000)	800

TABLE 4 TO § 27.1507—PERMISSIBLE POWER AND ANTENNA HEIGHTS FOR BASE STATIONS AND REPEATERS PERMITTED TO TRANSMIT WITH UP TO 2000 WATTS/MEGAHERTZ

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) (watts/megahertz)
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

§ 27.1508 Field strength limit.

The predicted or measured median field strength must not exceed 40 dBμV/m at any given point along the geographic license boundary, unless the affected licensee agrees to a different field strength. This value applies to both the initially offered service areas and to partitioned service areas.

§ 27.1509 Emission limits.

The power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) in watts by at least the following amounts:

(a) For 900 MHz broadband operations in 897.5–900.5 MHz band by at least 43 + 10 log (P) dB.

(b) For 900 MHz broadband operations in the 936.5–939.5 MHz band, by at least 50 + 10 log (P) dB.

(c) Compliance with the provisions of paragraphs (a) and (b) 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 licensee's band, a resolution bandwidth of at least 1 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.

(d) 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.

(e) 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.

§ 27.1510 Unacceptable interference to narrowband 900 MHz licensees from 900 MHz broadband licensees.

See 47 CFR 90.672.

Subpart Q—3.45 GHz Service (3450–3550 MHz)

SOURCE: 86 FR 17954, Apr. 7, 2021, unless otherwise noted.

§ 27.1600 3450–3550 MHz band subject to competitive bidding.

Mutually exclusive initial applications for 3450–3550 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.

§ 27.1601 Designated entities in the 3450–3550 MHz band.

(a) *Eligibility for small business provisions*—(1) *Definitions*—(i) *Small business.* 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 five (5) years.

(ii) *Very small business.* 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 five (5) years.

(2) *Bidding credits.* A winning bidder that qualifies as a small business, as defined in this section, or a consortium of small businesses as provided in § 1.2110(c)(6) of this chapter, may use the bidding credit of 15 percent, as specified in § 1.2110(f)(2)(i)(C) of this chapter, subject to the cap specified in § 1.2110(f)(2)(ii) 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 as provided in § 1.2110(c)(6) of this chapter, may use the bidding credit of 25 percent, as specified in § 1.2110(f)(2)(i)(B) of this chapter, subject to the cap specified in § 1.2110(f)(2)(ii) of this chapter.

(b) *Eligibility for rural service provider bidding credit.* A rural service provider, as defined in § 1.2110(f)(4)(i) of this chapter, that has not claimed a small business bidding credit, or a consortium of rural service providers as provided in § 1.2110(c)(6) of this chapter, may use the bidding credit of 15 percent specified in § 1.2110(f)(4) of this chapter.

§ 27.1602 Incumbent Federal operations.

Regarding incumbent Federal operations in the 3450–3550 MHz band, 3.45 GHz Service licensees must comply with footnote US431B of the Table of Frequency Allocations in 47 CFR 2.106.

§ 27.1603 Coordination procedures.

(a) *Coordination requirement.* Prior to operation of any 3.45 GHz Service license in a Cooperative Planning Area or Periodic Use Area, a 3.45 GHz Service licensee must successfully coordinate such operation with any Federal incumbents in the Cooperative Planning Area or Periodic Use Area. The coordination procedures contained in this section shall apply unless the 3.45 GHz Service licensee and the Federal incumbent(s) have reached a mutually acceptable operator-to-operator coordination agreement that provides otherwise.

(b) *Informal discussions.* Before a 3.45 GHz Service licensee submits a formal coordination request, it may share and discuss draft proposals with Federal incumbent coordination staff. These discussions are voluntary, informal, and non-binding and can begin at any time.

(c) *Formal coordination.* The 3.45 GHz Service licensee shall initiate coordination by formally requesting access to operate within a Cooperative Planning Area and/or Periodic Use Area directly through the Department of Defense's online portal.

(d) *Initiation, timing, and affirmative concurrence.* A 3.45 GHz Service licensee must initiate a formal coordination request through the online portal provided by the Department of Defense. Unless otherwise agreed between a 3.45 GHz Service licensee and the relevant Federal incumbent(s), no formal coordination requests may be submitted until nine (9) months after the date of the auction closing Public Notice. 3.45 GHz Service licensees may request informal discussions (through the point of contact identified in the applicable Transition Plan) during this nine-month time period. Unless otherwise agreed to in writing, the requirement to reach a coordination arrangement is satisfied only by obtaining the affirmative concurrence of the relevant Federal incumbent(s) via the portal. The requirement of this paragraph (d) is not satisfied by omission.

(e) *Submission information.* To submit a formal coordination request, the 3.45 GHz Service licensee must include information about the technical characteristics for the 3.45 GHz Service base stations and associated mobile units relevant to operation within the Cooperative Planning Area and/or Periodic Use Area. This information should be provided in accordance with the instructions provided in the portal user's guide provided by the Department of Defense. 3.45 GHz Service licensees must prioritize their deployments in the Cooperative Planning Area for each Federal incumbent when submitting a formal coordination request. If a 3.45 GHz Service licensee is seeking to coordinate with multiple systems or multiple locations of operation controlled by one Federal incumbent, the licensee must specify the order in which it prefers the Federal incumbent process the request (*i.e.*, the order of systems or geographic locations).

(f) *Coordination analysis.* If a 3.45 GHz Service licensee has questions about the result of a coordination request, it may contact the Federal incumbent to propose network design modifications to help address issues raised by the Federal incumbent. Once the 3.45 GHz Service licensee has revised its network design, it must resubmit a formal coordination request, and the 3.45 GHz Service formal coordination process begins again.

(g) *Interference resolution process.* In instances of identified harmful interference occurring between a Federal and non-Federal operator not otherwise addressed by the coordination procedures or operator-to-operator agreements, the 3.45 GHz Service licensee shall first attempt to resolve the interference directly. If that effort is unsuccessful, the 3.45 GHz Service licensee, if adversely affected may escalate the matter to the Commission.

§ 27.1604 Reimbursement of relocation expenses of non-Federal radiolocation incumbents.

(a) *Relocation reimbursement contribution.* Each entity granted an initial license (not a renewal) in the 3.45 GHz Service (Licensee) must pay a *pro rata* portion to reimburse the costs incurred by authorized non-Federal, secondary radiolocation licensees for relocating from the 3.3–3.55 GHz band. These costs include the cost of a clearinghouse's administration of the reimbursement, which the radiolocation licensees will

pay initially and include in their reimbursable costs.

(b) *Pro rata share.* A Licensee's *pro rata* share of relocation costs will be determined by dividing the total actual costs of such relocation, as approved by the clearinghouse selected pursuant to § 27.1605, by the total number of 3.45 GHz Service licenses granted, multiplied by the number of such licenses the Licensee will hold.

(c) *Timing of payment.* A Licensee's relocation reimbursement contribution share must be paid to the clearinghouse by the date(s) and subject to procedures specified by public notice.

§ 27.1605 Reimbursement clearinghouse.

(a) The clearinghouse ultimately selected shall determine the reimbursement obligations of each Licensee pursuant to § 27.1604.

(1) The clearinghouse must be a must be a neutral, independent entity with no conflicts of interest (as defined in § 27.1414(b), on the part of the organization or its officers, directors, employees, contractors, or significant subcontractors.

(2) The clearinghouse must be able to demonstrate that it has the requisite expertise to perform the duties required, which will include collecting and distributing reimbursement payments, auditing incoming and outgoing estimates, mitigating cost disputes among parties, and generally acting as a clearinghouse.

(3) The clearinghouse must comply with, on an ongoing basis, all applicable laws and Federal Government guidance on privacy and information security requirements such as relevant provisions in the Federal Information Security Management Act, National Institute of Standards and Technology publications, and Office of Management and Budget guidance.

(4) The clearinghouse must provide quarterly reports to the Wireless Telecommunications Bureau that detail the status of reimbursement funds available, the payments issued, the amounts collected from licensees, and any information filed by incumbents. The reports must account for all funds spent, including the clearinghouse's own expenses. The report shall include descriptions of any disputes and the manner in which they were resolved.

(b) Non-Federal secondary radiolocation licensees in the 3.3–3.55 GHz band that seek reimbursement of their expenses for relocating operations authorized under their licenses and existing as of February 22, 2019, must submit invoices or other appropriate documentation of such expenses to the clearinghouse no later than a date to be specified by public notice.

(c) Expenses must be reasonably related to the relocation from the 3.3–3.55 GHz band to the 2.9–3.0 GHz band, may be future expenses or expenses already incurred—including the clearinghouse's costs, and no expenses for other purposes will be subject to reimbursement. Ineligible expenses include, but are not limited to, those related to upgrades or improvements. The clearinghouse shall have the authority to determine whether particular expenses are eligible for reimbursement.

(d) The Wireless Telecommunications Bureau is responsible for resolving any disputes arising from decisions by the clearinghouse and shall specify by public notice when the clearinghouse's responsibilities have terminated.

§ 27.1606 Aggregation of 3450–3550 MHz band licenses.

(a) 3.45 GHz Service licensees may aggregate up to 40 megahertz of 3450–3550 MHz band licenses across both license categories in any service area at any given time for four years after the close of the auction. After four years post-auction, no such aggregation limit on 3450–3550 MHz licenses shall apply.

(b) The criteria in § 20.22(b) of this chapter will apply in order to attribute partial ownership and other interests for the purpose of applying the aggregation limit in paragraph (a) of this section.

§ 27.1607 Information sharing for time division duplex synchronization.

(a) 3.45 GHz Service licensees must provide information to requesting Citizens Broadband Radio Service (part 96 of this chapter) operators to enable time division duplex (TDD) synchronization. Negotiations over the information must be conducted in good faith,

with the goal of enabling synchronization between the relevant systems.

(1) A Citizens Broadband Radio Service operator, whether a Priority Access Licensee or a General Authorized Access user (§ 96.1(b) of this chapter), may request information from a 3.45 GHz Service licensee to enable cross-service TDD synchronization if it provides service, or intends to provide service, in the same or adjacent geographic area as a 3.45 GHz Service licensee.

(2) Upon request by an eligible Citizens Broadband Radio Service operator, the 3.45 GHz Service licensee must provide sufficient technical information to allow the Citizens Broadband Radio Service operator to synchronize its system with the 3.45 GHz band system. The 3.45 GHz Service licensee must keep this information current if its network operations change.

(b) 3.45 GHz Service licensees are under no obligation to make any changes to their operations or proposed operations to enable TDD synchronization.

PART 30—UPPER MICROWAVE FLEXIBLE USE SERVICE

Subpart A—General

Sec.
30.1 Creation of upper microwave flexible use service, scope and authority.
30.2 Definitions.
30.3 Eligibility.
30.4 Frequencies.
30.5 Service areas.
30.6 Permissible communications.
30.7 37–37.6 GHz Band—Shared coordinated service.
30.8 [Reserved]

Subpart B—Applications and Licenses

30.101 Initial authorizations.
30.102 Transition of existing local multipoint distribution service and 39 GHz licenses.
30.103 License term.
30.104 Performance requirements.
30.105 Geographic partitioning and spectrum disaggregation.

Subpart C—Technical Standards

30.201 Equipment authorization.
30.202 Power limits.
30.203 Emission limits.
30.204 Field strength limits.
30.205 Federal coordination requirements.
30.206 International coordination.
30.207 Radio frequency (RF) safety.
30.208 Operability.
30.209 Duplexing.

Subpart D—Competitive Bidding Procedures

30.301 Upper Microwave Flexible Use Service subject to competitive bidding.
30.302 Designated entities and bidding credits.

Subpart E—Special Provisions for Fixed Point-to-Point, Fixed Point-to-Multipoint Hub Stations, and Fixed Point-to-Multipoint User Stations

30.401 Permissible service.
30.402 Frequency tolerance.
30.403 Bandwidth.
30.404 Emission limits.
30.405 Transmitter power limitations.
30.406 Directional antennas.
30.407 Antenna polarization.

AUTHORITY: 47 U.S.C. 151, 152, 153, 154, 301, 303, 304, 307, 309, 310, 316, 332, 1302, unless otherwise noted.

SOURCE: 81 FR 79937, Nov. 14, 2016, unless otherwise noted.

Subpart A—General

§ 30.1 Creation of upper microwave flexible use service, scope and authority.

As of December 14, 2016, Local Multipoint Distribution Service licenses for the 27.5–28.35 GHz band, and licenses issued in the 38.6–40 GHz band under part 101 of this chapter shall be reassigned to the Upper Microwave Flexible Use Service. Local Multipoint Distribution Service licenses in bands other than 27.5–28.35 GHz shall remain in that service and shall be governed by the part 101 of this chapter applicable to that service.

§ 30.2 Definitions.

The following definitions apply to this part:

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. (See § 2.202 of this chapter).

Authorized frequency. The frequency, or frequency range, assigned to a station by the Commission and specified in the instrument of authorization.

Fixed satellite earth station. An earth station intended to be used at a specified fixed point.

Local Area Operations. Operations confined to physical facility boundaries, such as a factory.

Point-to-Multipoint Hub Station. A fixed point-to-multipoint radio station that provides one-way or two-way communication with fixed Point-to-Multipoint Service User Stations.

Point-to-Multipoint Service. A fixed point-to-multipoint radio service consisting of point-to-multipoint hub stations that communicate with fixed point-to-multipoint user stations.

Point-to-Multipoint User Station. A fixed radio station located at users' premises, lying within the coverage area of a Point-to-Multipoint Hub station, using a directional antenna to receive one-way communications from or providing two-way communications with a fixed Point-to-Multipoint Hub Station.

Point-to-point station. A 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.

Prior coordination. A bilateral process conducted prior to filing applications which includes the distribution of the technical parameters of a proposed radio system to potentially affected parties for their evaluation and timely response.

Secondary operations. Radio communications which may not cause interference to operations authorized on a primary basis and which are not protected from interference from these primary operations

Transportable station. Transmitting equipment that is not intended to be used while in motion, but rather at stationary locations.

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.

§ 30.3 Eligibility.

Any entity who meets the technical, financial, character, and citizenship qualifications that the Commission may require in accordance with such Act, 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.

§ 30.4 Frequencies.

The following frequencies are available for assignment in the Upper Microwave Flexible Use Service:

(a) 24.25–24.45 GHz and 24.75–25.25 GHz bands—24.25–24.35 GHz; 24.35–24.45 GHz; 24.75–24.85 GHz; 24.85–24.95 GHz; 24.95–25.05 GHz; 25.05–25.15 GHz; and 25.15–25.25 GHz.

(b) [Reserved]

(c) 27.5 GHz—28.35 GHz band—27.5–27.925 GHz and 27.925–28.35 GHz.

(d) 38.6–40 GHz band:

(1) New channel plan:

Channel No.	Frequency band limits (MHz)
1	38,600–38,700
2	38,700–38,800
3	38,800–38,900
4	38,900–39,000
5	39,000–39,100
6	39,100–39,200
7	39,200–39,300
8	39,300–39,400
9	39,400–39,500
10	39,500–39,600
11	39,600–39,700
12	39,700–39,800
13	39,800–39,900
14	39,900–40,000

(2) Pending transition to the new channel plan, existing 39 GHz licensees licensed under part 101 of this chapter may continue operating on the following channel plan:

Channel group A		Channel group B	
Channel No.	Frequency band limits (MHz)	Channel No.	Frequency band limits (MHz)
1–A	38,600–38,650	1–B	39,300–39,350
2–A	38,650–38,700	2–B	39,350–39,400
3–A	38,700–38,750	3–B	39,400–39,450
4–A	38,750–38,800	4–B	39,450–39,500
5–A	38,800–38,850	5–B	39,500–39,550
6–A	38,850–38,900	6–B	39,550–39,600
7–A	38,900–38,950	7–B	39,600–39,650
8–A	38,950–39,000	8–B	39,650–39,700
9–A	39,000–39,050	9–B	39,700–39,750
10–A	39,050–39,100	10–B	39,750–39,800
11–A	39,100–39,150	11–B	39,800–39,850
12–A	39,150–39,200	12–B	39,850–39,900
13–A	39,200–39,250	13–B	39,900–39,950
14–A	39,250–39,300	14–B	39,950–40,000

(e) [Reserved]

(f) 37–38.6 GHz band: 37,600–37,700; 37,700–37,800 MHz; 37,800–37,900 MHz; 37,900–38,000 MHz; 38,000–38,100 MHz; 38,100–38,200 MHz; 38,200–38,300 MHz; 38,300–38,400 MHz; 38,400–38,500 MHz, and 38,500–38,600 MHz. The 37,000–37,600 MHz band segment shall be available on a site-specific, coordinated shared basis with eligible Federal entities.

(g) 47.2–48.2 GHz band—47.2–47.3 GHz; 47.3–47.4 GHz; 47.4–47.5 GHz; 47.5–47.6 GHz; 47.6–47.7 GHz; 47.7–47.8 GHz; 47.8–47.9 GHz; 47.9–48.0 GHz; 48.0–48.1 GHz; and 48.1–48.2 GHz.

[81 FR 79937, Nov. 14, 2016, as amended at 83 FR 65, Jan. 2, 2018; 84 FR 1631, Feb. 5, 2019]

§ 30.5 Service areas.

(a) Except as noted in paragraphs (b) and (c) of this section, and except for the shared 37–37.6 GHz band, the service areas for the Upper Microwave Flexible Use Service are Partial Economic Areas.

(b) For the 27.5–28.35 GHz band, the service areas shall be counties.

(c) Common Carrier Fixed Point-to-Point Microwave Stations licensed in the 38.6–40 GHz bands licensed with Rectangular Service Areas shall maintain their Rectangular Service Area as defined in their authorization. The frequencies associated with Rectangular Service Area authorizations that have expired, cancelled, or otherwise been recovered by the Commission will automatically revert to the applicable county licensee.

(d) In the 37.5–40 GHz band, Upper Microwave Flexible Use Service licensees shall not place facilities within the protection zone of Fixed-Satellite Service earth stations authorized pursuant to § 25.136 of this chapter, absent consent from the Fixed-Satellite Service earth station licensee.

§ 30.6 Permissible communications.

(a) A licensee in the frequency bands specified in § 30.4 may provide any services for which its frequency bands are allocated, as set forth in the non-Federal Government column of the Table of Frequency Allocations in § 2.106 of this chapter (column 5).

(b) Fixed-Satellite Service shall be provided in a manner consistent with part 25 of this chapter. The technical and operating rules in this part shall not apply to Fixed-Satellite Service operation.

[81 FR 79937, Nov. 14, 2016, as amended at 83 FR 65, Jan. 2, 2018]

§ 30.7 37–37.6 GHz Band—Shared coordinated service.

(a) The 37–37.6 GHz band will be available for site-based registrations on a coordinated basis with co-equal eligible Federal entities.

(b) Any non-Federal entity meeting the eligibility requirements of § 30.3 may operate equipment that complies with the technical rules of this part pursuant to a Shared Access License.

(c) Licensees in the 37–37.6 GHz band must register their individual base stations and access points prior to placing them in operation.

§ 30.8 [Reserved]

Subpart B—Applications and Licenses

§ 30.101 Initial authorizations.

Except with respect to in the 37–37.6 GHz band, 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 § 30.4. 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.

§ 30.102 Transition of existing local multipoint distribution service and 39 GHz licenses.

Local Multipoint Distribution Service licenses in the 27.5—28.35 GHz band issued on a Basic Trading Area basis shall be disaggregated into county-based licenses and 39 GHz licenses issued on an Economic Area basis shall be disaggregated into Partial Economic Area-based licenses on December 14, 2016. For each county in the Basic Trading Area or Partial Economic Area in the Economic Area which is part of the original license, the licensee shall receive a separate license. If there is a co-channel Rectangular Service Area licensee within the service area of a 39 GHz Economic Area licensee, the disaggregated license shall not authorize operation with the service area of the Rectangular Service Area license.

§ 30.103 License term.

Initial authorizations will have a term not to exceed ten years from the date of initial issuance or renewal.

§ 30.104 Performance requirements.

(a) Upper Microwave Flexible Use Service licensees must make a buildout showing as part of their renewal applications. Licensees relying on mobile or point-to-multipoint service must show that they are providing reliable signal coverage and service to at least 40 percent of the population within the service area of the licensee, and that they are using facilities to provide service in that area either to customers or for internal use. Licensees relying on point-to-point service must demonstrate that they have four links operating and providing service, either to customers or for internal use, if the population within the license area is equal to or less than 268,000. If the population within the license area is greater than 268,000, a licensee relying on point-to-point service must demonstrate it has at least one link in operation and is providing service for each 67,000 population within the license area. In order to be eligible to be counted under the point-to-point buildout standard, a point-to-point link must operate with a transmit power greater than +43 dBm.

(b) In the alternative, a licensee may make its buildout showing on the basis of geographic area coverage. To satisfy the requirements of using this metric, licensees relying on mobile or point-to-multipoint service must show that they are providing reliable signal coverage and service to at least 25% of the geographic area of the license. The geographic area of the license shall be determined by the total land area of the county or counties covered by the license. Licensees relying on fixed point-to-point links or other, low-power point-to-point connections must show that they have deployed at least one transmitter or receiver in at least 25% of the census tracts within the license area. All equipment relied upon in the showing, whatever type of service or connection it provides, must be operational and providing service, either to customers or for internal use, as of the date of the filing.

(c) Showings that rely on a combination of multiple types of service will be evaluated on a case-by-case basis. Licensees may not combine population-based showings with geographic area-based showings.

(d) If a licensee in this service is also a Fixed-Satellite Service licensee and uses the spectrum covered under its UMFUS license in connection with a satellite earth station, it can demonstrate compliance with the requirements of this section by demonstrating that the earth station in question is in service, operational, and using the spectrum associated with the license.

This provision can only be used to demonstrate compliance for the county in which the earth station is located.

(e) Failure to meet this requirement will result in automatic cancellation of the license. In bands licensed on a Partial Economic Area basis, licensees will have the option of partitioning a license on a county basis in order to reduce the population or land area within the license area to a level where the licensee's buildout would meet one of the applicable performance metrics.

(f) Existing 24 GHz, 28 GHz and 39 GHz licensees shall be required to make a showing pursuant to this section by June 1, 2024.

[81 FR 79937, Nov. 14, 2016, as amended at 83 FR 65, Jan. 2, 2018; 83 FR 34492, July 20, 2018]

§ 30.105 Geographic partitioning and spectrum disaggregation.

(a) Parties seeking approval for partitioning and disaggregation shall request from the Commission an authorization for partial assignment of a license pursuant to §1.948 of this chapter. Upper Microwave Flexible Use Service 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 §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) Spectrum may be disaggregated in any amount.

(3) The Commission will consider requests for partial assignment of licenses that propose combinations of partitioning and disaggregation.

(4) For purposes of partitioning and disaggregation, part 30 systems must be designed so as not to exceed the signal level specified for the particular spectrum block in §30.204 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 §30.103.

[81 FR 79937, Nov. 14, 2016, as amended at 82 FR 41548, Sept. 1, 2017]

Subpart C—Technical Standards

§ 30.201 Equipment authorization.

(a) Except as provided under paragraph (c) of this section, 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.

(c) Unless specified otherwise, transmitters for use under the provisions of subpart E of this part for fixed point-to-point microwave and point-to-multipoint services must be a type that has been verified for compliance.

§ 30.202 Power limits.

(a) For fixed and base stations operating in connection with mobile systems, the average power of the sum of all antenna elements is limited to an equivalent isotopically radiated power (EIRP) density of +75dBm/100 MHz. For channel bandwidths less than 100 megahertz the EIRP must be reduced proportionally and linearly based on the bandwidth relative to 100 megahertz.

(b) For mobile stations, the average power of the sum of all antenna elements is limited to a maximum EIRP of +43 dBm.

(c) For transportable stations, as defined in §30.2, the average power of the sum of all antenna elements is limited to a maximum EIRP of +55 dBm.

(d) For fixed point-to-point and point-to-multipoint limits see §30.405.

§ 30.203 Emission limits.

(a) The conductive power or the total radiated power of any emission outside a licensee's frequency block shall be −13 dBm/MHz or lower. However, in the bands immediately outside and adjacent to the licensee's frequency block, having a bandwidth equal to 10 percent of the channel bandwidth, the conductive power or the total radiated power of any emission shall be −5 dBm/MHz or lower.

(b)(1) Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater.

(2) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges as the design permits.

(3) The measurements of emission power can be expressed in peak or average values.

(c) For fixed point-to-point and point-to-multipoint limits see § 30.404.

§ 30.204 Field strength limits.

(a) *Base/mobile operations:* The predicted or measured Power Flux Density (PFD) from any Base Station operating in the 27.5–28.35 GHz band, 37–38.6 GHz band, and 38.6–40 GHz bands at any location on the geographical border of a licensee's service area shall not exceed −76dBm/m²/MHz (measured at 1.5 meters above ground) unless the adjacent affected service area licensee(s) agree(s) to a different PFD.

(b) *Fixed point-to-point operations.* (1) Prior to operating a fixed point-to-point transmitting facility in the 27,500–28,350 MHz band where the facilities are located within 20 kilometers of the boundary of the licensees authorized market area, the licensee must complete frequency coordination in accordance with the procedures specified in § 101.103(d)(2) of this chapter with respect to neighboring licensees that may be affected by its operations.

(2) Prior to operating a fixed point-to-point transmitting facility in the 37,000–40,000 MHz band where the facilities are located within 16 kilometers of the boundary of the licensees authorized market area, the licensee must complete frequency coordination in accordance with the procedures specified in § 101.103(d)(2) of this chapter with respect to neighboring licensees that may be affected by its operations.

§ 30.205 Federal coordination requirements.

(a) Licensees in the 37–38 GHz band located within the zones defined by the coordinates in the tables below must coordinate their operations with Federal Space Research Service (space to Earth) users of the band via the National Telecommunications and Information Administration (NTIA). All licensees operating within the zone defined by the 60 dBm/100 MHz EIRP coordinates in the tables below must coordinate all operations. Licensees operating within the area between the zones defined by the 60 dBm and 75 dBm/100 MHz EIRP coordinates in the tables below must coordinate all operations if their base station EIRP is greater than 60 dBm/100 MHz or if their antenna height exceeds 100 meters above ground level. Licensees operating outside the zones defined by the 75 dBm/100 MHz EIRP coordinates in the tables below are not required to coordinate their operations with NTIA.

TABLE 1 TO PARAGRAPH (a): GOLDSTONE, CALIFORNIA COORDINATION ZONE

60 dBm/100 MHz EIRP		75 dBm/100 MHz EIRP	
Latitude/Longitude (decimal degrees)	Latitude/Longitude (decimal degrees)	Latitude/Longitude (decimal degrees)	Latitude/Longitude (decimal degrees)
34.69217/−115.6491	34.19524/−117.47963	34.69217/−115.6491	34.19524/−117.47963
35.25746/−115.32041	34.24586/−117.36210	35.25746/−115.32041	34.24586/−117.36210
36.21257/−117.06567	35.04648/−117.03781	36.11221/−116.63632	34.21748/−117.12812
36.55967/−117.63691	35.04788/−117.00949	36.54731/−117.48242	34.20370/−116.97024
36.66297/−118.31017	34.22940/−117.22327	36.73049/−118.33683	34.12196/−116.93109
36.06074/−118.38528	34.20370/−116.97024	36.39126/−118.47307	34.09498/−116.75473
35.47015/−118.39008	34.12196/−116.93109	36.36891/−118.47134	34.13603/−116.64002
35.40865/−118.34353	34.09498/−116.75473	35.47015/−118.39008	34.69217/−115.6591
35.35986/−117.24709	34.19642/−116.72901	35.40865/−118.34353	34.69217/−115.6491
35.29539/−117.21102	34.64906/−116.62741	35.32048/−117.26386	

TABLE 1 TO PARAGRAPH (a): GOLDSTONE, CALIFORNIA COORDINATION ZONE—Continued

60 dBm/100 MHz EIRP		75 dBm/100 MHz EIRP	
Latitude/Longitude (decimal degrees)	Latitude/Longitude (decimal degrees)	Latitude/Longitude (decimal degrees)	Latitude/Longitude (decimal degrees)
34.67607/−118.55412	34.44404/−116.31486	34.63725/−118.96736	
34.61532/−118.36919	34.52736/−116.27845	34.55789/−118.36204	
34.91551/−117.70371	34.76685/−116.27930	34.51108/−118.15329	
34.81257/−117.65400	34.69217/−115.6591	34.39220/−118.28852	
34.37411/−118.18385	34.69217/−115.6491	34.38546/−118.27460	
34.33405/−117.94189		34.37524/−118.24191	
34.27249/−117.65445		34.37039/−118.22557	

TABLE 2 TO PARAGRAPH (a)—SOCORRO, NEW MEXICO COORDINATION ZONE

60 dBm/100 MHz EIRP		75 dBm/100 MHz EIRP
Latitude/longitude (decimal degrees)	Latitude/longitude (decimal degrees)	Latitude/longitude (decimal degrees)
34.83816/−107.66828	33.44401/−108.67876	33.10651/−108.19320
34.80070/−107.68759	33.57963/−107.79895	33.11780/−107.99980
34.56506/−107.70233	33.84552/−107.60207	33.13558/−107.85611
34.40826/−107.71489	33.85964/−107.51915	33.80383/−107.16520
34.31013/−107.88349	33.86479/−107.17223	33.94554/−107.15516
34.24067/−107.96059	33.94779/−107.15038	33.95665/−107.15480
34.10278/−108.23166	34.11122/−107.18132	34.08156/−107.18137
34.07442/−108.30646	34.15203/−107.39035	34.10646/−107.18938
34.01447/−108.31694	34.29643/−107.51071	35.24269/−107.67969
33.86740/−108.48706	34.83816/−107.66828	34.06647/−108.70438
33.81660/−108.51052		33.35946/−108.68902
33.67909/−108.58750		33.29430/−108.65004
33.50223/−108.65470		33.10651/−108.19320

TABLE 3 TO PARAGRAPH (a)—WHITE SANDS, NEW MEXICO COORDINATION ZONE

60 dBm/100 MHz EIRP		75 dBm/100 MHz EIRP	
Latitude/longitude (decimal degrees)	Latitude/longitude (decimal degrees)	Latitude/longitude (decimal degrees)	Latitude/longitude (decimal degrees)
33.98689/−107.15967	31.78455/−106.54058	31.7494/−106.49132	32.88382/−108.16588
33.91573/−107.46301	32.24710/−106.56114	32.24524/−106.56507	32.76255/−108.05679
33.73122/−107.73585	32.67731/−106.53681	32.67731/−106.53681	32.56863/−108.43999
33.37098/−107.84333	32.89856/−106.56882	32.89856/−106.56882	32.48991/−108.50032
33.25424/−107.86409	33.24323/−106.70094	33.04880/−106.62309	32.39142/−108.48959
33.19808/−107.89673	33.98689/−107.15967	33.21824/−106.68992	31.63664/−108.40480
33.02128/−107.87226		33.24347/−106.70165	31.63466/−108.20921
32.47747/−107.77963		34.00708/−107.08652	31.78374/−108.20798
32.31543/−108.16101		34.04967/−107.17524	31.78322/−106.52825
31.79429/−107.88616		33.83491/−107.85971	31.7494/−106.49132

(b) Licensees in the 37–38.6 GHz band located within the zones defined by the coordinates in the table below must coordinate their operations with the Department of Defense via the National Telecommunications and Information Administration (NTIA).

TABLE 4 TO PARAGRAPH (b)—COORDINATION AREAS FOR FEDERAL TERRESTRIAL SYSTEMS

Location	Agency	Coordination area (decimal degrees)
China Lake, CA	Navy	50 kilometer radius centered on latitude 35.614781 and longitude −117.454309.
San Diego, CA	Navy	30 kilometer radius centered on latitude 32.68333 and longitude −117.23333.
Nanakuli, HI	Navy	30 kilometer radius centered on latitude 21.38333 and longitude −158.13333.
Fishers Island, NY	Navy	30 kilometer radius centered on latitude 41.25 and longitude −72.01666.

TABLE 4 TO PARAGRAPH (b)—COORDINATION AREAS FOR FEDERAL TERRESTRIAL SYSTEMS—Continued

Location	Agency	Coordination area (decimal degrees)
Saint Croix, VI	Navy	30 kilometer radius centered on latitude 17.74722 and longitude −64.88.
Fort Irwin, CA	Army	30 kilometer radius centered on latitude 35.26666 and longitude −116.68333.
Fort Carson, CO	Army	30 kilometer radius centered on latitude 38.71666 and longitude −104.65.
Fort Hood, TX	Army	30 kilometer radius centered on latitude 31.11666 and longitude −97.76666.
Fort Bliss, TX	Army	30 kilometer radius centered on latitude 31.8075 and longitude −106.42166.
Yuma Proving Ground, AZ	Army	30 kilometer radius centered on latitude 32.48333 and longitude −114.33333.
Fort Huachuca, AZ	Army	30 kilometer radius centered on latitude 31.55 and longitude −110.35.
White Sands Missile Range, NM	Army	30 kilometer radius centered on latitude 33.35 and longitude −106.3.
Edwards AFB, CA	Air Force	20 kilometer radius centered on latitude 34.922905 and longitude −117.891219.
Moody Air Force Base, GA	Air Force	30 kilometer radius centered on latitude 30.96694 and longitude −83.185.
Hurlburt Air Force Base, FL	Air Force	30 kilometer radius centered on latitude 30.42388 and longitude −86.70694.

(c) In addition to the locations listed in table 4 to paragraph (b) of this section, requests may be submitted to the Commission for access to the 37.6–38.6 GHz band for specific additional military bases and ranges for the purpose of defense applications or national security when the proposed military operations cannot be accommodated in the 37–37.6 GHz band.

[81 FR 79937, Nov. 14, 2016, as amended at 84 FR 18405, May 1, 2019; 84 FR 20820, May 13, 2019]

§ 30.206 International coordination.

Operations in the 27.5–28.35 GHz, 37–38.6, and 38.6–40 GHz bands are subject to existing and future international agreements with Canada and Mexico.

§ 30.207 Radio frequency (RF) safety.

Licensees and manufacturers are subject to the radio frequency radiation exposure requirements specified in §§1.1307(b), 1.1310, 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. Technical information showing the basis for this statement must be submitted to the Commission upon request.

§ 30.208 Operability.

Mobile and transportable stations that operate on any portion of frequencies within the 27.5–28.35 GHz or the 37–40 GHz bands must be capable of operating on all frequencies within those particular bands. Mobile and transportable stations that operate on any portion of either the 24.25–24.45 GHz or 24.75–25.25 GHz bands must be capable of operating on all frequencies within both of those bands.

[83 FR 34492, July 20, 2018]

§ 30.209 Duplexing.

Stations authorized under this rule part may employ frequency division duplexing, time division duplexing, or any other duplexing scheme, provided that they comply with the other technical and operational requirements specified in this part.

Subpart D—Competitive Bidding Procedures

§ 30.301 Upper Microwave Flexible Use Service subject to competitive bidding.

Mutually exclusive initial applications for Upper Microwave Flexible User 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.

§ 30.302 Designated entities and bidding credits.

(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, have average gross revenues that are not more than $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 that are not more than $20 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 a bidding credit of 15 percent, as 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 a bidding credit of 25 percent, as specified in § 1.2110(f)(2)(i)(B) of this chapter.

(c) A rural service provider, as defined in § 1.2110(f)(4) of this chapter, who has not claimed a small business bidding credit may use a bidding credit of 15 percent bidding credit, as specified in § 1.2110(f)(4)(i) of this chapter.

Subpart E—Special Provisions for Fixed Point-to-Point, Fixed Point-to-Multipoint Hub Stations, and Fixed Point-to-Multipoint User Stations

§ 30.401 Permissible service.

Stations authorized under this subpart may deploy stations used solely as fixed point-to-point stations, fixed point-to-multipoint hub stations, or fixed point-to-multipoint user stations, as defined in § 30.2, subject to the technical and operational requirements specified in this subpart.

§ 30.402 Frequency tolerance.

The carrier frequency of each transmitter authorized under this subpart must be maintained within the following percentage of the reference frequency (unless otherwise specified in the instrument of station authorization the reference frequency will be deemed to be the assigned frequency):

Frequency (MHz)	Frequency tolerance (percent)
27,500 to 28,350	0.001
38,600 to 40,000	0.03

§ 30.403 Bandwidth.

(a) Stations under this subpart will be authorized any type of emission, method of modulation, and transmission characteristic, consistent with efficient use of the spectrum and good engineering practice.

(b) The maximum bandwidth authorized per frequency to stations under this subpart is set out in the table that follows.

Frequency band (MHz)	Maximum authorized bandwidth
27,500 to 28,350	850 MHz.
38,600 to 40,000	200 MHz.[1]

[1] For channel block assignments in the 38,600–40,000 MHz bands when adjacent channels are aggregated, equipment is permitted to operate over the full channel block aggregation without restriction.

§ 30.404 Emission limits.

(a) The mean power of emissions must be attenuated below the mean output power of the transmitter in accordance with the following schedule:

(1) When using transmissions other than those employing digital modulation techniques:

(i) On any frequency removed from the assigned frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: At least 25 decibels;

(ii) On any frequency removed from the assigned frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: At least 35 decibels;

(iii) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least $43 + 10 \text{ Log}_{10}$ (mean output power in watts) decibels, or 80 decibels, whichever is the lesser attenuation.

(2) When using transmissions employing digital modulation techniques in situations not covered in this section:

(i) In any 1 MHz band, the center frequency of which is removed from the assigned frequency by more than 50 percent up to and including 250 percent of the authorized bandwidth: As specified by the following equation but in no event less than 11 decibels:

$A = 11 + 0.4(P-50) + 10 \text{ Log}_{10} B$. (Attenuation greater than 56 decibels or to an absolute power of less than −13 dBm/1MHz is not required.)

(ii) In any 1 MHz band, the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least $43 + 10 \text{ Log}_{10}$ (the mean output power in watts) decibels, or 80 decibels, whichever is the lesser attenuation. The authorized bandwidth includes the nominal radio frequency bandwidth of an individual transmitter/modulator in block-assigned bands. Equipment licensed prior to April 1, 2005 shall only be required to meet this standard in any 4 kHz band.

(iii) The emission mask in paragraph (a)(2)(i) of this section applies only to the band edge of each block of spectrum, but not to subchannels established by licensees. The value of P in the equation is the percentage removed from the carrier frequency and assumes that the carrier frequency is the center of the actual bandwidth used. The emission mask can be satisfied by locating a carrier of the subchannel sufficiently far from the channel edges so that the emission levels of the mask are satisfied. The emission mask shall use a value B (bandwidth) of 40 MHz, for all cases even in the case where a narrower subchannel is used (for instance the actual bandwidth is 10 MHz) and the mean output power used in the calculation is the sum of the output power of a fully populated channel. For block assigned channels, the out-of-band emission limits apply only outside the assigned band of operation and not within the band.

(b) [Reserved]

§ 30.405 Transmitter power limitations.

On any authorized frequency, the average power delivered to an antenna in this service must be the minimum amount of power necessary to carry out the communications desired. Application of this principle includes, but is not to be limited to, requiring a licensee who replaces one or more of its antennas with larger antennas to reduce its antenna input power by an amount appropriate to compensate for the increased primary lobe gain of the replacement antenna(s). In no event shall the average equivalent isotropically radiated power (EIRP), as referenced to an isotropic radiator, exceed the following:

MAXIMUM ALLOWABLE EIRP

Frequency band (MHz)	Fixed (dBW)
27,500–28,350[1]	+ 55
38,600–40,000	+ 55

[1] For Point-to-multipoint user stations authorized in these bands, the EIRP shall not exceed 55 dBw or 42 dBw/MHz.

§ 30.406 Directional antennas.

(a) Unless otherwise authorized upon specific request by the applicant, each station authorized under the rules of this subpart must employ a directional antenna adjusted with the center of the major lobe of radiation in the horizontal plane directed toward the receiving station with which it communicates: *provided, however*, where a station communicates with more than one point, a multi- or omni-directional antenna may be authorized if necessary.

(b) Fixed stations (other than temporary fixed stations) must employ transmitting and receiving antennas (excluding second receiving antennas for operations such as space diversity) meeting the appropriate performance Standard A indicated in the table to this section, except that in areas not subject to frequency congestion, antennas meeting performance Standard B may be used. For frequencies with a Standard B1 and a Standard B2, in order to comply with Standard B an antenna must fully meet either Standard B1 or Standard B2. Licensees shall comply with the antenna standards table shown in this paragraph in the following manner:

(1) With either the maximum beamwidth to 3 dB points requirement or with the minimum antenna gain requirement; and

(2) With the minimum radiation suppression to angle requirement.

Frequency (MHz)	Category	Maximum beamwidth to 3 dB points[1] (included angle in degrees)	Minimum antenna gain (dbi)	Minimum radiation suppression to angle in degrees from centerline of main beam in decibels						
				5° to 10°	10° to 15°	15° to 20°	20° to 30°	30° to 100°	100° to 140°	140° to 180°
38,600 to 40,000[2] ...	A	n/a	38	25	29	33	36	42	55	55
	B	n/a	38	20	24	28	32	35	36	36

[1] If a licensee chooses to show compliance using maximum beamwidth to 3 dB points, the beamwidth limit shall apply in both the azimuth and the elevation planes.

[2] Stations authorized to operate in the 38,600–40,000 MHz band may use antennas other than those meeting the Category A standard. However, the Commission may require the use of higher performance antennas where interference problems can be resolved by the use of such antennas.

§ 30.407 Antenna polarization.

In the 27,500–28,350 MHz band, system operators are permitted to use any polarization within its service area, but only vertical and/or horizontal polarization for antennas located within 20 kilometers of the outermost edge of their service area.

PART 32—UNIFORM SYSTEM OF ACCOUNTS FOR TELECOMMUNICATIONS COMPANIES

Subpart A—Preface

Sec.
32.1 Background.
32.2 Basis of the accounts.
32.3 [Reserved]
32.4 Communications Act.

Subpart B—General Instructions

32.11 Companies subject to this part.
32.12 Records.
32.13 Accounts—general.
32.14 Regulated accounts.
32.15 [Reserved]
32.16 Changes in accounting standards.
32.17 Interpretation of accounts.
32.18 Waivers.
32.19 Address for reports and correspondence.
32.20 Numbering convention.
32.21 Sequence of accounts.
32.22 Comprehensive interperiod tax allocation.
32.23 Nonregulated activities.
32.24 Compensated absences.
32.25 Unusual items and contingent liabilities.
32.26 Materiality.
32.27 Transactions with affiliates.

Subpart C—Instructions for Balance Sheet Accounts

32.101 Structure of the balance sheet accounts.
32.102 Nonregulated investments.
32.103 Balance sheet accounts for other than regulated-fixed assets to be maintained.
32.1120 Cash and equivalents.
32.1170 Receivables.
32.1171 Allowance for doubtful accounts.
32.1191 Accounts receivable allowance—other.
32.1220 Inventories.
32.1280 Prepayments.
32.1350 Other current assets.
32.1406 Nonregulated investments.
32.1410 Other noncurrent assets.
32.1438 Deferred maintenance and retirements.
32.1500 Other jurisdictional assets—net.
32.2000 Instructions for telecommunications plant accounts.
32.2001 Telecommunications plant in service.
32.2002 Property held for future telecommunications use.
32.2003 Telecommunications plant under construction.
32.2005 Telecommunications plant adjustment.
32.2006 Nonoperating plant.
32.2007 Goodwill.
32.2110 Land and support assets.
32.2111 Land.
32.2112 Motor vehicles.
32.2113 Aircraft.
32.2114 Tools and other work equipment.
32.2121 Buildings.
32.2122 Furniture.
32.2123 Office equipment.
32.2124 General purpose computers.
32.2210 Central office—switching.
32.2211 Non-digital switching.
32.2212 Digital electronic switching.
32.2220 Operator systems.
32.2230 Central office—transmission.
32.2231 Radio systems.
32.2232 Circuit equipment.
32.2310 Information origination/termination.
32.2311 Station apparatus.
32.2341 Large private branch exchanges.
32.2351 Public telephone terminal equipment.
32.2362 Other terminal equipment.
32.2410 Cable and wire facilities.
32.2411 Poles.
32.2421 Aerial cable.
32.2422 Underground cable.
32.2423 Buried cable.
32.2424 Submarine & deep sea cable.
32.2426 Intrabuilding network cable.
32.2431 Aerial wire.
32.2441 Conduit systems.
32.2680 Amortizable tangible assets.
32.2681 Finance leases.
32.2682 Leasehold improvements.
32.2690 Intangibles.
32.3000 Instructions for balance sheet accounts—depreciation and amortization.
32.3100 Accumulated depreciation.
32.3200 Accumulated depreciation—held for future telecommunications use.
32.3300 Accumulated depreciation—nonoperating.
32.3400 Accumulated amortization—tangible.
32.3410 Accumulated amortization—capitalized finance leases.
32.3999 Instructions for balance sheet accounts—liabilities and stockholders' equity.
32.4000 Current accounts and notes payable.
32.4040 Customers' deposits.
32.4070 Income taxes—accrued.
32.4080 Other taxes—accrued.

32.4100 Net current deferred operating income taxes.
32.4110 Net current deferred nonoperating income taxes.
32.4130 Other current liabilities.
32.4200 Long term debt and funded debt.
32.4300 Other long-term liabilities and deferred credits.
32.4320 Unamortized operating investment tax credits—net.
32.4330 Unamortized nonoperating investment tax credits—net.
32.4340 Net noncurrent deferred operating income taxes.
32.4341 Net deferred tax liability adjustments.
32.4350 Net noncurrent deferred nonoperating income taxes.
32.4361 Deferred tax regulatory adjustments—net.
32.4370 Other jurisdictional liabilities and deferred credits—net.
32.4510 Capital stock.
32.4520 Additional paid-in capital.
32.4530 Treasury stock.
32.4540 Other capital.
32.4550 Retained earnings.

Subpart D—Instructions for Revenue Accounts

32.4999 General.
32.5000 Basic local service revenue.
32.5001 Basic area revenue.
32.5002 Optional extended area revenue.
32.5003 Cellular mobile revenue.
32.5040 Private line revenue.
32.5060 Other basic area revenue.
32.5081 End user revenue.
32.5082 Switched access revenue.
32.5083 Special access revenue.
32.5100 Long distance message revenue.
32.5200 Miscellaneous revenue.
32.5230 Directory revenue.
32.5280 Nonregulated operating revenue.
32.5300 Uncollectible revenue.

Subpart E—Instructions for Expense Accounts

32.5999 General.
32.6110 Network support expenses.
32.6112 Motor vehicle expense.
32.6113 Aircraft expense.
32.6114 Tools and other work equipment expense.
32.6120 General support expenses.
32.6121 Land and building expense.
32.6122 Furniture and artworks expense.
32.6123 Office equipment expense.
32.6124 General purpose computers expense.
32.6210 Central office switching expenses.
32.6211 Non-digital switching expense.
32.6212 Digital electronic switching expense.
32.6220 Operator systems expense.
32.6230 Central office transmission expense.
32.6231 Radio systems expense.
32.6232 Circuit equipment expense.
32.6310 Information origination/termination expenses.
32.6311 Station apparatus expense.
32.6341 Large private branch exchange expense.
32.6351 Public telephone terminal equipment expense.
32.6362 Other terminal equipment expense.
32.6410 Cable and wire facilities expenses.
32.6411 Poles expense.
32.6421 Aerial cable expense.
32.6422 Underground cable expense.
32.6423 Buried cable expense.
32.6424 Submarine and deep sea cable expense.
32.6426 Intrabuilding network cable expense.
32.6431 Aerial wire expense.
32.6441 Conduit systems expense.
32.6510 Other property, plant and equipment expenses.
32.6511 Property held for future telecommunications use expense.
32.6512 Provisioning expense.
32.6530 Network operations expenses.
32.6531 Power expense.
32.6532 Network administration expense.
32.6533 Testing expense.
32.6534 Plant operations administration expense.
32.6535 Engineering expense.
32.6540 Access expense.
32.6560 Depreciation and amortization expenses.
32.6561 Depreciation expense—telecommunications plant in service.
32.6562 Depreciation expense—property held for future telecommunications use.
32.6563 Amortization expense—tangible.
32.6564 Amortization expense—intangible.
32.6565 Amortization expense—other.
32.6610 Marketing.
32.6611 Product management and sales.
32.6613 Product advertising.
32.6620 Services.
32.6621 Call completion services.
32.6622 Number services.
32.6623 Customer services.
32.6720 General and administrative.
32.6790 Provision for uncollectible notes receivable.

Subpart F—Instructions for Other Income Accounts

32.6999 General.
32.7100 Other operating income and expenses.
32.7199 Content of accounts.
32.7200 Operating taxes.
32.7210 Operating investment tax credits—net.
32.7220 Operating Federal income taxes.
32.7230 Operating state and local income taxes.
32.7240 Operating other taxes.

32.7250 Provision for deferred operating income taxes—net.
32.7300 Nonoperating income and expense.
32.7400 Nonoperating taxes.
32.7500 Interest and related items.
32.7600 Extraordinary items.
32.7899 Content of accounts.
32.7910 Income effect of jurisdictional ratemaking differences—net.
32.7990 Nonregulated net income.

Subpart G—Glossary

32.9000 Glossary of terms.

AUTHORITY: 47 U.S.C. 219, 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 (GAAP). The rules of this part, and any other rules or orders that are derivative of or dependent on the rules in this part, do not apply to price cap companies, and rate-of-return telephone companies offering business data services pursuant to §61.50 of this chapter, that have opted-out of USOA requirements pursuant to the conditions specified by the Commission in §32.11(g).

[83 FR 67121, Dec. 28, 2018]

§ 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 [Reserved]

§ 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 Companies subject to this part.

(a) This part applies to every incumbent local exchange carrier, as defined in section 251(h) of the Communications Act, and any other carrier that the Commission designates by order. This part refers to such carriers as ''companies'' or ''Class B companies.'' 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)—(f) [Reserved]

(g) Notwithstanding paragraph (a) of this section, a price cap company, or a rate-of-return telephone company offering business data services pursuant to §61.50 of this chapter, that elects to calculate its pole attachment rates pursuant to §1.1406(e) of this chapter will not be subject to this Uniform System of Accounts.

[67 FR 5679, Feb. 6, 2002, as amended at 69 FR 53648, Sept. 2, 2004; 82 FR 20840, May 4, 2017; 83 FR 67121, Dec. 28, 2018]

§ 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.

(a) Except as provided in paragraph (b) of this section, companies may abide by the materiality standards of GAAP when implementing this system of accounts.

(b) For companies that receive High-Cost Loop Support, or Connect America Fund Broadband Loop Support, materiality shall be determined consistent with the general materiality guidelines promulgated by the Auditing Standards Board.

[82 FR 20840, May 4, 2017]

§ 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 3400, Accumulated amortization—tangible, 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, as amended at 82 FR 20840, May 4, 2017]

§ 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 companies for other than regulated-fixed assets are indicated as follows:

BALANCE SHEET ACCOUNTS

Account title	
Current assets	
Cash and equivalents	1120
Receivables	1170
Allowance for doubtful accounts	1171
Supplies:	
Material and supplies	1220
Prepayments	1280
Other current assets	1350
Noncurrent assets	
Investments:	
Nonregulated investments	1406
Other noncurrent assets	1410
Deferred charges:	
Deferred maintenance, retirements and other deferred charges.	1438
Other:	
Other jurisdictional assets-net	1500

[82 FR 20840, May 4, 2017]

§ 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.

(l) This account shall include property subject to a lessee operating lease longer than one year.

(1) An operating lease is a contract, or part of a contract, that conveys the right to control the use of identified property, plant and equipment (an identified asset) for a period of time in exchange for consideration.

(2) The amounts recorded in this account at the inception of an operating lease shall be equal 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. Amounts subject to current treatment shall be included in Account 1350, Other current assets.

(3) Any balance in this account relating to capitalized operating leases shall be excluded in any ratemaking calculations.

(m) This account shall include the amount of lessor receivables from an operating lease longer than one year.

(1) The amount recorded in this account at the inception of an operating lease shall be equal 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 lessee, together with any profit thereon. Amounts subject to current settlement shall be included in Account 1350, Other current assets.

(2) Any balance in this account relating to receivables associated with capitalized operating leases shall be excluded in any ratemaking calculations.

[67 FR 5682, Feb. 6, 2002, as amended at 84 FR 4729, Feb. 19, 2019]

§ 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) [Reserved]

(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 through an acquisition or merger may be accounted for at market value at the time of the acquisition or merger.

(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 3400, Accumulated amortization—tangible 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 in accordance with GAAP when implementing this system of accounts. 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.

(8) Notwithstanding any other provision of this part concerning continuing property records, carriers subject to price cap regulations set forth in part 61 of this chapter shall maintain property records necessary to track substantial assets and investments in an accurate, auditable manner that enables them to verify their accounting books, make such property information available to the Commission upon request, and ensure the maintenance of such data.

(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 paragraph (f)(3) of this section) of the property record units. The continuing property records shall be compiled on the basis of original cost (or other book cost consistent with this system of accounts) and maintained in such manner as will provide for the verification of property record units by physical examination. 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 telephone companies as indicated:

Account title	
Regulated plant	
Property, plant and equipment:	
Telecommunications plant in service	[1] 2001
Property held for future telecommunications use.	2002
Telecommunications plant under construction-short term.	2003
Telecommunications plant adjustment	2005
Nonoperating plant	2006
Goodwill	2007
Telecommunications plant in service (TPIS)	
TPIS—General support assets:	
Land and support assets	2110
TPIS—Central Office assets:	
Central Office—switching	2210
Operator systems	2220
Central Office—transmission	2230
TPIS—Information origination/termination assets:	
Information origination termination	2310
TPIS—Cable and wire facilities assets:	
Cable and wire facilities	2410
TPIS—Amortizable assets:	
Amortizable tangible assets	2680
Intangibles	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; 82 FR 20840, May 4, 2017]

§ 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 companies to record the original cost of land and support assets of the type and character detailed in Accounts 2111 through 2124.

[82 FR 20841, May 4, 2017]

§ 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 companies to record the original cost of switching assets of the type and character detailed in Accounts 2211 through 2212.

[82 FR 20841, May 4, 2017]

§ 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 companies to record the original cost of radio systems and circuit equipment of the type and character detailed in Accounts 2231 and 2232.

[82 FR 20841, May 4, 2017]

§ 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 companies to record the original cost of information origination/termination equipment of the type and character detailed in Accounts 2311 through 2362.

[82 FR 20841, May 4, 2017]

§ 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 companies to record the original cost of cable and wire facilities of the type and character detailed in Accounts 2411 through 2441.

[82 FR 20841, May 4, 2017]

§ 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 companies to record amounts for property acquired under finance leases and the original cost of leasehold improvements of the type of character detailed in Accounts 2681 and 2682.

[84 FR 4729, Feb. 19, 2019]

§ 32.2681 Finance leases.

(a) This account shall include all property acquired under a finance lease. A lease qualifies as a finance 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 finance 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.

[51 FR 43499, Dec. 2, 1986, as amended at 84 FR 4729, Feb. 19, 2019]

§ 32.2682 Leasehold improvements.

(a) This account shall include the original cost of leasehold improvements made to telecommunications plant held under a finance 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.

[51 FR 43499, Dec. 2, 1986, as amended at 67 FR 5687, Feb. 6, 2002; 69 FR 53649, Sept. 2, 2004; 82 FR 20841, May 4, 2017; 84 FR 4730, Feb. 19, 2019]

§ 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) [Reserved]

(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; 82 FR 20841, May 4, 2017]

§ 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).)

(2) Subsidiary records shall be maintained for Accounts 2005, 2682, 2690, 3400 in accordance with § 32.2000(h)(4).

(b) *Depreciation and amortization accounts to be maintained by telephone companies, as indicated.*

Account title	
Depreciation and amortization:	
Accumulated depreciation	3100
Accumulated depreciation—Held for future telecommunications use.	3200
Accumulated depreciation—Nonoperating	3300
Accumulated depreciation—Tangible	3400

[82 FR 20841, May 4, 2017]

§ 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 include:

(1) The accumulated amortization associated with the investment contained in Account 2681, Finance 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 finance 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, as amended at 82 FR 20842, May 4, 2017; 84 FR 4730, Feb. 19, 2019]

§ 32.3410 Accumulated amortization—capitalized finance leases.

(a) This account shall include the accumulated amortization associated with the investment contained in Account 2681, Finance Leases.

(b) This account shall be credited with amounts for the amortization of finance 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; 84 FR 4730, Feb. 19, 2019]

§ 32.3999 Instructions for balance sheet accounts—liabilities and stockholders' equity.

LIABILITIES AND STOCKHOLDERS' EQUITY ACCOUNTS TO BE MAINTAINED BY COMPANIES

Account title	
Current liabilities:	
Current accounts and notes payable	4000
Customer's Deposits	4040
Income taxes—accrued	4070
Other taxes—accrued	4080
Net Current Deferred Nonoperating Income Taxes.	4100
Net Current Deferred Nonoperating Income Taxes.	4110
Other current liabilities	4130
Long-term debt:	
Long Term debt and Funded debt	4200
Other liabilities and deferred credits:	
Other liabilities and deferred credits	4300
Unamortized operating investment tax credits—net.	4320
Unamortized nonoperating investment tax credits—net.	4330
Net noncurrent deferred operating income taxes.	4340
Net deferred tax liability adjustments	4341
Net noncurrent deferred nonoperating income taxes.	4350
Deferred tax regulatory adjustments—net	4361
Other jurisdictional liabilities and deferred credits—net.	4370
Stockholder's equity:	
Capital stock	4510
Additional paid-in capital	4520
Treasury stock	4530
Other capital	4540
Retained earnings	4550

[82 FR 20842, May 4, 2017]

§ 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 finance 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, as amended at 84 FR 4730, Feb. 19, 2019]

§ 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 finance 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.

(9) The noncurrent portion of obligations applicable to property subject to capitalized operating leases. Amounts subject to current settlement shall be included in Account 4130, Other current liabilities. Any balance in this account relating to capitalized operating leases

shall be excluded in any ratemaking calculations.

(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, as amended at 84 FR 4730, Feb. 19, 2019]

§ 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.

(c) This account shall include the deferred obligations associated with a capitalize operating lease longer than one year. The amounts recorded in this account at the inception of an operating lease shall be equal 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.

[67 FR 5690, Feb. 6, 2002, as amended at 84 FR 4730, Feb. 19, 2019]

§ 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. Such subsidiary record categories shall be reported as required by part 43 of this chapter.

(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	
Local network services revenues:	
Basic local service revenue.	
Network access service revenues:	
End user revenue	5081
Switched access revenue	5082
Special access revenue	5083
Long distance network services revenues:	
Long distance message revenue	5100
Miscellaneous revenues:	
Miscellaneous revenue	5200
Nonregulated revenues:	
Nonregulated operating revenue	5280
Uncollectible revenues:	
Uncollectible revenue	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; 82 FR 20842, May 4, 2017]

§ 32.5000 Basic local service revenue.

Companies shall use this account for revenues of the type and character detailed in Accounts 5001 through 5060.

[82 FR 20842, May 4, 2017]

§ 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, as well as revenue of the type and character detailed 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 non-telecommunications 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, as amended at 82 FR 20842, May 4, 2017]

§ 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	
Income Statement Accounts	
Plant specific operations expense:	
Network support expense	6110
General support expenses	6120
Central office switching expense	6210
Operators system expense	6220
Central office transmission expenses	6230
Information origination/termination expense	6310
Cable and wire facilities expenses	6410
Plant nonspecific operations expense:	
Other property plant and equipment expenses.	6510
Network operations expenses	6530
Access expense	6540
Depreciation and amortization expenses	6560
Customer operations expense:	
Marketing	6610
Services	6620
Corporate operations expense:	
General and administrative	6720
Provision for uncollectible notes receivable	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; 82 FR 20842, May 4, 2017]

§ 32.6110 Network support expenses.

(a) Companies shall use this account for expenses of the type and character detailed in Accounts 6112 through 6114.

(b) Credits shall be made to this account by 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.

[82 FR 20842, May 4, 2017]

§ 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.

Companies shall use this account for expenses of the type and character detailed in Accounts 6121 through 6124.

[82 FR 20842, May 4, 2017]

§ 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.

Companies shall use this account for expenses of the type and character detailed in Accounts 6231 and 6232.

[82 FR 20842, May 4, 2017]

§ 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.

Companies shall use this account for expenses of the type and character detailed in Accounts 6311 through 6362.

[82 FR 20842, May 4, 2017]

§ 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.

Companies shall use this account for expenses of the type and character detailed in Accounts 6411 through 6441.

[82 FR 20842, May 4, 2017]

§ 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.

Companies shall use this account for expenses of the type and character detailed in Accounts 6511 and 6512.

[82 FR 20842, May 4, 2017]

§ 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.

Companies shall use this account for expenses of the type and character detailed in Accounts 6531 through 6535.

[82 FR 20843, May 4, 2017]

§ 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.

Companies shall use this account for expenses of the type and character detailed in Accounts 6561 through 6565.

[82 FR 20843, May 4, 2017]

§ 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.

Companies shall use this account for expenses of the type and character detailed in Accounts 6611 through 6613.

[82 FR 20843, May 4, 2017]

§ 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.

Companies shall use this account for expenses of the type and character detailed in Accounts 6621 through 6623.

[82 FR 20843, May 4, 2017]

§ 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	
Other operating income and expense:	
Other operating income and expense	7100
Operating taxes:	
Operating taxes	7200
Nonoperating income and expense:	
Nonoperating income and expense	7300
Nonoperating taxes:	
Nonoperating taxes	7400
Interest and related items:	
Interest and related items	7500
Extraordinary items	7600
Jurisdictional differences and non-regulated income items:	
Income effect of jurisdictional ratemaking difference—net.	7910
Nonregulated net income	7990

[82 FR 20843, May 4, 2017]

§ 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.

Companies shall use this account for operating taxes of the type and character detailed in Accounts 7210 through 7250.

[82 FR 20843, May 4, 2017]

§ 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 finance lease and capitalized operating 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, as amended at 84 FR 4730, Feb. 19, 2019]

§ 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 purchased.

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; 82 FR 20843, May 4, 2017]

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.
36.4 Streamlining procedures for processing petitions for waiver of study area boundaries.

Subpart B—Telecommunications Property

GENERAL

36.101 Section arrangement.
36.102 General.

GENERAL SUPPORT FACILITIES

36.111 General.
36.112 Apportionment procedure.

CENTRAL OFFICE EQUIPMENT

36.121 General.
36.122 Categories and apportionment procedures.
36.123 Operator systems equipment—Category 1.
36.124 Tandem switching equipment—Category 2.
36.125 Local switching equipment—Category 3.
36.126 Circuit equipment—Category 4.

INFORMATION ORIGINATION/TERMINATION (IOT) EQUIPMENT

36.141 General.
36.142 Categories and apportionment procedures.

CABLE AND WIRE FACILITIES

36.151 General.
36.152 Categories of Cable and Wire Facilities (C&WF).
36.153 Assignment of Cable and Wire Facilities (C&WF) to categories.
36.154 Exchange Line Cable and Wire Facilities (C&WF)—Category 1—apportionment procedures.
36.155 Wideband and exchange truck (C&WF)—Category 2—apportionment procedures.
36.156 Interexchange Cable and Wire Facilities (C&WF)—Category 3—apportionment procedures.
36.157 Host/remote message Cable and Wire Facilities (C&WF)—Category 4—apportionment procedures.

AMORTIZABLE ASSETS

36.161 Tangible assets—Account 2680.
36.162 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.

RURAL TELEPHONE BANK STOCK

36.172 Other noncurrent assets—Account 1410.

[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).

MATERIAL AND SUPPLIES AND CASH WORKING CAPITAL

36.181 Material and supplies—Account 1220.
36.182 Cash working capital.

EQUAL ACCESS EQUIPMENT

36.191 Equal access equipment.

Subpart C—Operating Revenues and Certain Income Accounts

GENERAL

36.201 Section arrangement.
36.202 General.

OPERATING REVENUES

36.211 General.
36.212 Basic local services revenue—Account 5000.
36.213 Network access services revenues.
36.214 Long distance message revenue—Account 5100.
36.215 Miscellaneous revenue—Account 5200.
36.216 Uncollectible revenue—Account 5300.

CERTAIN INCOME ACCOUNTS

36.221 Other operating income and expenses—Account 7100.
36.222 Nonoperating income and expenses—Account 7300.
36.223 Interest and related items—Account 7500.
36.224 Extraordinary items—Account 7600.
36.225 Income effect of jurisdictional ratemaking differences—Account 7910.

Subpart D—Operating Expenses and Taxes

GENERAL

36.301 Section arrangement.
36.302 General.

PLANT SPECIFIC OPERATIONS EXPENSES

36.310 General.

NETWORK SUPPORT/GENERAL SUPPORT EXPENSES

36.311 Network Support/General Support Expenses—Accounts 6110 and 6120.

CENTRAL OFFICE EXPENSES

36.321 Central office expenses—Accounts 6210, 6220, and 6230.

INFORMATION ORIGINATION/TERMINATION EXPENSES

36.331 Information origination/termination expenses—Account 6310.

CABLE AND WIRE FACILITIES EXPENSES

36.341 Cable and wire facilities expenses—Account 6410.

PLANT NONSPECIFIC OPERATIONS EXPENSES

36.351 General.

PLANT EXPENSES—OTHER

36.352 Other property plant and equipment expenses—Account 6510.

NETWORK OPERATIONS EXPENSES

36.353 Network operations expenses—Account 6530.
36.354 Access expenses—Account 6540.

DEPRECIATION AND AMORTIZATION EXPENSES

36.361 Depreciation and amortization expenses—Account 6560.

CUSTOMER OPERATIONS EXPENSES

36.371 General.
36.372 Marketing—Account 6610.
36.373 Services—Account 6620.
36.374 Telephone operator services.
36.375 Published directory listing.
36.376 All other.
36.377 Category 1—Local business office expense.
36.378 Category 2—Customer services (revenue accounting).
36.379 Message processing expense.
36.380 Other billing and collecting expense.
36.381 Carrier access charge billing and collecting expense.
36.382 Category 3—All other customer services expense.

CORPORATE OPERATIONS EXPENSE

36.391 General.
36.392 General and administrative—Account 6720.

OPERATING TAXES

36.411 Operating taxes—Account 7200.
36.412 Apportionment procedures.

EQUAL ACCESS EXPENSES

36.421 Equal access expenses.

Subpart E—Reserves and Deferrals

36.501 General.
36.502 Other jurisdictional assets—Net—Account 1500.
36.503 Accumulated depreciation—Account 3100.
36.504 Accumulated depreciation—Property held for future telecommunications use—Account 3200.
36.505 Accumulated amortization—Tangible—Account 3400.
36.506 Net current deferred operating income taxes—Account 4100, Net noncurrent deferred operating income taxes—Account 4340.
36.507 Other jurisdictional liabilities and deferred credits—Net—Account 4370.

Subparts F–G [Reserved]

APPENDIX TO PART 36—GLOSSARY

AUTHORITY: 47 U.S.C. 151, 152, 154(i) and (j), 201, 205, 220, 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, 77 FR 30411, May 23, 2012, 82 FR 25538, June 2, 2017, and corrected at 83 FR 4153, Jan. 30, 2018. Nomenclature changes to part 36 also appear at 83 FR 63587, Dec. 11, 2018, and 84 FR 4360, Feb. 15, 2019.

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 December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, local exchange carriers subject to price cap regulation, pursuant to §61.41 of this chapter, shall assign costs from the accounts under part 32 of this chapter (part 32 account(s)) 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 December 31, 2024, 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 this paragraph (b). Such election must be made prior to July 1, 2001. Any local exchange carrier that is subject to §69.3(e) of this chapter and that elected to be subject to this paragraph (b) may withdraw from that election by notifying the Commission by May 1, 2019, of its intent to withdraw from that election, and that withdrawal will be effective as of July 1, 2019. Any local exchange carrier that participates in an Association tariff, pursuant to §§69.601 through 69.610 of this chapter, and that elected to be subject to this paragraph (b) may withdraw from that election by notifying the Association by March 1, 2019, of such intent. Subject to these two exceptions, local exchange carriers that previously elected to become subject to this paragraph (b) shall not be eligible to withdraw from such regulation for the duration of the freeze.

(c) Effective July 1, 2001, through December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, 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; 84 FR 4360, Feb. 15, 2019]

§ 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]

EFFECTIVE DATE NOTE: At 89 FR 25158, Apr. 10, 2024, § 36.4 was amended by adding paragraph (c), and the date of effectiveness is delayed indefinitely. For the convenience of the user, the added text is set forth as follows:

§ 36.4 Streamlining procedures for processing petitions for waiver of study area boundaries.

* * * * *

(c) *Petitions for waiver required.* Effective as of [30 DAYS AFTER THE EFFECTIVE DATE OF THIS PARAGRAPH (c)], local exchange carriers seeking a change in study area boundaries must file a study area petition consistent with the procedures set out in paragraphs (a) and (b) of this section notwithstanding any prior exemption from such waiver requests including, but not limited to, when a company is combining previously unserved territory with one of its study areas or a holding company is consolidating existing study areas within the same state. The Wireline Competition Bureau or the Office of Economics and Analytics are permitted to accept study area boundary corrections without a waiver.

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 local exchange carriers that had annual revenues from regulated telecommunications operations equal to or greater than $157 million for calendar year 2016 are apportioned among the operations on the basis of either the method in paragraph (a)(1) of this section or the method in paragraph (a)(2) of this section, at the election of the local exchange carrier:

(1) The separation of the costs of the combined Big Three Expenses which include the following accounts:

TABLE 1 TO PARAGRAPH (a)(1)

Plant Specific Expenses	
Central Office Switching Expenses.	Account 6210.
Operators Systems Expenses	Account 6220.
Central Office Transmission Expenses.	Account 6230.
Information Origination/Termination Expenses.	Account 6310.
Cable and Wire Facilities Expenses.	Account 6410.
Plant Non-Specific Expenses	
Network Operations Expenses ...	Account 6530.
Customer Operations Expenses	
Marketing	Account 6610.
Services	Account 6620.

(2) The separation of the costs of Central Office Equipment, Information Origination/Termination Equipment, and Cable and Wire Facilities, combined.

(b) The costs of the general support facilities of local exchange carriers that had annual revenues from regulated telecommunications operations less than $157 million for calendar year 2016 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.

[83 FR 63584, Dec. 11, 2018]

CENTRAL OFFICE EQUIPMENT

§ 36.121 General.

(a) The costs of central office equipment are carried in the following accounts:

TABLE 1 TO PARAGRAPH (a)

Central Office Switching	Account 2210.
Operator Systems	Account 2220.
Central Office Transmission ..	Account 2230.

(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; 83 FR 63584, Dec. 11, 2018]

§ 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 December 31, 2024, 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 December 31, 2024, 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 Account 2210. 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 December 31, 2024, study areas subject to price cap regulation, pursuant to §61.41 of this chapter, shall assign the average balance of Account 2210 to Category 2, Tandem Switching Equipment based on the relative percentage assignment of the average balance of Account 2210 (or, if Accounts 2211, 2212, and 2215 were required to be maintained at the applicable time, the average balances of Accounts 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 December 31, 2024, 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; 83 FR 63584, Dec. 11, 2018]

§36.125 Local switching equipment—Category 3.

(a) Local switching equipment is included in account 2210. 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 December 31, 2024, study areas subject to price cap regulation, pursuant to §61.41 of this chapter, shall assign the average balance of Account 2210 to Category 3, Local Switching Equipment, based on the relative percentage assignment of the average balance of Account 2210 (or, if Accounts 2211, 2212, and 2215 were required to be maintained at the applicable time, the average balances of Accounts 2211, 2212, and 2215) to Category 3, during the twelve-month period ending December 31, 2000.

(i) Effective July 1, 2001, through December 31, 2024, 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; 83 FR 63585, Dec. 11, 2018]

§ 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 Account 2230. 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 system terminals.

(2) Telephone 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 transmission testing.

(b) For apportionment among the operations, the cost of circuit equipment 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 in general use, while audio program transmission amplifiers, bridges, monitoring devices and volume indicators 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 December 31, 2024, study areas subject to price cap regulation, pursuant to §61.41, shall assign the average balance of Account 2230 to the categories/subcategories as specified in §36.126(b)(1) through (b)(4) based on the relative percentage assignment of the average balance of Account 2230 (or, if Accounts 2231 and 2232 were required to be maintained at the applicable time, the average balances of Accounts 2231 and 2232) costs to these categories/subcategories during the twelve-month period ending December 31, 2000.

(6) Effective July 1, 2001, through December 31, 2024, study areas subject to price cap regulation, pursuant to §61.41 of this chapter, shall assign the average balance of Account 2230 to the categories/subcategories as specified in paragraphs (b)(1) through (4) of this section based on the relative percentage assignment of the average balance of Account 2230 (or, if Accounts 2231 and 2232 were required to be maintained at the applicable time, the average balances of Accounts 2231 and 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 non-wideband service as described in § 36.154.

(4) Effective July 1, 2001, through December 31, 2024, 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 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 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 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 private line services is directly assigned to the appropriate operations.

(4) Effective July 1, 2001, through December 31, 2024, 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 December 31, 2024, 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; 82 FR 48776, Oct. 20, 2017; 83 FR 63585, Dec. 11, 2018; 84 FR 4360, Feb. 15, 2019]

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 December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, 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 jurisdiction.

(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 December 31, 2024, 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; 83 FR 63585, Dec. 11, 2018]

§ 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 December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, 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.

This subpart is arranged in sections as follows:

General	36.202
Operating Revenues	36.211
Basic local services revenue—Account 5000	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, as amended at 83 FR 63585, Dec. 11, 2018]

§ 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.

Operating revenues are included in the following accounts:

Account title	Account No.
Basic Local Service Revenue	5000
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, as amended at 83 FR 63585, Dec. 11, 2018]

§ 36.212 Basic local services revenue—Account 5000.

(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 December 31, 2024, 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 December 31, 2024, 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.

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.	36.311.
Central Office Expenses—Accounts 6210, 6220, 6230.	36.321.
Information Origination/Termination Expenses—Account 6310.	36.331.
Cable and Wire Facilities Expenses—Account 6410.	36.341.
Plant Nonspecific Operations Expenses:	
General	36.351.

Other Property Plant and Equipment Expenses—Account 6510.	36.352.
Network Operations Expenses—Account 6530.	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	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.	36.411 and 36.412.
Equal Access Expenses	36.421.

[69 FR 12551, Mar. 17, 2004, as amended at 83 FR 63585, Dec. 11, 2018]

§ 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 (SRCs) for Salaries and Wages, Benefits and Other Expenses are applicable to all of the expense accounts except for:

(i) SRCs 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.

[52 FR 17229, May 6, 1987, as amended at 83 FR 63586, Dec. 11, 2018]

Plant Specific Operations Expenses

§ 36.310 General.

(a) Plant specific operations expenses include the following accounts:

Table 1 to Paragraph (a)

Network Support Expenses	Account 6110.
General Support Expenses	Account 6120.
Central Office Switching Expenses.	Account 6210.
Operator System Expenses	Account 6220.
Central Office Transmission Expenses.	Account 6230.
Information Origination/Termination Expenses.	Account 6310.
Cable and Wire Facilities Expenses.	Account 6410.

(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; 83 FR 63586, Dec. 11, 2018]

NETWORK SUPPORT/GENERAL SUPPORT EXPENSES

§ 36.311 Network Support/General Support Expenses—Accounts 6110 and 6120.

(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.

(a) The expenses related to central office equipment are summarized in the following accounts:

TABLE 1 TO PARAGRAPH (a)

Central Office Switching Expense.	Account 6210.
Operator Systems Expense	Account 6220.
Central Office Transmission Expense.	Account 6230.

(b) The expenses 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; 83 FR 63586, Dec. 11, 2018]

INFORMATION ORIGINATION/TERMINATION EXPENSES

§ 36.331 Information origination/termination expenses—Account 6310.

(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.

(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.

Plant nonspecific operations expenses include the following accounts:

TABLE 1 TO §36.351

Other Property Plant and Equipment Expenses.	Account 6510.

TABLE 1 TO § 36.351—Continued

Network Operations Expenses	Account 6530.
Access Expenses	Account 6540.
Depreciation and Amortization Expenses.	Account 6560.

[83 FR 63586, Dec. 11, 2018]

PLANT EXPENSES—OTHER

§ 36.352 Other property plant and equipment expenses—Account 6510.

(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.

(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.
Services	Account 6620.

[69 FR 12552, Mar. 17, 2004, as amended at 83 FR 63587, Dec. 11, 2018]

§ 36.372 Marketing—Account 6610.

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 December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, 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 (3) 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 December 31, 2024, all study areas shall apportion Published directory listing expenses using the underlying relative use measurements, as specified in paragraphs (b)(1) through (3) 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; 83 FR 63587, Dec. 11, 2018]

§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 December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, 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]

(b) [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; 83 FR 63587, Dec. 11, 2018]

§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 December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, 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 December 31, 2024, 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:

TABLE 1 TO PARAGRAPH (c)

Plant Specific Expenses	
Central Office Switching Expenses.	Account 6210.
Operators Systems Expenses	Account 6220.
Central Office Transmission Expenses.	Account 6230.
Information Origination/Termination Expenses.	Account 6310.
Cable and Wire Facilities Expense.	Account 6410.
Plant Non-Specific Expenses	
Network Operations Expenses	Account 6530.
Customer Operations Expenses	
Marketing	Account 6610.
Services	Account 6620.

[52 FR 17229, May 6, 1987, as amended at 69 FR 12552, Mar. 17, 2004; 83 FR 63587, Dec. 11, 2018]

OPERATING TAXES

§ 36.411 Operating taxes—Account 7200.

This account includes the taxes arising from the operations of the company, *i.e.:*

(a) Operating Investment Tax Credits.

(b) Operating Federal Income Taxes.

(c) Operating State and Local Income Taxes.

(d) Operating Other Taxes.

(e) Provision for Deferred Operating Income Taxes.

[83 FR 63587, Dec. 11, 2018]

§ 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.
Net Current Deferred Operating Income Taxes.	Account 4100.
Net Noncurrent Deferred Operating Income Taxes.	Account 4340.
Other Jurisdictional Liabilities and Deferred Credits—Net.	Account 4370.

[69 FR 12553, Mar. 17, 2004, as amended at 83 FR 63587, Dec. 11, 2018]

§ 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.

Amounts in these accounts are apportioned among the operations on the basis of the separation of the related accounts.

[52 FR 17229, May 6, 1987, as amended at 83 FR 63587, Dec. 11, 2018]

§ 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

A list of CFR titles, subtitles, chapters, subchapters and parts and an alphabetical list of agencies publishing in the CFR are included in the CFR Index and Finding Aids volume to the Code of Federal Regulations which is published separately and revised annually.

Table of CFR Titles and Chapters
Alphabetical List of Agencies Appearing in the CFR
Table of OMB Control Numbers
List of CFR Sections Affected

Table of CFR Titles and Chapters

(Revised as of October 1, 2024)

Title 1—General Provisions

I Administrative Committee of the Federal Register (Parts 1—49)
II Office of the Federal Register (Parts 50—299)
III Administrative Conference of the United States (Parts 300—399)
IV Miscellaneous Agencies (Parts 400—599)
VI National Capital Planning Commission (Parts 600—699)

Title 2—Grants and Agreements

SUBTITLE A—OFFICE OF MANAGEMENT AND BUDGET GUIDANCE FOR GRANTS AND AGREEMENTS
I Office of Management and Budget Governmentwide Guidance for Grants and Agreements (Parts 2—199)
II Office of Management and Budget Guidance (Parts 200—299)
SUBTITLE B—FEDERAL AGENCY REGULATIONS FOR GRANTS AND AGREEMENTS
III Department of Health and Human Services (Parts 300—399)
IV Department of Agriculture (Parts 400—499)
VI Department of State (Parts 600—699)
VII Agency for International Development (Parts 700—799)
VIII Department of Veterans Affairs (Parts 800—899)
IX Department of Energy (Parts 900—999)
X Department of the Treasury (Parts 1000—1099)
XI Department of Defense (Parts 1100—1199)
XII Department of Transportation (Parts 1200—1299)
XIII Department of Commerce (Parts 1300—1399)
XIV Department of the Interior (Parts 1400—1499)
XV Environmental Protection Agency (Parts 1500—1599)
XVI U.S. International Development Finance Corporation (Parts 1600—1699)
XVIII National Aeronautics and Space Administration (Parts 1800—1899)
XX United States Nuclear Regulatory Commission (Parts 2000—2099)
XXII Corporation for National and Community Service (Parts 2200—2299)
XXIII Social Security Administration (Parts 2300—2399)
XXIV Department of Housing and Urban Development (Parts 2400—2499)

Title 2—Grants and Agreements—Continued

Chap.

XXV National Science Foundation (Parts 2500—2599)
XXVI National Archives and Records Administration (Parts 2600—2699)
XXVII Small Business Administration (Parts 2700—2799)
XXVIII Department of Justice (Parts 2800—2899)
XXIX Department of Labor (Parts 2900—2999)
XXX Department of Homeland Security (Parts 3000—3099)
XXXI Institute of Museum and Library Services (Parts 3100—3199)
XXXII National Endowment for the Arts (Parts 3200—3299)
XXXIII National Endowment for the Humanities (Parts 3300—3399)
XXXIV Department of Education (Parts 3400—3499)
XXXV Export-Import Bank of the United States (Parts 3500—3599)
XXXVI Office of National Drug Control Policy, Executive Office of the President (Parts 3600—3699)
XXXVII Peace Corps (Parts 3700—3799)
LVIII Election Assistance Commission (Parts 5800—5899)
LIX Gulf Coast Ecosystem Restoration Council (Parts 5900—5999)
LX Federal Communications Commission (Parts 6000—6099)

Title 3—The President

I Executive Office of the President (Parts 100—199)

Title 4—Accounts

I Government Accountability Office (Parts 1—199)

Title 5—Administrative Personnel

I Office of Personnel Management (Parts 1—1199)
II Merit Systems Protection Board (Parts 1200—1299)
III Office of Management and Budget (Parts 1300—1399)
IV Office of Personnel Management and Office of the Director of National Intelligence (Parts 1400—1499)
V The International Organizations Employees Loyalty Board (Parts 1500—1599)
VI Federal Retirement Thrift Investment Board (Parts 1600—1699)
VIII Office of Special Counsel (Parts 1800—1899)
IX Appalachian Regional Commission (Parts 1900—1999)
XI Armed Forces Retirement Home (Parts 2100—2199)
XIV Federal Labor Relations Authority, General Counsel of the Federal Labor Relations Authority and Federal Service Impasses Panel (Parts 2400—2499)
XVI Office of Government Ethics (Parts 2600—2699)
XXI Department of the Treasury (Parts 3100—3199)
XXII Federal Deposit Insurance Corporation (Parts 3200—3299)
XXIII Department of Energy (Parts 3300—3399)

Title 5—Administrative Personnel—Continued

Chap.	
XXIV	Federal Energy Regulatory Commission (Parts 3400—3499)
XXV	Department of the Interior (Parts 3500—3599)
XXVI	Department of Defense (Parts 3600—3699)
XXVIII	Department of Justice (Parts 3800—3899)
XXIX	Federal Communications Commission (Parts 3900—3999)
XXX	Farm Credit System Insurance Corporation (Parts 4000—4099)
XXXI	Farm Credit Administration (Parts 4100—4199)
XXXIII	U.S. International Development Finance Corporation (Parts 4300—4399)
XXXIV	Securities and Exchange Commission (Parts 4400—4499)
XXXV	Office of Personnel Management (Parts 4500—4599)
XXXVI	Department of Homeland Security (Parts 4600—4699)
XXXVII	Federal Election Commission (Parts 4700—4799)
XL	Interstate Commerce Commission (Parts 5000—5099)
XLI	Commodity Futures Trading Commission (Parts 5100—5199)
XLII	Department of Labor (Parts 5200—5299)
XLIII	National Science Foundation (Parts 5300—5399)
XLV	Department of Health and Human Services (Parts 5500—5599)
XLVI	Postal Rate Commission (Parts 5600—5699)
XLVII	Federal Trade Commission (Parts 5700—5799)
XLVIII	Nuclear Regulatory Commission (Parts 5800—5899)
XLIX	Federal Labor Relations Authority (Parts 5900—5999)
L	Department of Transportation (Parts 6000—6099)
LII	Export-Import Bank of the United States (Parts 6200—6299)
LIII	Department of Education (Parts 6300—6399)
LIV	Environmental Protection Agency (Parts 6400—6499)
LV	National Endowment for the Arts (Parts 6500—6599)
LVI	National Endowment for the Humanities (Parts 6600—6699)
LVII	General Services Administration (Parts 6700—6799)
LVIII	Board of Governors of the Federal Reserve System (Parts 6800—6899)
LIX	National Aeronautics and Space Administration (Parts 6900—6999)
LX	United States Postal Service (Parts 7000—7099)
LXI	National Labor Relations Board (Parts 7100—7199)
LXII	Equal Employment Opportunity Commission (Parts 7200—7299)
LXIII	Inter-American Foundation (Parts 7300—7399)
LXIV	Merit Systems Protection Board (Parts 7400—7499)
LXV	Department of Housing and Urban Development (Parts 7500—7599)
LXVI	National Archives and Records Administration (Parts 7600—7699)
LXVII	Institute of Museum and Library Services (Parts 7700—7799)
LXVIII	Commission on Civil Rights (Parts 7800—7899)
LXIX	Tennessee Valley Authority (Parts 7900—7999)

Title 5—Administrative Personnel—Continued

Chap.

LXX Court Services and Offender Supervision Agency for the District of Columbia (Parts 8000—8099)

LXXI Consumer Product Safety Commission (Parts 8100—8199)

LXXIII Department of Agriculture (Parts 8300—8399)

LXXIV Federal Mine Safety and Health Review Commission (Parts 8400—8499)

LXXVI Federal Retirement Thrift Investment Board (Parts 8600—8699)

LXXVII Office of Management and Budget (Parts 8700—8799)

LXXX Federal Housing Finance Agency (Parts 9000—9099)

LXXXIII Special Inspector General for Afghanistan Reconstruction (Parts 9300—9399)

LXXXIV Bureau of Consumer Financial Protection (Parts 9400—9499)

LXXXVI National Credit Union Administration (Parts 9600—9699)

XCVII Department of Homeland Security Human Resources Management System (Department of Homeland Security—Office of Personnel Management) (Parts 9700—9799)

XCVIII Council of the Inspectors General on Integrity and Efficiency (Parts 9800—9899)

XCIX Military Compensation and Retirement Modernization Commission (Parts 9900—9999)

C National Council on Disability (Parts 10000—10049)

CI National Mediation Board (Parts 10100—10199)

CII U.S. Office of Special Counsel (Parts 10200—10299)

CIII U.S. Office of Federal Mediation and Conciliation Service (Parts 10300—10399)

CIV Office of the Intellectual Property Enforcement Coordinator (Part 10400—10499)

Title 6—Domestic Security

I Department of Homeland Security, Office of the Secretary (Parts 1—199)

X Privacy and Civil Liberties Oversight Board (Parts 1000—1099)

Title 7—Agriculture

SUBTITLE A—OFFICE OF THE SECRETARY OF AGRICULTURE (PARTS 0—26)

SUBTITLE B—REGULATIONS OF THE DEPARTMENT OF AGRICULTURE

I Agricultural Marketing Service (Standards, Inspections, Marketing Practices), Department of Agriculture (Parts 27—209)

II Food and Nutrition Service, Department of Agriculture (Parts 210—299)

III Animal and Plant Health Inspection Service, Department of Agriculture (Parts 300—399)

IV Federal Crop Insurance Corporation, Department of Agriculture (Parts 400—499)

V Agricultural Research Service, Department of Agriculture (Parts 500—599)

Title 7—Agriculture—Continued

Chap.

VI Natural Resources Conservation Service, Department of Agriculture (Parts 600—699)

VII Farm Service Agency, Department of Agriculture (Parts 700—799)

VIII Agricultural Marketing Service (Federal Grain Inspection Service, Fair Trade Practices Program), Department of Agriculture (Parts 800—899)

IX Agricultural Marketing Service (Marketing Agreements and Orders; Fruits, Vegetables, Nuts), Department of Agriculture (Parts 900—999)

X Agricultural Marketing Service (Marketing Agreements and Orders; Milk), Department of Agriculture (Parts 1000—1199)

XI Agricultural Marketing Service (Marketing Agreements and Orders; Miscellaneous Commodities), Department of Agriculture (Parts 1200—1299)

XIV Commodity Credit Corporation, Department of Agriculture (Parts 1400—1499)

XV Foreign Agricultural Service, Department of Agriculture (Parts 1500—1599)

XVI [Reserved]

XVII Rural Utilities Service, Department of Agriculture (Parts 1700—1799)

XVIII Rural Housing Service, Rural Business-Cooperative Service, Rural Utilities Service, and Farm Service Agency, Department of Agriculture (Parts 1800—2099)

XX [Reserved]

XXV Office of Advocacy and Outreach, Department of Agriculture (Parts 2500—2599)

XXVI Office of Inspector General, Department of Agriculture (Parts 2600—2699)

XXVII Office of Information Resources Management, Department of Agriculture (Parts 2700—2799)

XXVIII Office of Operations, Department of Agriculture (Parts 2800—2899)

XXIX Office of Energy Policy and New Uses, Department of Agriculture (Parts 2900—2999)

XXX Office of the Chief Financial Officer, Department of Agriculture (Parts 3000—3099)

XXXI Office of Environmental Quality, Department of Agriculture (Parts 3100—3199)

XXXII Office of Procurement and Property Management, Department of Agriculture (Parts 3200—3299)

XXXIII Office of Transportation, Department of Agriculture (Parts 3300—3399)

XXXIV National Institute of Food and Agriculture (Parts 3400—3499)

XXXV Rural Housing Service, Department of Agriculture (Parts 3500—3599)

XXXVI National Agricultural Statistics Service, Department of Agriculture (Parts 3600—3699)

Title 7—Agriculture—Continued

Chap.

XXXVII Economic Research Service, Department of Agriculture (Parts 3700—3799)

XXXVIII World Agricultural Outlook Board, Department of Agriculture (Parts 3800—3899)

XLI [Reserved]

XLII Rural Business-Cooperative Service, Department of Agriculture (Parts 4200—4299)

L Rural Business-Cooperative Service, Rural Housing Service, and Rural Utilities Service, Department of Agriculture (Parts 5000—5099)

Title 8—Aliens and Nationality

I Department of Homeland Security (Parts 1—499)

V Executive Office for Immigration Review, Department of Justice (Parts 1000—1399)

Title 9—Animals and Animal Products

I Animal and Plant Health Inspection Service, Department of Agriculture (Parts 1—199)

II Agricultural Marketing Service (Fair Trade Practices Program), Department of Agriculture (Parts 200—299)

III Food Safety and Inspection Service, Department of Agriculture (Parts 300—599)

Title 10—Energy

I Nuclear Regulatory Commission (Parts 0—199)

II Department of Energy (Parts 200—699)

III Department of Energy (Parts 700—999)

X Department of Energy (General Provisions) (Parts 1000—1099)

XIII Nuclear Waste Technical Review Board (Parts 1300—1399)

XVII Defense Nuclear Facilities Safety Board (Parts 1700—1799)

XVIII Northeast Interstate Low-Level Radioactive Waste Commission (Parts 1800—1899)

Title 11—Federal Elections

I Federal Election Commission (Parts 1—9099)

II Election Assistance Commission (Parts 9400—9499)

Title 12—Banks and Banking

I Comptroller of the Currency, Department of the Treasury (Parts 1—199)

II Federal Reserve System (Parts 200—299)

III Federal Deposit Insurance Corporation (Parts 300—399)

Title 12—Banks and Banking—Continued

Chap.

IV Export-Import Bank of the United States (Parts 400—499)

V (Parts 500—599) [Reserved]

VI Farm Credit Administration (Parts 600—699)

VII National Credit Union Administration (Parts 700—799)

VIII Federal Financing Bank (Parts 800—899)

IX (Parts 900—999)[Reserved]

X Consumer Financial Protection Bureau (Parts 1000—1099)

XI Federal Financial Institutions Examination Council (Parts 1100—1199)

XII Federal Housing Finance Agency (Parts 1200—1299)

XIII Financial Stability Oversight Council (Parts 1300—1399)

XIV Farm Credit System Insurance Corporation (Parts 1400—1499)

XV Department of the Treasury (Parts 1500—1599)

XVI Office of Financial Research, Department of the Treasury (Parts 1600—1699)

XVII Office of Federal Housing Enterprise Oversight, Department of Housing and Urban Development (Parts 1700—1799)

XVIII Community Development Financial Institutions Fund, Department of the Treasury (Parts 1800—1899)

Title 13—Business Credit and Assistance

I Small Business Administration (Parts 1—199)

III Economic Development Administration, Department of Commerce (Parts 300—399)

IV Emergency Steel Guarantee Loan Board (Parts 400—499)

V Emergency Oil and Gas Guaranteed Loan Board (Parts 500—599)

Title 14—Aeronautics and Space

I Federal Aviation Administration, Department of Transportation (Parts 1—199)

II Office of the Secretary, Department of Transportation (Aviation Proceedings) (Parts 200—399)

III Commercial Space Transportation, Federal Aviation Administration, Department of Transportation (Parts 400—1199)

V National Aeronautics and Space Administration (Parts 1200—1299)

VI Air Transportation System Stabilization (Parts 1300—1399)

Title 15—Commerce and Foreign Trade

SUBTITLE A—OFFICE OF THE SECRETARY OF COMMERCE (PARTS 0—29)

SUBTITLE B—REGULATIONS RELATING TO COMMERCE AND FOREIGN TRADE

I Bureau of the Census, Department of Commerce (Parts 30—199)

Title 15—Commerce and Foreign Trade—Continued

Chap.

II National Institute of Standards and Technology, Department of Commerce (Parts 200—299)

III International Trade Administration, Department of Commerce (Parts 300—399)

IV Foreign-Trade Zones Board, Department of Commerce (Parts 400—499)

VII Bureau of Industry and Security, Department of Commerce (Parts 700—799)

VIII Bureau of Economic Analysis, Department of Commerce (Parts 800—899)

IX National Oceanic and Atmospheric Administration, Department of Commerce (Parts 900—999)

XI National Technical Information Service, Department of Commerce (Parts 1100—1199)

XIII East-West Foreign Trade Board (Parts 1300—1399)

XIV Minority Business Development Agency (Parts 1400—1499)

XV Office of the Under-Secretary for Economic Affairs, Department of Commerce (Parts 1500—1599)

SUBTITLE C—REGULATIONS RELATING TO FOREIGN TRADE AGREEMENTS

XX Office of the United States Trade Representative (Parts 2000—2099)

SUBTITLE D—REGULATIONS RELATING TO TELECOMMUNICATIONS AND INFORMATION

XXIII National Telecommunications and Information Administration, Department of Commerce (Parts 2300—2399) [Reserved]

Title 16—Commercial Practices

I Federal Trade Commission (Parts 0—999)

II Consumer Product Safety Commission (Parts 1000—1799)

Title 17—Commodity and Securities Exchanges

I Commodity Futures Trading Commission (Parts 1—199)

II Securities and Exchange Commission (Parts 200—399)

IV Department of the Treasury (Parts 400—499)

Title 18—Conservation of Power and Water Resources

I Federal Energy Regulatory Commission, Department of Energy (Parts 1—399)

III Delaware River Basin Commission (Parts 400—499)

VI Water Resources Council (Parts 700—799)

VIII Susquehanna River Basin Commission (Parts 800—899)

XIII Tennessee Valley Authority (Parts 1300—1399)

Title 19—Customs Duties

Chap.

I U.S. Customs and Border Protection, Department of Homeland Security; Department of the Treasury (Parts 0—199)

II United States International Trade Commission (Parts 200—299)

III International Trade Administration, Department of Commerce (Parts 300—399)

IV U.S. Immigration and Customs Enforcement, Department of Homeland Security (Parts 400—599) [Reserved]

Title 20—Employees' Benefits

I Office of Workers' Compensation Programs, Department of Labor (Parts 1—199)

II Railroad Retirement Board (Parts 200—399)

III Social Security Administration (Parts 400—499)

IV Employees' Compensation Appeals Board, Department of Labor (Parts 500—599)

V Employment and Training Administration, Department of Labor (Parts 600—699)

VI Office of Workers' Compensation Programs, Department of Labor (Parts 700—799)

VII Benefits Review Board, Department of Labor (Parts 800—899)

VIII Joint Board for the Enrollment of Actuaries (Parts 900—999)

IX Office of the Assistant Secretary for Veterans' Employment and Training Service, Department of Labor (Parts 1000—1099)

Title 21—Food and Drugs

I Food and Drug Administration, Department of Health and Human Services (Parts 1—1299)

II Drug Enforcement Administration, Department of Justice (Parts 1300—1399)

III Office of National Drug Control Policy (Parts 1400—1499)

Title 22—Foreign Relations

I Department of State (Parts 1—199)

II Agency for International Development (Parts 200—299)

III Peace Corps (Parts 300—399)

IV International Joint Commission, United States and Canada (Parts 400—499)

V United States Agency for Global Media (Parts 500—599)

VII U.S. International Development Finance Corporation (Parts 700—799)

IX Foreign Service Grievance Board (Parts 900—999)

X Inter-American Foundation (Parts 1000—1099)

XI International Boundary and Water Commission, United States and Mexico, United States Section (Parts 1100—1199)

Title 22—Foreign Relations—Continued

Chap.

XII United States International Development Cooperation Agency (Parts 1200—1299)

XIII Millennium Challenge Corporation (Parts 1300—1399)

XIV Foreign Service Labor Relations Board; Federal Labor Relations Authority; General Counsel of the Federal Labor Relations Authority; and the Foreign Service Impasse Disputes Panel (Parts 1400—1499)

XV African Development Foundation (Parts 1500—1599)

XVI Japan-United States Friendship Commission (Parts 1600—1699)

XVII United States Institute of Peace (Parts 1700—1799)

Title 23—Highways

I Federal Highway Administration, Department of Transportation (Parts 1—999)

II National Highway Traffic Safety Administration and Federal Highway Administration, Department of Transportation (Parts 1200—1299)

III National Highway Traffic Safety Administration, Department of Transportation (Parts 1300—1399)

Title 24—Housing and Urban Development

SUBTITLE A—OFFICE OF THE SECRETARY, DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (PARTS 0—99)

SUBTITLE B—REGULATIONS RELATING TO HOUSING AND URBAN DEVELOPMENT

I Office of Assistant Secretary for Equal Opportunity, Department of Housing and Urban Development (Parts 100—199)

II Office of Assistant Secretary for Housing-Federal Housing Commissioner, Department of Housing and Urban Development (Parts 200—299)

III Government National Mortgage Association, Department of Housing and Urban Development (Parts 300—399)

IV Office of Housing and Office of Multifamily Housing Assistance Restructuring, Department of Housing and Urban Development (Parts 400—499)

V Office of Assistant Secretary for Community Planning and Development, Department of Housing and Urban Development (Parts 500—599)

VI Office of Assistant Secretary for Community Planning and Development, Department of Housing and Urban Development (Parts 600—699) [Reserved]

VII Office of the Secretary, Department of Housing and Urban Development (Housing Assistance Programs and Public and Indian Housing Programs) (Parts 700—799)

Title 24—Housing and Urban Development—Continued

Chap.

VIII Office of the Assistant Secretary for Housing—Federal Housing Commissioner, Department of Housing and Urban Development (Section 8 Housing Assistance Programs, Section 202 Direct Loan Program, Section 202 Supportive Housing for the Elderly Program and Section 811 Supportive Housing for Persons With Disabilities Program) (Parts 800—899)

IX Office of Assistant Secretary for Public and Indian Housing, Department of Housing and Urban Development (Parts 900—1699)

X Office of Assistant Secretary for Housing—Federal Housing Commissioner, Department of Housing and Urban Development (Interstate Land Sales Registration Program) (Parts 1700—1799) [Reserved]

XII Office of Inspector General, Department of Housing and Urban Development (Parts 2000—2099)

XV Emergency Mortgage Insurance and Loan Programs, Department of Housing and Urban Development (Parts 2700—2799) [Reserved]

XX Office of Assistant Secretary for Housing—Federal Housing Commissioner, Department of Housing and Urban Development (Parts 3200—3899)

XXIV Board of Directors of the HOPE for Homeowners Program (Parts 4000—4099) [Reserved]

XXV Neighborhood Reinvestment Corporation (Parts 4100—4199)

Title 25—Indians

I Bureau of Indian Affairs, Department of the Interior (Parts 1—299)

II Indian Arts and Crafts Board, Department of the Interior (Parts 300—399)

III National Indian Gaming Commission, Department of the Interior (Parts 500—599)

IV Office of Navajo and Hopi Indian Relocation (Parts 700—899)

V Bureau of Indian Affairs, Department of the Interior, and Indian Health Service, Department of Health and Human Services (Part 900—999)

VI Office of the Assistant Secretary, Indian Affairs, Department of the Interior (Parts 1000—1199)

VII Office of the Special Trustee for American Indians, Department of the Interior (Parts 1200—1299)

Title 26—Internal Revenue

I Internal Revenue Service, Department of the Treasury (Parts 1—End)

Title 27—Alcohol, Tobacco Products and Firearms

I Alcohol and Tobacco Tax and Trade Bureau, Department of the Treasury (Parts 1—399)

Title 27—Alcohol, Tobacco Products and Firearms—Continued

Chap.

II Bureau of Alcohol, Tobacco, Firearms, and Explosives, Department of Justice (Parts 400—799)

Title 28—Judicial Administration

I Department of Justice (Parts 0—299)

III Federal Prison Industries, Inc., Department of Justice (Parts 300—399)

V Bureau of Prisons, Department of Justice (Parts 500—599)

VI Offices of Independent Counsel, Department of Justice (Parts 600—699)

VII Office of Independent Counsel (Parts 700—799)

VIII Court Services and Offender Supervision Agency for the District of Columbia (Parts 800—899)

IX National Crime Prevention and Privacy Compact Council (Parts 900—999)

XI Department of Justice and Department of State (Parts 1100—1199)

Title 29—Labor

SUBTITLE A—OFFICE OF THE SECRETARY OF LABOR (PARTS 0—99)

SUBTITLE B—REGULATIONS RELATING TO LABOR

I National Labor Relations Board (Parts 100—199)

II Office of Labor-Management Standards, Department of Labor (Parts 200—299)

III National Railroad Adjustment Board (Parts 300—399)

IV Office of Labor-Management Standards, Department of Labor (Parts 400—499)

V Wage and Hour Division, Department of Labor (Parts 500—899)

IX Construction Industry Collective Bargaining Commission (Parts 900—999)

X National Mediation Board (Parts 1200—1299)

XII Federal Mediation and Conciliation Service (Parts 1400—1499)

XIV Equal Employment Opportunity Commission (Parts 1600—1699)

XVII Occupational Safety and Health Administration, Department of Labor (Parts 1900—1999)

XX Occupational Safety and Health Review Commission (Parts 2200—2499)

XXV Employee Benefits Security Administration, Department of Labor (Parts 2500—2599)

XXVII Federal Mine Safety and Health Review Commission (Parts 2700—2799)

XL Pension Benefit Guaranty Corporation (Parts 4000—4999)

Title 30—Mineral Resources

Chap.

I Mine Safety and Health Administration, Department of Labor (Parts 1—199)

II Bureau of Safety and Environmental Enforcement, Department of the Interior (Parts 200—299)

IV Geological Survey, Department of the Interior (Parts 400—499)

V Bureau of Ocean Energy Management, Department of the Interior (Parts 500—599)

VII Office of Surface Mining Reclamation and Enforcement, Department of the Interior (Parts 700—999)

XII Office of Natural Resources Revenue, Department of the Interior (Parts 1200—1299)

Title 31—Money and Finance: Treasury

SUBTITLE A—OFFICE OF THE SECRETARY OF THE TREASURY (PARTS 0—50)

SUBTITLE B—REGULATIONS RELATING TO MONEY AND FINANCE

I Monetary Offices, Department of the Treasury (Parts 51—199)

II Fiscal Service, Department of the Treasury (Parts 200—399)

IV Secret Service, Department of the Treasury (Parts 400—499)

V Office of Foreign Assets Control, Department of the Treasury (Parts 500—599)

VI Bureau of Engraving and Printing, Department of the Treasury (Parts 600—699)

VII Federal Law Enforcement Training Center, Department of the Treasury (Parts 700—799)

VIII Office of Investment Security, Department of the Treasury (Parts 800—899)

IX Federal Claims Collection Standards (Department of the Treasury—Department of Justice) (Parts 900—999)

X Financial Crimes Enforcement Network, Department of the Treasury (Parts 1000—1099)

Title 32—National Defense

SUBTITLE A—DEPARTMENT OF DEFENSE

I Office of the Secretary of Defense (Parts 1—399)

V Department of the Army (Parts 400—699)

VI Department of the Navy (Parts 700—799)

VII Department of the Air Force (Parts 800—1099)

SUBTITLE B—OTHER REGULATIONS RELATING TO NATIONAL DEFENSE

XII Department of Defense, Defense Logistics Agency (Parts 1200—1299)

XVI Selective Service System (Parts 1600—1699)

XVII Office of the Director of National Intelligence (Parts 1700—1799)

XVIII National Counterintelligence Center (Parts 1800—1899)

XIX Central Intelligence Agency (Parts 1900—1999)

Title 32—National Defense—Continued

Chap.

XX Information Security Oversight Office, National Archives and Records Administration (Parts 2000—2099)

XXI National Security Council (Parts 2100—2199)

XXIV Office of Science and Technology Policy (Parts 2400—2499)

XXVII Office for Micronesian Status Negotiations (Parts 2700—2799)

XXVIII Office of the Vice President of the United States (Parts 2800—2899)

Title 33—Navigation and Navigable Waters

I Coast Guard, Department of Homeland Security (Parts 1—199)

II Corps of Engineers, Department of the Army, Department of Defense (Parts 200—399)

IV Great Lakes St. Lawrence Seaway Development Corporation, Department of Transportation (Parts 400—499)

Title 34—Education

SUBTITLE A—OFFICE OF THE SECRETARY, DEPARTMENT OF EDUCATION (PARTS 1—99)

SUBTITLE B—REGULATIONS OF THE OFFICES OF THE DEPARTMENT OF EDUCATION

I Office for Civil Rights, Department of Education (Parts 100—199)

II Office of Elementary and Secondary Education, Department of Education (Parts 200—299)

III Office of Special Education and Rehabilitative Services, Department of Education (Parts 300—399)

IV Office of Career, Technical, and Adult Education, Department of Education (Parts 400—499)

V Office of Bilingual Education and Minority [Reserved]

VI Office of Postsecondary Education, Department of Education (Parts 600—699)

VII Office of Educational Research and Improvement, Department of Education (Parts 700—799) [Reserved]

SUBTITLE C—REGULATIONS RELATING TO EDUCATION

XI [Reserved]

XII National Council on Disability (Parts 1200—1299)

Title 35 [Reserved]

Title 36—Parks, Forests, and Public Property

I National Park Service, Department of the Interior (Parts 1—199)

II Forest Service, Department of Agriculture (Parts 200—299)

III Corps of Engineers, Department of the Army (Parts 300—399)

IV American Battle Monuments Commission (Parts 400—499)

V Smithsonian Institution (Parts 500—599)

VI [Reserved]

Title 36—Parks, Forests, and Public Property—Continued

Chap.

VII Library of Congress (Parts 700—799)

VIII Advisory Council on Historic Preservation (Parts 800—899)

IX Pennsylvania Avenue Development Corporation (Parts 900—999)

X Presidio Trust (Parts 1000—1099)

XI Architectural and Transportation Barriers Compliance Board (Parts 1100—1199)

XII National Archives and Records Administration (Parts 1200—1299)

XV Oklahoma City National Memorial Trust (Parts 1500—1599)

XVI Morris K. Udall Scholarship and Excellence in National Environmental Policy Foundation (Parts 1600—1699)

Title 37—Patents, Trademarks, and Copyrights

I United States Patent and Trademark Office, Department of Commerce (Parts 1—199)

II U.S. Copyright Office, Library of Congress (Parts 200—299)

III Copyright Royalty Board, Library of Congress (Parts 300—399)

IV National Institute of Standards and Technology, Department of Commerce (Parts 400—599)

Title 38—Pensions, Bonuses, and Veterans' Relief

I Department of Veterans Affairs (Parts 0—199)

II Armed Forces Retirement Home (Parts 200—299)

Title 39—Postal Service

I United States Postal Service (Parts 1—999)

III Postal Regulatory Commission (Parts 3000—3099)

Title 40—Protection of Environment

I Environmental Protection Agency (Parts 1—1099)

IV Environmental Protection Agency and Department of Justice (Parts 1400—1499)

V Council on Environmental Quality (Parts 1500—1599)

VI Chemical Safety and Hazard Investigation Board (Parts 1600—1699)

VII Environmental Protection Agency and Department of Defense; Uniform National Discharge Standards for Vessels of the Armed Forces (Parts 1700—1799)

VIII Gulf Coast Ecosystem Restoration Council (Parts 1800—1899)

IX Federal Permitting Improvement Steering Council (Part 1900)

Title 41—Public Contracts and Property Management

SUBTITLE A—FEDERAL PROCUREMENT REGULATIONS SYSTEM [NOTE]

Title 41—Public Contracts and Property Management—Continued

Chap.

SUBTITLE B—OTHER PROVISIONS RELATING TO PUBLIC CONTRACTS

50 Public Contracts, Department of Labor (Parts 50–1—50–999)

51 Committee for Purchase From People Who Are Blind or Severely Disabled (Parts 51–1—51–99)

60 Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor (Parts 60–1—60–999)

61 Office of the Assistant Secretary for Veterans' Employment and Training Service, Department of Labor (Parts 61–1—61–999)

Chapters 62—100 [Reserved]

SUBTITLE C—FEDERAL PROPERTY MANAGEMENT REGULATIONS SYSTEM

101 Federal Property Management Regulations (Parts 101–1—101–99)

102 Federal Management Regulation (Parts 102–1—102–299)

Chapters 103—104 (Parts 103–001—104–099)[Reserved]

105 General Services Administration (Parts 105–1—105–999)

109 Department of Energy Property Management Regulations (Parts 109–1—109–99)

114 Department of the Interior (Parts 114–1—114–99)

115 Environmental Protection Agency (Parts 115–1—115–99)

128 Department of Justice (Parts 128–1—128–99)

Chapters 129—200 [Reserved]

SUBTITLE D—FEDERAL ACQUISITION SUPPLY CHAIN SECURITY

201 Federal Acquisition Security Council (Parts 201–1—201–99)

SUBTITLE E [RESERVED]

SUBTITLE F—FEDERAL TRAVEL REGULATION SYSTEM

300 General (Parts 300–1—300–99)

301 Temporary Duty (TDY) Travel Allowances (Parts 301–1—301–99)

302 Relocation Allowances (Parts 302–1—302–99)

303 Payment of Expenses Connected with the Death of Certain Employees (Part 303–1—303–99)

304 Payment of Travel Expenses from a Non-Federal Source (Parts 304–1—304–99)

Title 42—Public Health

I Public Health Service, Department of Health and Human Services (Parts 1—199)

Chapters II—III [Reserved]

IV Centers for Medicare & Medicaid Services, Department of Health and Human Services (Parts 400—699)

V Office of Inspector General-Health Care, Department of Health and Human Services (Parts 1000—1099)

Title 43—Public Lands: Interior

Chap.

SUBTITLE A—OFFICE OF THE SECRETARY OF THE INTERIOR (PARTS 1—199)

SUBTITLE B—REGULATIONS RELATING TO PUBLIC LANDS

I Bureau of Reclamation, Department of the Interior (Parts 400—999)

II Bureau of Land Management, Department of the Interior (Parts 1000—9999)

III Utah Reclamation Mitigation and Conservation Commission (Parts 10000—10099)

Title 44—Emergency Management and Assistance

I Federal Emergency Management Agency, Department of Homeland Security (Parts 0—399)

IV Department of Commerce and Department of Transportation (Parts 400—499)

Title 45—Public Welfare

SUBTITLE A—DEPARTMENT OF HEALTH AND HUMAN SERVICES (PARTS 1—199)

SUBTITLE B—REGULATIONS RELATING TO PUBLIC WELFARE

II Office of Family Assistance (Assistance Programs), Administration for Children and Families, Department of Health and Human Services (Parts 200—299)

III Office of Child Support Services, Administration of Families and Services, Department of Health and Human Services (Parts 300—399)

IV Office of Refugee Resettlement, Administration for Children and Families, Department of Health and Human Services (Parts 400—499)

V Foreign Claims Settlement Commission of the United States, Department of Justice (Parts 500—599)

VI National Science Foundation (Parts 600—699)

VII Commission on Civil Rights (Parts 700—799)

VIII Office of Personnel Management (Parts 800—899)

IX Denali Commission (Parts 900—999)

X Office of Community Services, Administration for Children and Families, Department of Health and Human Services (Parts 1000—1099)

XI National Foundation on the Arts and the Humanities (Parts 1100—1199)

XII Corporation for National and Community Service (Parts 1200—1299)

XIII Administration for Children and Families, Department of Health and Human Services (Parts 1300—1399)

XVI Legal Services Corporation (Parts 1600—1699)

XVII National Commission on Libraries and Information Science (Parts 1700—1799)

XVIII Harry S. Truman Scholarship Foundation (Parts 1800—1899)

Title 45—Public Welfare—Continued

Chap.

XXI Commission of Fine Arts (Parts 2100—2199)

XXIII Arctic Research Commission (Parts 2300—2399)

XXIV James Madison Memorial Fellowship Foundation (Parts 2400—2499)

XXV Corporation for National and Community Service (Parts 2500—2599)

Title 46—Shipping

I Coast Guard, Department of Homeland Security (Parts 1—199)

II Maritime Administration, Department of Transportation (Parts 200—399)

III Coast Guard (Great Lakes Pilotage), Department of Homeland Security (Parts 400—499)

IV Federal Maritime Commission (Parts 500—599)

Title 47—Telecommunication

I Federal Communications Commission (Parts 0—199)

II Office of Science and Technology Policy and National Security Council (Parts 200—299)

III National Telecommunications and Information Administration, Department of Commerce (Parts 300—399)

IV National Telecommunications and Information Administration, Department of Commerce, and National Highway Traffic Safety Administration, Department of Transportation (Parts 400—499)

V The First Responder Network Authority (Parts 500—599)

Title 48—Federal Acquisition Regulations System

1 Federal Acquisition Regulation (Parts 1—99)

2 Defense Acquisition Regulations System, Department of Defense (Parts 200—299)

3 Health and Human Services (Parts 300—399)

4 Department of Agriculture (Parts 400—499)

5 General Services Administration (Parts 500—599)

6 Department of State (Parts 600—699)

7 Agency for International Development (Parts 700—799)

8 Department of Veterans Affairs (Parts 800—899)

9 Department of Energy (Parts 900—999)

10 Department of the Treasury (Parts 1000—1099)

12 Department of Transportation (Parts 1200—1299)

13 Department of Commerce (Parts 1300—1399)

14 Department of the Interior (Parts 1400—1499)

15 Environmental Protection Agency (Parts 1500—1599)

16 Office of Personnel Management, Federal Employees Health Benefits Acquisition Regulation (Parts 1600—1699)

Title 48—Federal Acquisition Regulations System—Continued

Chap.

17 Office of Personnel Management (Parts 1700—1799)

18 National Aeronautics and Space Administration (Parts 1800—1899)

19 Broadcasting Board of Governors (Parts 1900—1999)

20 Nuclear Regulatory Commission (Parts 2000—2099)

21 Office of Personnel Management, Federal Employees Group Life Insurance Federal Acquisition Regulation (Parts 2100—2199)

23 Social Security Administration (Parts 2300—2399)

24 Department of Housing and Urban Development (Parts 2400—2499)

25 National Science Foundation (Parts 2500—2599)

28 Department of Justice (Parts 2800—2899)

29 Department of Labor (Parts 2900—2999)

30 Department of Homeland Security, Homeland Security Acquisition Regulation (HSAR) (Parts 3000—3099)

34 Department of Education Acquisition Regulation (Parts 3400—3499)

51 Department of the Army Acquisition Regulations (Parts 5100—5199) [Reserved]

52 Department of the Navy Acquisition Regulations (Parts 5200—5299)

53 Department of the Air Force Federal Acquisition Regulation Supplement (Parts 5300—5399) [Reserved]

54 Defense Logistics Agency, Department of Defense (Parts 5400—5499)

57 African Development Foundation (Parts 5700—5799)

61 Civilian Board of Contract Appeals, General Services Administration (Parts 6100—6199)

99 Cost Accounting Standards Board, Office of Federal Procurement Policy, Office of Management and Budget (Parts 9900—9999)

Title 49—Transportation

SUBTITLE A—OFFICE OF THE SECRETARY OF TRANSPORTATION (PARTS 1—99)

SUBTITLE B—OTHER REGULATIONS RELATING TO TRANSPORTATION

I Pipeline and Hazardous Materials Safety Administration, Department of Transportation (Parts 100—199)

II Federal Railroad Administration, Department of Transportation (Parts 200—299)

III Federal Motor Carrier Safety Administration, Department of Transportation (Parts 300—399)

IV Coast Guard, Department of Homeland Security (Parts 400—499)

V National Highway Traffic Safety Administration, Department of Transportation (Parts 500—599)

VI Federal Transit Administration, Department of Transportation (Parts 600—699)

Title 49—Transportation—Continued

Chap.

VII National Railroad Passenger Corporation (AMTRAK) (Parts 700—799)

VIII National Transportation Safety Board (Parts 800—999)

X Surface Transportation Board (Parts 1000—1399)

XI Research and Innovative Technology Administration, Department of Transportation (Parts 1400—1499) [Reserved]

XII Transportation Security Administration, Department of Homeland Security (Parts 1500—1699)

Title 50—Wildlife and Fisheries

I United States Fish and Wildlife Service, Department of the Interior (Parts 1—199)

II National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Department of Commerce (Parts 200—299)

III International Fishing and Related Activities (Parts 300—399)

IV Joint Regulations (United States Fish and Wildlife Service, Department of the Interior and National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Department of Commerce); Endangered Species Committee Regulations (Parts 400—499)

V Marine Mammal Commission (Parts 500—599)

VI Fishery Conservation and Management, National Oceanic and Atmospheric Administration, Department of Commerce (Parts 600—699)

Alphabetical List of Agencies Appearing in the CFR

(Revised as of October 1, 2024)

Agency	CFR Title, Subtitle or Chapter
Administrative Conference of the United States	1, III
Advisory Council on Historic Preservation	36, VIII
Advocacy and Outreach, Office of	7, XXV
Afghanistan Reconstruction, Special Inspector General for	5, LXXXIII
African Development Foundation	22, XV
Federal Acquisition Regulation	48, 57
Agency for International Development	2, VII; 22, II
Federal Acquisition Regulation	48, 7
Agricultural Marketing Service	7, I, VIII, IX, X, XI; 9, II
Agricultural Research Service	7, V
Agriculture, Department of	2, IV; 5, LXXIII
Advocacy and Outreach, Office of	7, XXV
Agricultural Marketing Service	7, I, VIII, IX, X, XI; 9, II
Agricultural Research Service	7, V
Animal and Plant Health Inspection Service	7, III; 9, I
Chief Financial Officer, Office of	7, XXX
Commodity Credit Corporation	7, XIV
Economic Research Service	7, XXXVII
Energy Policy and New Uses, Office of	2, IX; 7, XXIX
Environmental Quality, Office of	7, XXXI
Farm Service Agency	7, VII, XVIII
Federal Acquisition Regulation	48, 4
Federal Crop Insurance Corporation	7, IV
Food and Nutrition Service	7, II
Food Safety and Inspection Service	9, III
Foreign Agricultural Service	7, XV
Forest Service	36, II
Information Resources Management, Office of	7, XXVII
Inspector General, Office of	7, XXVI
National Agricultural Library	7, XLI
National Agricultural Statistics Service	7, XXXVI
National Institute of Food and Agriculture	7, XXXIV
Natural Resources Conservation Service	7, VI
Operations, Office of	7, XXVIII
Procurement and Property Management, Office of	7, XXXII
Rural Business-Cooperative Service	7, XVIII, XLII
Rural Development Administration	7, XLII
Rural Housing Service	7, XVIII, XXXV
Rural Utilities Service	7, XVII, XVIII, XLII
Secretary of Agriculture, Office of	7, Subtitle A
Transportation, Office of	7, XXXIII
World Agricultural Outlook Board	7, XXXVIII
Air Force, Department of	32, VII
Federal Acquisition Regulation Supplement	48, 53
Air Transportation Stabilization Board	14, VI
Alcohol and Tobacco Tax and Trade Bureau	27, I
Alcohol, Tobacco, Firearms, and Explosives, Bureau of	27, II
AMTRAK	49, VII
American Battle Monuments Commission	36, IV
American Indians, Office of the Special Trustee	25, VII
Animal and Plant Health Inspection Service	7, III; 9, I
Appalachian Regional Commission	5, IX
Architectural and Transportation Barriers Compliance Board	36, XI

Agency	CFR Title, Subtitle or Chapter
Arctic Research Commission	45, XXIII
Armed Forces Retirement Home	5, XI; 38, II
Army, Department of	32, V
Engineers, Corps of	33, II; 36, III
Federal Acquisition Regulation	48, 51
Benefits Review Board	20, VII
Bilingual Education and Minority Languages Affairs, Office of	34, V
Blind or Severely Disabled, Committee for Purchase from People Who Are	41, 51
Federal Acquisition Regulation	48, 19
Career, Technical, and Adult Education, Office of	34, IV
Census Bureau	15, I
Centers for Medicare & Medicaid Services	42, IV
Central Intelligence Agency	32, XIX
Chemical Safety and Hazard Investigation Board	40, VI
Chief Financial Officer, Office of	7, XXX
Child Support Services, Office of	45, III
Children and Families, Administration for	45, II, IV, X, XIII
Civil Rights, Commission on	5, LXVIII; 45, VII
Civil Rights, Office for	34, I
Coast Guard	33, I; 46, I; 49, IV
Coast Guard (Great Lakes Pilotage)	46, III
Commerce, Department of	2, XIII; 44, IV; 50, VI
Census Bureau	15, I
Economic Affairs, Office of the Under-Secretary for	15, XV
Economic Analysis, Bureau of	15, VIII
Economic Development Administration	13, III
Emergency Management and Assistance	44, IV
Federal Acquisition Regulation	48, 13
Foreign-Trade Zones Board	15, IV
Industry and Security, Bureau of	15, VII
International Trade Administration	15, III; 19, III
National Institute of Standards and Technology	15, II; 37, IV
National Marine Fisheries Service	50, II, IV
National Oceanic and Atmospheric Administration	15, IX; 50, II, III, IV, VI
National Technical Information Service	15, XI
National Telecommunications and Information Administration	15, XXIII; 47, III, IV
National Weather Service	15, IX
Patent and Trademark Office, United States	37, I
Secretary of Commerce, Office of	15, Subtitle A
Commercial Space Transportation	14, III
Commodity Credit Corporation	7, XIV
Commodity Futures Trading Commission	5, XLI; 17, I
Community Planning and Development, Office of Assistant Secretary for	24, V, VI
Community Services, Office of	45, X
Comptroller of the Currency	12, I
Construction Industry Collective Bargaining Commission	29, IX
Consumer Financial Protection Bureau	5, LXXXIV; 12, X
Consumer Product Safety Commission	5, LXXI; 16, II
Copyright Royalty Board	37, III
Corporation for National and Community Service	2, XXII; 45, XII, XXV
Cost Accounting Standards Board	48, 99
Council on Environmental Quality	40, V
Council of the Inspectors General on Integrity and Efficiency	5, XCVIII
Court Services and Offender Supervision Agency for the District of Columbia	5, LXX; 28, VIII
Customs and Border Protection	19, I
Defense, Department of	2, XI; 5, XXVI; 32, Subtitle A; 40, VII
Advanced Research Projects Agency	32, I
Air Force Department	32, VII
Army Department	32, V; 33, II; 36, III; 48, 51
Defense Acquisition Regulations System	48, 2
Defense Intelligence Agency	32, I

Agency	CFR Title, Subtitle or Chapter
Defense Logistics Agency	32, I, XII; 48, 54
Engineers, Corps of	33, II; 36, III
National Imagery and Mapping Agency	32, I
Navy, Department of	32, VI; 48, 52
Secretary of Defense, Office of	2, XI; 32, I
Defense Contract Audit Agency	32, I
Defense Intelligence Agency	32, I
Defense Logistics Agency	32, XII; 48, 54
Defense Nuclear Facilities Safety Board	10, XVII
Delaware River Basin Commission	18, III
Denali Commission	45, IX
Disability, National Council on	5, C; 34, XII
District of Columbia, Court Services and Offender Supervision Agency for the	5, LXX; 28, VIII
Drug Enforcement Administration	21, II
East-West Foreign Trade Board	15, XIII
Economic Affairs, Office of the Under-Secretary for	15, XV
Economic Analysis, Bureau of	15, VIII
Economic Development Administration	13, III
Economic Research Service	7, XXXVII
Education, Department of	2, XXXIV; 5, LIII
Bilingual Education and Minority Languages Affairs, Office of	34, V
Career, Technical, and Adult Education, Office of	34, IV
Civil Rights, Office for	34, I
Educational Research and Improvement, Office of	34, VII
Elementary and Secondary Education, Office of	34, II
Federal Acquisition Regulation	48, 34
Postsecondary Education, Office of	34, VI
Secretary of Education, Office of	34, Subtitle A
Special Education and Rehabilitative Services, Office of	34, III
Educational Research and Improvement, Office of	34, VII
Election Assistance Commission	2, LVIII; 11, II
Elementary and Secondary Education, Office of	34, II
Emergency Oil and Gas Guaranteed Loan Board	13, V
Emergency Steel Guarantee Loan Board	13, IV
Employee Benefits Security Administration	29, XXV
Employees' Compensation Appeals Board	20, IV
Employees Loyalty Board	5, V
Employment and Training Administration	20, V
Employment Policy, National Commission for	1, IV
Employment Standards Administration	20, VI
Endangered Species Committee	50, IV
Energy, Department of	2, IX; 5, XXIII; 10, II, III, X
Federal Acquisition Regulation	48, 9
Federal Energy Regulatory Commission	5, XXIV; 18, I
Property Management Regulations	41, 109
Energy, Office of	7, XXIX
Engineers, Corps of	33, II; 36, III
Engraving and Printing, Bureau of	31, VI
Environmental Protection Agency	2, XV; 5, LIV; 40, I, IV, VII
Federal Acquisition Regulation	48, 15
Property Management Regulations	41, 115
Environmental Quality, Office of	7, XXXI
Equal Employment Opportunity Commission	5, LXII; 29, XIV
Equal Opportunity, Office of Assistant Secretary for	24, I
Executive Office of the President	3, I
Environmental Quality, Council on	40, V
Management and Budget, Office of	2, Subtitle A; 5, III, LXXVII; 14, VI; 48, 99
National Drug Control Policy, Office of	2, XXXVI; 21, III
National Security Council	32, XXI; 47, II
Presidential Documents	3
Science and Technology Policy, Office of	32, XXIV; 47, II
Trade Representative, Office of the United States	15, XX

Agency	CFR Title, Subtitle or Chapter
Export-Import Bank of the United States	2, XXXV; 5, LII; 12, IV
Families and Services, Administration of	45, III
Family Assistance, Office of	45, II
Farm Credit Administration	5, XXXI; 12, VI
Farm Credit System Insurance Corporation	5, XXX; 12, XIV
Farm Service Agency	7, VII, XVIII
Federal Acquisition Regulation	48, 1
Federal Acquisition Security Council	41, 201
Federal Aviation Administration	14, I
Commercial Space Transportation	14, III
Federal Claims Collection Standards	31, IX
Federal Communications Commission	2, LX; 5, XXIX; 47, I
Federal Contract Compliance Programs, Office of	41, 60
Federal Crop Insurance Corporation	7, IV
Federal Deposit Insurance Corporation	5, XXII; 12, III
Federal Election Commission	5, XXXVII; 11, I
Federal Emergency Management Agency	44, I
Federal Employees Group Life Insurance Federal Acquisition Regulation	48, 21
Federal Employees Health Benefits Acquisition Regulation	48, 16
Federal Energy Regulatory Commission	5, XXIV; 18, I
Federal Financial Institutions Examination Council	12, XI
Federal Financing Bank	12, VIII
Federal Highway Administration	23, I, II
Federal Home Loan Mortgage Corporation	1, IV
Federal Housing Enterprise Oversight Office	12, XVII
Federal Housing Finance Agency	5, LXXX; 12, XII
Federal Labor Relations Authority	5, XIV, XLIX; 22, XIV
Federal Law Enforcement Training Center	31, VII
Federal Management Regulation	41, 102
Federal Maritime Commission	46, IV
Federal Mediation and Conciliation Service	5, CIII; 29, XII
Federal Mine Safety and Health Review Commission	5, LXXIV; 29, XXVII
Federal Motor Carrier Safety Administration	49, III
Federal Permitting Improvement Steering Council	40, IX
Federal Prison Industries, Inc.	28, III
Federal Procurement Policy Office	48, 99
Federal Property Management Regulations	41, 101
Federal Railroad Administration	49, II
Federal Register, Administrative Committee of	1, I
Federal Register, Office of	1, II
Federal Reserve System	12, II
Board of Governors	5, LVIII
Federal Retirement Thrift Investment Board	5, VI, LXXVI
Federal Service Impasses Panel	5, XIV
Federal Trade Commission	5, XLVII; 16, I
Federal Transit Administration	49, VI
Federal Travel Regulation System	41, Subtitle F
Financial Crimes Enforcement Network	31, X
Financial Research Office	12, XVI
Financial Stability Oversight Council	12, XIII
Fine Arts, Commission of	45, XXI
Fiscal Service	31, II
Fish and Wildlife Service, United States	50, I, IV
Food and Drug Administration	21, I
Food and Nutrition Service	7, II
Food Safety and Inspection Service	9, III
Foreign Agricultural Service	7, XV
Foreign Assets Control, Office of	31, V
Foreign Claims Settlement Commission of the United States	45, V
Foreign Service Grievance Board	22, IX
Foreign Service Impasse Disputes Panel	22, XIV
Foreign Service Labor Relations Board	22, XIV
Foreign-Trade Zones Board	15, IV
Forest Service	36, II
General Services Administration	5, LVII; 41, 105
Contract Appeals, Board of	48, 61

Agency	CFR Title, Subtitle or Chapter
Federal Acquisition Regulation	48, 5
Federal Management Regulation	41, 102
Federal Property Management Regulations	41, 101
Federal Travel Regulation System	41, Subtitle F
General	41, 300
Payment From a Non-Federal Source for Travel Expenses	41, 304
Payment of Expenses Connected With the Death of Certain Employees	41, 303
Relocation Allowances	41, 302
Temporary Duty (TDY) Travel Allowances	41, 301
Geological Survey	30, IV
Government Accountability Office	4, I
Government Ethics, Office of	5, XVI
Government National Mortgage Association	24, III
Grain Inspection, Packers and Stockyards Administration	7, VIII; 9, II
Great Lakes St. Lawrence Seaway Development Corporation	33, IV
Gulf Coast Ecosystem Restoration Council	2, LIX; 40, VIII
Harry S. Truman Scholarship Foundation	45, XVIII
Health and Human Services, Department of	2, III; 5, XLV; 45, Subtitle A
Centers for Medicare & Medicaid Services	42, IV
Child Support Services, Office of	45, III
Children and Families, Administration for	45, II, IV, X, XIII
Community Services, Office of	45, X
Families and Services, Administration of	45, III
Family Assistance, Office of	45, II
Federal Acquisition Regulation	48, 3
Food and Drug Administration	21, I
Indian Health Service	25, V
Inspector General (Health Care), Office of	42, V
Public Health Service	42, I
Refugee Resettlement, Office of	45, IV
Homeland Security, Department of	2, XXX; 5, XXXVI; 6, I; 8, I
Coast Guard	33, I; 46, I; 49, IV
Coast Guard (Great Lakes Pilotage)	46, III
Customs and Border Protection	19, I
Federal Emergency Management Agency	44, I
Human Resources Management and Labor Relations Systems	5, XCVII
Immigration and Customs Enforcement Bureau	19, IV
Transportation Security Administration	49, XII
HOPE for Homeowners Program, Board of Directors of	24, XXIV
Housing and Urban Development, Department of	2, XXIV; 5, LXV; 24, Subtitle B
Community Planning and Development, Office of Assistant Secretary for	24, V, VI
Equal Opportunity, Office of Assistant Secretary for	24, I
Federal Acquisition Regulation	48, 24
Federal Housing Enterprise Oversight, Office of	12, XVII
Government National Mortgage Association	24, III
Housing—Federal Housing Commissioner, Office of Assistant Secretary for	24, II, VIII, X, XX
Housing, Office of, and Multifamily Housing Assistance Restructuring, Office of	24, IV
Inspector General, Office of	24, XII
Public and Indian Housing, Office of Assistant Secretary for	24, IX
Secretary, Office of	24, Subtitle A, VII
Housing—Federal Housing Commissioner, Office of Assistant Secretary for	24, II, VIII, X, XX
Housing, Office of, and Multifamily Housing Assistance Restructuring, Office of	24, IV
Immigration and Customs Enforcement Bureau	19, IV
Immigration Review, Executive Office for	8, V
Independent Counsel, Office of	28, VII
Independent Counsel, Offices of	28, VI
Indian Affairs, Bureau of	25, I, V

Agency	CFR Title, Subtitle or Chapter
Indian Affairs, Office of the Assistant Secretary	25, VI
Indian Arts and Crafts Board	25, II
Indian Health Service	25, V
Industry and Security, Bureau of	15, VII
Information Resources Management, Office of	7, XXVII
Information Security Oversight Office, National Archives and Records Administration	32, XX
Inspector General	
Agriculture Department	7, XXVI
Health and Human Services Department	42, V
Housing and Urban Development Department	24, XII, XV
Institute of Peace, United States	22, XVII
Intellectual Property Enforcement Coordinator, Office of	5, CIV
Inter-American Foundation	5, LXIII; 22, X
Interior, Department of	2, XIV
American Indians, Office of the Special Trustee	25, VII
Endangered Species Committee	50, IV
Federal Acquisition Regulation	48, 14
Federal Property Management Regulations System	41, 114
Fish and Wildlife Service, United States	50, I, IV
Geological Survey	30, IV
Indian Affairs, Bureau of	25, I, V
Indian Affairs, Office of the Assistant Secretary	25, VI
Indian Arts and Crafts Board	25, II
Land Management, Bureau of	43, II
National Indian Gaming Commission	25, III
National Park Service	36, I
Natural Resource Revenue, Office of	30, XII
Ocean Energy Management, Bureau of	30, V
Reclamation, Bureau of	43, I
Safety and Environmental Enforcement, Bureau of	30, II
Secretary of the Interior, Office of	2, XIV; 43, Subtitle A
Surface Mining Reclamation and Enforcement, Office of	30, VII
Internal Revenue Service	26, I
International Boundary and Water Commission, United States and Mexico, United States Section	22, XI
International Development, United States Agency for	22, II
Federal Acquisition Regulation	48, 7
International Development Cooperation Agency, United States	22, XII
International Development Finance Corporation, U.S.	2, XVI; 5, XXXIII; 22, VII
International Joint Commission, United States and Canada	22, IV
International Organizations Employees Loyalty Board	5, V
International Trade Administration	15, III; 19, III
International Trade Commission, United States	19, II
Interstate Commerce Commission	5, XL
Investment Security, Office of	31, VIII
James Madison Memorial Fellowship Foundation	45, XXIV
Japan–United States Friendship Commission	22, XVI
Joint Board for the Enrollment of Actuaries	20, VIII
Justice, Department of	2, XXVIII; 5, XXVIII; 28, I, XI; 40, IV
Alcohol, Tobacco, Firearms, and Explosives, Bureau of	27, II
Drug Enforcement Administration	21, II
Federal Acquisition Regulation	48, 28
Federal Claims Collection Standards	31, IX
Federal Prison Industries, Inc.	28, III
Foreign Claims Settlement Commission of the United States	45, V
Immigration Review, Executive Office for	8, V
Independent Counsel, Offices of	28, VI
Prisons, Bureau of	28, V
Property Management Regulations	41, 128
Labor, Department of	2, XXIX; 5, XLII
Benefits Review Board	20, VII
Employee Benefits Security Administration	29, XXV

Agency	CFR Title, Subtitle or Chapter
Employees' Compensation Appeals Board	20, IV
Employment and Training Administration	20, V
Federal Acquisition Regulation	48, 29
Federal Contract Compliance Programs, Office of	41, 60
Federal Procurement Regulations System	41, 50
Labor-Management Standards, Office of	29, II, IV
Mine Safety and Health Administration	30, I
Occupational Safety and Health Administration	29, XVII
Public Contracts	41, 50
Secretary of Labor, Office of	29, Subtitle A
Veterans' Employment and Training Service, Office of the Assistant Secretary for	41, 61; 20, IX
Wage and Hour Division	29, V
Workers' Compensation Programs, Office of	20, I, VI
Labor-Management Standards, Office of	29, II, IV
Land Management, Bureau of	43, II
Legal Services Corporation	45, XVI
Libraries and Information Science, National Commission on	45, XVII
Library of Congress	36, VII
Copyright Royalty Board	37, III
U.S. Copyright Office	37, II
Management and Budget, Office of	2, Subpart A; 5, III, LXXVII; 14, VI; 48, 99
Marine Mammal Commission	50, V
Maritime Administration	46, II
Merit Systems Protection Board	5, II, LXIV
Micronesian Status Negotiations, Office for	32, XXVII
Military Compensation and Retirement Modernization Commission	5, XCIX
Millennium Challenge Corporation	22, XIII
Mine Safety and Health Administration	30, I
Minority Business Development Agency	15, XIV
Miscellaneous Agencies	1, IV
Monetary Offices	31, I
Morris K. Udall Scholarship and Excellence in National Environmental Policy Foundation	36, XVI
Museum and Library Services, Institute of	2, XXXI
National Aeronautics and Space Administration	2, XVIII; 5, LIX; 14, V
Federal Acquisition Regulation	48, 18
National Agricultural Library	7, XLI
National Agricultural Statistics Service	7, XXXVI
National and Community Service, Corporation for	2, XXII; 45, XII, XXV
National Archives and Records Administration	2, XXVI; 5, LXVI; 36, XII
Information Security Oversight Office	32, XX
National Capital Planning Commission	1, IV, VI
National Counterintelligence Center	32, XVIII
National Credit Union Administration	5, LXXXVI; 12, VII
National Crime Prevention and Privacy Compact Council	28, IX
National Drug Control Policy, Office of	2, XXXVI; 21, III
National Endowment for the Arts	2, XXXII
National Endowment for the Humanities	2, XXXIII
National Foundation on the Arts and the Humanities	45, XI
National Geospatial-Intelligence Agency	32, I
National Highway Traffic Safety Administration	23, II, III; 47, VI; 49, V
National Imagery and Mapping Agency	32, I
National Indian Gaming Commission	25, III
National Institute of Food and Agriculture	7, XXXIV
National Institute of Standards and Technology	15, II; 37, IV
National Intelligence, Office of Director of	5, IV; 32, XVII
National Labor Relations Board	5, LXI; 29, I
National Marine Fisheries Service	50, II, IV
National Mediation Board	5, CI; 29, X
National Oceanic and Atmospheric Administration	15, IX; 50, II, III, IV, VI
National Park Service	36, I
National Railroad Adjustment Board	29, III
National Railroad Passenger Corporation (AMTRAK)	49, VII

Agency	CFR Title, Subtitle or Chapter
National Science Foundation	2, XXV; 5, XLIII; 45, VI
Federal Acquisition Regulation	48, 25
National Security Council	32, XXI; 47, II
National Technical Information Service	15, XI
National Telecommunications and Information Administration	15, XXIII; 47, III, IV, V
National Transportation Safety Board	49, VIII
Natural Resource Revenue, Office of	30, XII
Natural Resources Conservation Service	7, VI
Navajo and Hopi Indian Relocation, Office of	25, IV
Navy, Department of	32, VI
Federal Acquisition Regulation	48, 52
Neighborhood Reinvestment Corporation	24, XXV
Northeast Interstate Low-Level Radioactive Waste Commission	10, XVIII
Nuclear Regulatory Commission	2, XX; 5, XLVIII; 10, I
Federal Acquisition Regulation	48, 20
Occupational Safety and Health Administration	29, XVII
Occupational Safety and Health Review Commission	29, XX
Ocean Energy Management, Bureau of	30, V
Oklahoma City National Memorial Trust	36, XV
Operations Office	7, XXVIII
Patent and Trademark Office, United States	37, I
Payment From a Non-Federal Source for Travel Expenses	41, 304
Payment of Expenses Connected With the Death of Certain Employees	41, 303
Peace Corps	2, XXXVII; 22, III
Pennsylvania Avenue Development Corporation	36, IX
Pension Benefit Guaranty Corporation	29, XL
Personnel Management, Office of	5, I, IV, XXXV; 45, VIII
Federal Acquisition Regulation	48, 17
Federal Employees Group Life Insurance Federal Acquisition Regulation	48, 21
Federal Employees Health Benefits Acquisition Regulation	48, 16
Human Resources Management and Labor Relations Systems, Department of Homeland Security	5, XCVII
Pipeline and Hazardous Materials Safety Administration	49, I
Postal Regulatory Commission	5, XLVI; 39, III
Postal Service, United States	5, LX; 39, I
Postsecondary Education, Office of	34, VI
President's Commission on White House Fellowships	1, IV
Presidential Documents	3
Presidio Trust	36, X
Prisons, Bureau of	28, V
Privacy and Civil Liberties Oversight Board	6, X
Procurement and Property Management, Office of	7, XXXII
Public and Indian Housing, Office of Assistant Secretary for	24, IX
Public Contracts, Department of Labor	41, 50
Public Health Service	42, I
Railroad Retirement Board	20, II
Reclamation, Bureau of	43, I
Refugee Resettlement, Office of	45, IV
Relocation Allowances	41, 302
Research and Innovative Technology Administration	49, XI
Rural Business-Cooperative Service	7, XVIII, XLII, L
Rural Housing Service	7, XVIII, XXXV, L
Rural Utilities Service	7, XVII, XVIII, XLII, L
Safety and Environmental Enforcement, Bureau of	30, II
Science and Technology Policy, Office of	32, XXIV; 47, II
Secret Service	31, IV
Securities and Exchange Commission	5, XXXIV; 17, II
Selective Service System	32, XVI
Small Business Administration	2, XXVII; 13, I
Smithsonian Institution	36, V
Social Security Administration	2, XXIII; 20, III; 48, 23
Soldiers' and Airmen's Home, United States	5, XI
Special Counsel, Office of	5, VIII

Agency	CFR Title, Subtitle or Chapter
Special Education and Rehabilitative Services, Office of	34, III
State, Department of	2, VI; 22, I; 28, XI
Federal Acquisition Regulation	48, 6
Surface Mining Reclamation and Enforcement, Office of	30, VII
Surface Transportation Board	49, X
Susquehanna River Basin Commission	18, VIII
Tennessee Valley Authority	5, LXIX; 18, XIII
Trade Representative, United States, Office of	15, XX
Transportation, Department of	2, XII; 5, L
Commercial Space Transportation	14, III
Emergency Management and Assistance	44, IV
Federal Acquisition Regulation	48, 12
Federal Aviation Administration	14, I
Federal Highway Administration	23, I, II
Federal Motor Carrier Safety Administration	49, III
Federal Railroad Administration	49, II
Federal Transit Administration	49, VI
Great Lakes St. Lawrence Seaway Development Corporation	33, IV
Maritime Administration	46, II
National Highway Traffic Safety Administration	23, II, III; 47, IV; 49, V
Pipeline and Hazardous Materials Safety Administration	49, I
Secretary of Transportation, Office of	14, II; 49, Subtitle A
Transportation Statistics Bureau	49, XI
Transportation, Office of	7, XXXIII
Transportation Security Administration	49, XII
Transportation Statistics Bureau	49, XI
Travel Allowances, Temporary Duty (TDY)	41, 301
Treasury, Department of the	2, X; 5, XXI; 12, XV; 17, IV; 31, IX
Alcohol and Tobacco Tax and Trade Bureau	27, I
Community Development Financial Institutions Fund	12, XVIII
Comptroller of the Currency	12, I
Customs and Border Protection	19, I
Engraving and Printing, Bureau of	31, VI
Federal Acquisition Regulation	48, 10
Federal Claims Collection Standards	31, IX
Federal Law Enforcement Training Center	31, VII
Financial Crimes Enforcement Network	31, X
Fiscal Service	31, II
Foreign Assets Control, Office of	31, V
Internal Revenue Service	26, I
Investment Security, Office of	31, VIII
Monetary Offices	31, I
Secret Service	31, IV
Secretary of the Treasury, Office of	31, Subtitle A
Truman, Harry S. Scholarship Foundation	45, XVIII
United States Agency for Global Media	22, V
United States and Canada, International Joint Commission	22, IV
United States and Mexico, International Boundary and Water Commission, United States Section	22, XI
U.S. Copyright Office	37, II
U.S. Office of Special Counsel	5, CII
Utah Reclamation Mitigation and Conservation Commission	43, III
Veterans Affairs, Department of	2, VIII; 38, I
Federal Acquisition Regulation	48, 8
Veterans' Employment and Training Service, Office of the Assistant Secretary for	41, 61; 20, IX
Vice President of the United States, Office of	32, XXVIII
Wage and Hour Division	29, V
Water Resources Council	18, VI
Workers' Compensation Programs, Office of	20, I, VI
World Agricultural Outlook Board	7, XXXVIII

Table of OMB Control Numbers

A list of OMB control numbers for chapter I of title 47 is online; a link to the website appears in 47 CFR 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.

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 can be found at *https://www.reginfo.gov/public/do/PRAMain*. The Commission intends that this posting comply with the requirement that agencies ''display'' current OMB 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 Secretary, Office of the Secretary, Office of Managing Director, Federal Communications Commission, Washington, DC 20554 by sending an email to *PRA@fcc.gov*.

[88 FR 21431, Apr. 10, 2023]

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, 2019 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.govinfo.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.govinfo.gov*.

2019

47 CFR

84 FR Page

Chapter I

20.2 (c) added 66779
20.3 Amended 66779
20.18 Removed 66779
20.19 (m) removed 37592
22.921 Removed 66779
25 Regulation 83 FR 42043 eff. date confirmed 13141
25 Notification 22733
25.103 Amended 53651, 66779
25.115 (a)(1), (2)(iii), (b), (c)(1), (2)(i)(A), (3)(i)(B), (ii), (e)(1), (g)(1)(vii), and (k) revised; (a)(4) removed; (a)(5) through (10), (l), (m), and (n) added 53651
25.129 (c) revised 53654
25.130 (b)(4) revised 20819
25.130 Removed 53654
25.131 Removed 53654
25.132 (d) introductory text revised 53654
25.133 (d) revised 53654
25.136 Regulation at 83 FR 63 eff. date confirmed 2462
25.136 Regulation at 83 FR 34489 eff. date confirmed 2462
25.136 Heading, (e), (f), and (g) revised; (c)(2) and (d)(4)(ii) amended; (h) added 20819
25.136 (h) removed 47147
25.138 Removed 53654

47 CFR—Continued

84 FR Page

Chapter I—Continued

25.140 (a)(3)(i), (ii), (iii), and (d)(1) revised 53654
25.202 (a)(8), (10), and (11) revised 53655
25.204 (e)(3) revised; (h) through (k) removed 53655
25.209 (c)(1) and (f) revised 53655
25.212 (c), (d), (g), and (h) revised 53655
25.218 (a), (b), and (i) revised; (j) added 53656
25.220 (a) revised 53656
25.221 Removed 53656
25.222 Removed 53656
25.226 Removed 53656
25.227 Removed 53656
25.228 Added 53656
25.258 (b) revised 53659
25.284 Removed 66779
25.287 (d) removed 53659
25.290 Added 53659
25.701 (f)(6)(i)(D) added; eff. 10-29-19 45668
27 Policy statement 8443
27 Actions on petitions 26363
27.4 Amended 57364
27.5 (i)(3) removed 57364
27.14 (o) introductory text, (2) introductory text, (iii), and (3) revised; (u) and (v) added 57364
27.14 Correction: (u)(4) and (5) amended 64209

47 CFR—Continued

84 FR Page

Chapter I—Continued
27.53 (j)(1) and (k) revised 23499
27.1201 Removed 57365
27.1203 Removed 57365
27.1204 Added 57365
27.1205 Added 57365
27.1206 Revised 57365
27.1207 Revised 57366
27.1208 Revised 57366
27.1209 Revised 57366
27.1214 Revised 57366
27.1217 Revised 57366
27.1218 Heading revised 57366
27.1219 Added 57366
27.1219 Correction: (a)(1) amended 64209
27.1230—27.1239 Undesignated center heading removed 57367
27.1230 Removed 57367
27.1231 Removed 57367
27.1232 Removed 57367
27.1233 Removed 57367
27.1234 Removed 57367
27.1235 Removed 57367
27.1236 Removed 57367
27.1237 Removed 57367
27.1238 Removed 57367
27.1239 Removed 57367
30 Authority citation revised 20820
30 Policy statement 43046
30.4 (b), (c), (d), and (e) redesignated as (c), (d), (f), and (g); new (d)(1), new (f), and new (g) revised 1631
30.205 (a) Table 2 and Table 3 amended 18405
30.205 (b) table designated as (b) table 4; new (b) table 4 amended; (c) added 20820
32.1410 (l) and (m) added; eff. 1-1-20 4729
32.2680 Revised; eff. 1-1-20 4729
32.2681 Heading, (a), and (c) revised; eff. 1-1-20 4729
32.2682 (a) revised; eff. 1-1-20 4730
32.3400 (a)(1) and (b) revised; eff. 1-1-20 4730
32.3410 Heading, (a), and (b) revised; eff. 1-1-20 4730
32.4130 (c) revised; eff. 1-1-20 4730
32.4200 (a)(5) revised; (a)(9) added; eff. 1-1-20 4730
32.4300 (c) added; eff. 1-1-20 4730
32.7500 (e) revised; eff. 1-1-20 4730
36.3 (b) revised; (a), (c), (d) introductory text, and (e) amended; eff. date delayed in part 4360

47 CFR—Continued

84 FR Page

Chapter I—Continued
36.3 Regulation at 84 FR 4360 eff. 3-1-19 6977
36.123 (a)(5) and (6) amended 4360
36.124 (c) and (d) amended 4360
36.125 (h) and (i) amended 4360
36.126 (b)(6), (c)(4), (e)(4), and (f)(2) amended 4360
36.141 (c) amended 4360
36.142 (c) amended 4360
36.152 (d) amended 4360
36.154 (g) amended 4360
36.155 (b) amended 4360
36.156 (c) amended 4360
36.157 (b) amended 4360
36.191 (d) amended 4360
36.212 (c) amended 4360
36.214 (a) amended 4360
36.372 Amended 4360
36.374 (b) and (d) amended 4360
36.375 (b)(4) and (5) amended 4360
36.377 (a) introductory text, (1)(ix), (2)(vii), (3)(vii), (4)(vii), (5)(vii), and (6)(vii) amended 4360
36.378 (b)(1) amended 4360
36.379 (b)(1) and (2) amended 4360
36.380 (d) and (e) amended 4360
36.381 (c) and (d) amended 4360
36.382 (a) amended 4360

2020

47 CFR

85 FR Page

Chapter I
20 Actions on petitions 12747
20.12 (a)(1) revised 43134
20.15 (b)(1) amended 838
20.19 (b)(4) revised; (l) heading added; (l) introductory text amended 64406
22.317 Regulation at 82 FR 41547 confirmed 60718
22.379 Added 18150
22.947 Regulation at 82 FR 41547 confirmed 60718
24.51 (c) removed 18150
24.52 Revised 18150
24.102 Introductory text amended 64407
24.202 Introductory text amended 64407
25 Notification 16567
25 Compliance notification 57980
25.103 Amended 22864, 43733, 44786
25.108 (a) amended 64407
25.109 (e) added 22864
25.112 (a)(3) revised 43733

47 CFR—Continued

85 FR Page

Chapter I—Continued
25.113 (h) and (i) revised 43733
25.114 (d) introductory text revised 43733
25.114 (d)(14) revised 52450
25.115 (p) added 18150
25.115 (f), (g)(1)(vii), (l)(3)(i), (m)(3)(i), and (n)(3)(i) revised; (o) added 44786
25.117 (g) revised 18150
25.117 (d)(1) revised 43733
25.121 (a)(1) and (d)(2) revised; (a)(3) and (d)(3) added 43733
25.121 (f) added 52451
25.122 Added 43734
25.122 (c) and (d) revised 52452
25.123 Added 43734
25.123 (b)(11) added 52452
25.129 (c) revised 18150
25.137 (b) and (d)(5) revised 43735
25.138 Added 22864
25.147 Added 22864
25.149 (c)(3) revised 18150
25.156 (d)(1) revised 43735
25.157 (i) added; (a) revised 43735
25.159 (b) revised 43735
25.165 (a) introductory text and (e)(1) revised 43735
25.202 (a)(8) revised; (a)(10)(i) and (ii) added; (a)(11) removed 44787
25.203 (n) added 22864
25.209 (f) revised 44787
25.217 (b)(1) revised; (b)(4) added 43735
25.218 (a) and (j) revised 44787
25.228 (a), (b), (c), (e)(1), and (j) introductory text revised 44787
25.254 (c) amended 64407
25.271 (g) revised 18150
25.271 (d) revised 52453
25.282 (b) revised 52453
25.301 Amended 64407
27 Compliance notification 31704, 57765, 57980
27 Technical correction 38089
27.1 (b)(15) added; (c) revised 22864
27.1 (b)(16) added 43134
27.4 Amended 22865
27.5 (m) added 22865
27.5 (n) added 43134
27.6 (m) added 22865
27.6 (a) heading added; (a) introductory text and (c)(3) introductory text amended 64407
27.1—27.9 (Subpart A) Appendix A added 22865
27.11 (l) added 22881

47 CFR—Continued

85 FR Page

Chapter I—Continued
27.12 (a) revised 43134
27.13 (m) added 22881
27.13 (n) added 43134
27.14 Regulation at 82 FR 41547 confirmed in part 60718
27.14 Correction: (v) removed 1284
27.14 (a) and (k) amended; (v) added 22881
27.17 Regulation at 82 FR 41548 confirmed 60718
27.50 (j) added 22882
27.52 Revised 18151
27.53 (l) added 22882
27.55 (d) added 22882
27.57 (c) revised 22882
27.73 (a) amended 64407
27.75 (a)(3) added 22882
27.1204 Correction: (f) removed 1284
27.1310 (a)(1) amended 64407
27.1321 (b) revised 38740
27.1401—27.1424 (Subpart O) Added 22884
27.1500—27.1510 (Subpart P) Added 43134
30.106 Regulation at 82 FR 41548 confirmed 60718
36 Actions on petitions 12747

2021

47 CFR

86 FR Page

Chapter I
20 Authority citation revised 23625
20.3 Amended 44638
20.19 (a) through (c), (e), (g), (h)(2)(ii), (5), (k), and (l) revised; (d) and (f)(1)(ii) removed 23625
20.19 (f), (h)(1), and (i) revised; eff. date delayed indefinitely 23627
20.19 Regulation at 86 FR 23627 confirmed 60776
20.23 (b) through (d) added; eff. date delayed indefinitely 44638
25 Compliance notification 17311
25.108 (a) and (c)(5) amended; eff. 10-4-21 49488
25.108 (c)(5) and (6) amended; eff. date delayed indefinitely 49488
25.110 (b)(3) introductory text and (iii) revised; (b)(3)(iv) added; eff. 10-4-21 49488
25.111 (d) amended 54399
25.114 (a)(3) revised; eff. date delayed indefinitely 49489
25.115 (a)(1) revised 11887

47 CFR—Continued

86 FR Page

Chapter I—Continued
25.118 (a)(4) and (b) revised 11887
25.121 (a)(1) revised; eff. 10-4-21 49489
25.124 Added 11887
25.133 (a) revised 11887
25.136 (h) added; eff. date delayed indefinitely 11887
25.136 Regulation at 86 FR 11887 eff. date 9-20-21 52101
25.140 Heading revised; (b)(6) added; eff. date delayed indefinitely 49489
25.146 (b) removed 11644
25.148 (b), (d), and (e) removed; eff. 10-4-21 49489
25.164 (a) revised; eff. 10-4-21 49489
25.165 (a) introductory text revised; eff. 10-4-21 49489
25.170 Removed 11888
25.171 Revised 11888
25.172 (a)(1) revised 11888
25.217 (b)(1) revised 11644
27 Policy statement ... 10181, 30389, 32775, 57369
27 Compliance date notification 13659, 60775
27.1 (b)(17) added 17952
27.4 Amended 17952
27.5 (o) added 17952
27.6 (n) added 17952
27.11 (m) added 17952
27.13 (o) added 17952
27.14 (a) and (k) amended; (w) added 17952
27.50 (k) added 17953
27.53 (n) redesignated as (o); new (n) added 17953
27.55 (e) added 17954
27.57 (c) revised 17954
27.75 (a)(4) added 17954
27.1600—27.1607 (Subpart Q) Added 17954

2022

47 CFR

87 FR Page

Chapter I
20.23 Regulation at 86 FR 44638 eff. date confirmed 26139
25.103 Amended 72403
25.114 (d)(7), (15), and (18) revised; eff. date delayed 72403
25.115 (e), (g) introductory text, and (k) revised; eff. date delayed 72404
25.117 (d)(2)(v) revised; eff. date delayed 72404

47 CFR—Continued

87 FR Page

Chapter I—Continued
25.140 (a)(2), (3)(iii), (b)(3) through (5), and (d) introductory text revised; (b)(6) added; eff. date delayed 72404
25.202 (a)(10) introductory text, (i), and (ii) redesignated as paragraphs (a)(10)(i), (ii), and (iii); new (a)(10)(ii) revised 72405
25.203 (m)(1) table and (3) revised; eff. date delayed 72405
25.208 (w) removed 72406
25.209 (a)(1) introductory text, (3) introductory text, (4) introductory text, (6) introductory text, and (b)(1) introductory text through (3) introductory text revised 72406
25.210 (f) revised; (i) removed 72406
25.212 (e) and (h) revised 72406
25.218 (a), (i) heading, and (j) revised; (b) heading added 72407
25.220 (a) revised 72407
25.262 Revised 72407
25.264 Heading, (a) introductory text, (4), (6), (b) introductory text, (2) introductory text, (ii), (3), (4), (c), (d) introductory text, (1)(ii), (2) introductory text, (e) introductory text, (1) introductory text, (2) introductory text, (3), (f) introductory text, (2), (g), (h) introductory text, and (i) introductory text revised; eff. date delayed 72407
25.701 (d) revised; eff. date delayed indefinitely 7754
25.701 Regulation at 87 FR 7754 confirmed 33441
25.702 (b) revised; eff. date delayed indefinitely 7754
25.702 Regulation at 87 FR 7754 confirmed 33441
27 Policy statement 21755, 30836, 78573

2023

47 CFR

88 FR Page

Chapter I
20 Order 25286
20 Waiver 70891
20.19 (l) introductory text revised 21439
25 Order 43460, 43462
25 Policy statement 63850
25 Technical correction 87723

47 CFR—Continued

88 FR Page

Chapter I—Continued
25.108 (a) revised; (c)(10) and (d) added 21439
25.110 (a) and (d) revised 21440
25.111 (d) amended 21440
25.112 (a)(3) removed; (b) introductory text revised 84753
25.113 (b) amended 21440
25.115 (b) introductory text amended 21440
25.116 (e) amended 21440
25.117 (b) revised 21440
25.117 (i) added 84754
25.118 (a) introductory text, (e) introductory text, and (f) introductory text amended 21440
25.119 (c) and (d) amended 21440
25.136 (h) amended 21440
25.137 (b) amended 21440
25.137 (d)(5) revised 84754
25.138 (b) and (c)(2) revised 21440
25.151 (a)(10) through (12) revised; (a)(13) added 39792
25.154 (a)(3), (c), and (d) revised; (e) amended 21440
25.159 (b) and (c) introductory text revised 84754
25.171 (c) revised 21441
25.172 (b) amended 21441
25.228 (h)(5), (j)(1), (3) introductory text, and (4) amended 21441
25.254 (c) revised 21441
25.261 (c)(1) amended; (e) added; (b) and new (e) revised 39792
25.263 (e) amended 21441
25.271 (f) amended 21442
25.301 Revised 21442
27 Order 43460, 43462
27 Policy statement 33550, 63850
27.6 (c)(3) introductory text revised 21442
27.72 (e) amended 21442
27.73 (a) amended 21442

2024

(Regulations published from January 1, 2024, through October 1, 2024)

47 CFR

89 FR Page

Chapter I
20 Technical correction 48514
20.3 Amended 45555
25 Policy statement 13276
25 Technical correction 66615
25.103 Amended 34166

47 CFR—Continued

89 FR Page

Chapter I—Continued
25.108 Regulation at 86 FR 49488 confirmed 58072
25.109 (f) added 34166
25.114 (a)(4) added 34166
25.114 Regulation at 86 FR 49489 confirmed 58072
25.114 Regulation at 87 FR 72403 confirmed 58072
25.114 Regulation at 85 FR 52450 confirmed 65217
25.114 (d)(14)(vii)(D)(*1*) revised 65223
25.115 (q) added 34166
25.115 Regulation at 87 FR 72404 confirmed 58072
25.117 (j) added 34166
25.117 Regulation at 87 FR 72404 confirmed in part 58072
25.118 Form 312 revised 58072
25.121 Regulation at 85 FR 52451 confirmed 65217
25.122 Regulation at 85 FR 52452 confirmed 65217
25.123 Regulation at 85 FR 52452 confirmed 65217
25.125 Added 34166
25.125 (b)(1), (2), and (c) added; delayed indefinitely 34167
25.136 Regulation at 86 FR 11880 confirmed 58072
25.137 (b) and (f) revised 34167
25.140 Regulation at 86 FR 49489 confirmed in part 58072
25.140 Regulation at 87 FR 72404 confirmed in part 58072
25.140 Correction: (a)(3)(iii)(B) amended 58074
25.161 (e) added 34167
25.202 (k) added 34167
25.203 Regulation at 87 FR 72405 confirmed 58072
25.204 Heading revised; (g) added 34167
25.208 Heading revised; (w) added 34167
25.264 Correction: (a)(6), (b)(2)(ii), (3), and (e) introductory text amended 58074
25.264 Regulation at 87 FR 72407 confirmed 58072
25.283 (b) heading, (d) heading, and (e) added 65223
26 Added 63321
26.106 Added; eff. date delayed indefinitely 63324
26.108 Added; eff. date delayed indefinitely 63324

47 CFR—Continued

89 FR Page

Chapter I—Continued
26.202 Added; eff. date delayed indefinitely 63324
26.301 Added; eff. date delayed indefinitely 63325
27.60 Removed 7243

47 CFR—Continued

89 FR Page

Chapter I—Continued
27.1310 Removed 7243
36 Notification 58631
36.4 (c) added; eff. date delayed indefinitely 25158