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centimeters of the operator's body when the transceiver is in operation.

(c) In addition to the information required by §1.1307(b) and §2.1033(c) of this chapter, applicants for certification required by this section 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 and shall submit the statements required by §2.1093(c) of this chapter.

(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]

EARTH STATIONS

§25.130 Filing requirements for transmitting earth stations.

(a) Applications for a new or modified transmitting earth station facility shall be submitted on FCC Form 312, Main Form and Schedule B, accompanied by any required exhibits, except for those earth station applications filed on FCC Form 312EZ pursuant to §25.115(a). All such earth station license applications must be filed electronically through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter. Additional filing requirements for ESVs are described in §§25.221 and 25.222. In addition, applicants not required to submit applications on Form 312EZ, other than ESV applicants, must submit the following information to be used as an ''informative'' in the public notice issued under §25.151 as an attachment to their application:

(1) A detailed description of the service to be provided, including frequency bands and satellites to be used. The applicant must identify either the specific satellite(s) with which it plans to operate, or the eastern and western boundaries of the arc it plans to coordinate.

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

(3) Proposed power and power density levels.

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

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

(b) A frequency coordination analysis in accordance with §25.203 shall be provided for earth stations transmitting in the frequency bands shared with equal rights between terrestrial and space services, except that applications for user transceiver units associated with the NVNG mobile-satellite service shall instead provide the information required by §25.135 and applications for user transceiver units associated with the 1.6/2.4 GHz Mobile-Satellite Service shall demonstrate that user transceiver operations comply with the requirements set forth in §25.213.

(c) In those cases where an applicant is filing a number of essentially similar applications, showings of a general nature applicable to all of the proposed stations may be submitted in the initial application and incorporated by reference in subsequent applications.

(d) Transmissions of signals or programming to non-U.S. licensed satellites, and to and/or from foreign points by means of U.S.-licensed fixed satellites may be subject to restrictions as a result of international agreements or treaties. The Commission will maintain public information on the status of any such agreements.

(e) Each application 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 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 notification 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.

(f) Applicants seeking to operate in a shared government/non-government band must provide the half-power beam width of their proposed earth station antenna, as an attachment to their applications.

[56 FR 24016, May 28, 1991, as amended at 58 FR 68059, Dec. 23, 1993; 59 FR 53327, Oct. 21, 1994; 61 FR 4367, Feb. 6, 1996; 61 FR 9952, Mar. 12, 1996; 62 FR 5929, Feb. 10, 1997; 62 FR 64172, Dec. 4, 1997; 69 FR 29901, May 26, 2004; 69 FR 47795, Aug. 6, 2004; 70 FR 4783, Jan. 31, 2005; 70 FR 32253, June 2, 2005]

§ 25.131 Filing requirements for receive-only earth stations.

(a) Except as provided in paragraphs (b) and (j) of this section, and § 25.115(a), applications for a license for a receive-only earth station shall be submitted on FCC Form 312, Main Form and Schedule B, accompanied by any required exhibits and the information described in §§ 25.130(a)(1) through 25.130(a)(5). All such earth station license applications must be filed electronically through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter.

(b) Except as provided in paragraph (j) of this section, receive-only earth stations in the fixed-satellite service that operate with U.S.-licensed satellites 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.

(c) Licensing or registration of receive-only earth stations with the Commission confers no authority to receive and use signals or programming received from satellites. *See* section 705 of the Communications Act. 47 U.S.C. 605.

(d) Applications for registration shall be filed on FCC Form 312, Main Form and Schedule B, accompanied by the coordination exhibit required by § 25.203, and any other required exhibits. Any application that is deficient or incomplete in any respect shall be immediately returned to the applicant without processing.

(e) Complete applications for registration will be placed on public notice for 30 days and automatically granted if no objection is submitted to the Commission and served on the applicant. Additional pleadings are authorized in accordance with § 1.45 of this chapter.

(f) The registration of a receive-only earth station results in the listing of an authorized frequency band at the location specified in the registration. Interference protection levels are those agreed to during coordination.

(g) Reception of signals or programming from non-U.S. satellites may be subject to restrictions as a result of international agreements or treaties. The Commission will maintain public information on the status of any such agreements.

(h) Registration term: Registrations for receive-only earth stations governed by this section will be issued for a period of 15 years from the date on which the application was filed. Applications for renewals of registrations must be submitted on FCC Form 312R (Application for Renewal of Radio Station License in Specified Services) no earlier than 90 days and no later than 30 days before the expiration date of the registration.

(i) Applications for modification of license or registration of receive-only earth stations shall be made in conformance with §§ 25.117 and 25.118. In addition, registrants are required to notify the Commission when a receive-only earth station is no longer operational or when it has not been used to provide any service during any 6-month period.

(j)(1) Except as set forth in paragraph (j)(2) of this section, receive-only earth stations operating with non-U.S. licensed space stations shall file an FCC

Form 312 requesting a license or modification to operate such station.

(2) Receive-only earth stations used to receive transmissions from non-U.S.-licensed space stations on the Permitted Space Station List need not file for licenses, provided that:

(i) The earth station antenna meets the antenna performance standards set forth in §§ 25.209(a) and (b), and

(ii) The space station operator and earth station operator comply with all applicable rules set forth in this chapter, and the conditions on the Permitted Space Station List applicable to that space station.

[56 FR 24016, May 28, 1991, as amended at 61 FR 9952, Mar. 12, 1996; 62 FR 5929, Feb. 10, 1997; 62 FR 64172, Dec. 4, 1997; 65 FR 58466, Sept. 29, 2000; 67 FR 12485, Mar. 19, 2002; 68 FR 62249, Nov. 3, 2003; 68 FR 63999, Nov. 12, 2003; 69 FR 29901, May 26, 2004; 69 FR 47795, Aug. 6, 2004; 70 FR 32253, June 2, 2005]

§ 25.132 Verification of earth station antenna performance standards.

(a)(1) All applications for transmitting earth stations, except for earth stations operating in the 20/30 GHz band, must be accompanied by a certificate pursuant to § 2.902 of this chapter from the manufacturer of each antenna that the results of a series of radiation pattern tests performed on representative equipment in representative configurations by the manufacturer demonstrates that the equipment complies with the performance standards set forth in § 25.209. The licensee must be prepared to demonstrate the measurements to the Commission on request.

(2) All applications for transmitting earth stations operating in the 20/30 GHz band must be accompanied by the measurements specified in §§ 25.138(d) and (e).

(b)(1) In order to demonstrate compliance with § 25.209 (a) and (b), the following measurements on a production antenna performed on calibrated antenna range, as a minimum, shall be made at the bottom, middle and top of each allocated frequency band and submitted to the Commission:

(i) Co-polarized patterns for each of two orthogonal senses of polarizations in two orthogonal cuts of the antenna.

(A) In the azimuth plane, plus and minus 7 degrees and plus and minus 180 degrees.

(B) In the elevation plane, zero to forty-five degrees.

(ii) Cross-polarization patterns in the E- and H-planes, plus and minus 9 degrees.

(iii) Main beam gain.

(2) The FCC envelope specified in § 25.209 shall be superimposed on each pattern. The minimum tests specified above are recognized as representative of the performance of the antenna in most planes although some increase in sidelobe levels should be expected in the spar planes and orthogonal spar planes.

(3) Applicants seeking authority to use an antenna that does not meet the standards set forth in §§ 25.209(a) and (b) of this part, pursuant to the procedure set forth in § 25.220 or § 25.223(c) of this part, are required to submit a copy of the manufacturer's range test plots of the antenna gain patterns specified in paragraph (b)(1) of this section.

(c) The tests specified in paragraph (b) of this section are normally performed at the manufacturer's facility; but for those antennas that are very large and only assembled on-site, on-site measurements may be used for product qualification data. If on-site data is to be used for qualification, the test frequencies and number of patterns should follow, where possible, the recommendations in paragraph (b) of this section, and the test data is to be submitted in the same manner as described in paragraph (a) of this section.

(d) For each new or modified transmitting antenna over 3 meters in diameter, 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]

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

(a)(1) Each license for an earth station governed by this part, except for mobile satellite earth station terminals (METs), shall specify as a condition therein the period in which construction of facilities must be completed and station operation commenced. Construction of the earth station must be completed and the station must be brought into operation within 12 months from the date of the license grant except as may be determined by the Commission for any particular application.

(2) Each license for mobile satellite earth station terminals (METs) shall specify as a condition therein the period in which station operation must be commenced. The networks in which the METs will be operated must be brought into operation within 12 months from the date of the license grant except as may be determined by the Commission for any particular application.

(b)(1) Each license for a transmitting earth station included in this part, except for earth stations licensed under a blanket licensing provision, shall also specify as a condition therein that upon the completion of construction, each 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 facility has been tested and is within 2 dB of the pattern specified in § 25.209, § 25.135 (NVNG MSS earth stations), or § 25.213 (1.6/2.4 GHz Mobile-Satellite Service earth stations);

(vi) The date on which the earth station became operational; and

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

(2) For earth stations authorized under any blanket licensing provision in this chapter, a certification containing the information in paragraph (b)(1) of this section must be filed when the network is put into operation.

(c) If the facility does not meet the technical parameters set forth in § 25.209, a request for a waiver must be submitted and approved by the Commission before operations may commence.

(d) Each receiving earth station licensed or registered pursuant to § 25.131 must be constructed and placed into service within 6 months after coordination has been completed. Each licensee or registrant must file with the Commission a certification that the facility is completed and operating as provided in paragraph (b) of this section, with the exception of certification of antenna patterns.

[56 FR 24016, May 28, 1991, as amended at 58 FR 68059, Dec. 23, 1993; 59 FR 53327, Oct. 21, 1994; 65 FR 59142, Oct. 4, 2000; 70 FR 32254, June 2, 2005]

§ 25.134 Licensing provisions of Very Small Aperture Terminal (VSAT) and C-band Small Aperture Terminal (CSAT) networks.

(a)(1) VSAT networks operating in the 12/14 GHz bands. All applications for digital VSAT networks granted on or before September 15, 2005, with a maximum outbound downlink EIRP density of +10.0 dBW/4 kHz per carrier and earth station antennas with maximum input power density of -14 dBW/4 kHz will be processed routinely. All applications for analog VSAT networks with maximum outbound downlink power densities of +17.0 dBW/4 kHz per carrier and maximum antenna input power densities of -8.0 dBW/4 kHz shall be processed routinely in accordance with Declaratory Order in the Matter of Routine Licensing of Earth Stations in the 6 GHz and 14 GHz Bands Using Antennas Less than 9 Meters and 5 Meters in Diameter, Respectively, for Both Full Transponder and Narrowband Transmissions, 2 FCC Rcd 2149 (1987) (Declaratory Order).

(a)(2) *Large Networks of Small Antennas operating in the 4/6 GHz frequency bands.* All applications for digital and/or analog operations will be routinely processed provided the network employs antennas that are 4.5 meter or larger in diameter, that are consistent with § 25.209, the power levels are consistent with §§ 25.211(d) and 25.212(d), and frequency coordination has been satisfactorily completed. The use of smaller antennas or non-consistent power levels require the filing of an initial lead application (§ 25.115(c)(2)) that includes all technical analyses required to demonstrate that unacceptable interference will not be caused to any and all affected adjacent satellite operators by the operation of the nonconforming earth station.

(b) *VSAT networks operating in the 11.7–12.2 GHz and 14.0–14.5 GHz band.* Each applicant for digital and/or analog VSAT network authorization proposing to use transmitted satellite carrier EIRP densities and/or maximum antenna input power in excess of those specified in paragraph (a) of this Section must comply with the procedures set forth in § 25.220.

(c) [Reserved]

(d) An application for VSAT authorization shall be filed on FCC Form 312, Main Form and Schedule B.

(e) VSAT operators in the 11.7–12.2 GHz and 14.0–14.5 GHz frequency bands are permitted to use more than one hub earth station in their networks.

(f) VSAT operators in the 11.7–12.2 GHz and 14.0–14.5 GHz frequency bands are permitted to use temporary fixed earth stations as either hub earth stations or remote earth stations in their networks, but must specify the number of temporary fixed earth stations they plan to use in their networks at the time of their applications.

(g) Starting March 10, 2005, all applications for VSAT service in the 12/14 GHz band that meet the following requirements will be routinely processed: (1) The maximum transmitter power spectral density of a digital modulated carrier into any GSO FSS earth station antenna shall not exceed $-14.0 - 10\log(N)$ dB(W/4 kHz). For a VSAT network using frequency division multiple access (FDMA) or time division multiple access (TDMA) technique, N is equal to one. For a VSAT network using code division multiple access (CDMA) technique, N is the maximum number of co-frequency simultaneously transmitting earth stations in the same satellite receiving beam.

(2) The maximum GSO FSS satellite EIRP spectral density of the digital modulated emission shall not exceed 10 dB (W/4kHz) for all methods of modulation and accessing techniques.

(3) The maximum transmitter power spectral density of an analog carrier into any GSO FSS earth station antenna shall not exceed −8.0 dB(W/4kHz) and the maximum GSO FSS satellite EIRP spectral density shall not exceed +17.0 dB(W/4kHz).

(h) VSAT operators licensed pursuant to this section are prohibited from using remote earth stations in their networks that are not designed to stop transmissions from their remote earth stations when synchronization with the target satellite fails.

[56 FR 66001, Dec. 20, 1991, as amended at 62 FR 5929, Feb. 10, 1997; 66 FR 31560, June 12, 2001; 70 FR 32254, June 2, 2005; 70 FR 33376, June 8, 2005]

§ 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) Transceiver units associated with the non-voice, non-geostationary mobile-satellite service may not be operated on civil aircraft. All portable or hand-held transceiver units (including transceiver units installed in other devices that are themselves portable or hand-held) having a receiver operating in the 137–138 MHz band shall bear the following statement in a conspicuous location on the device: ''This device may not be operated while on board a civil aircraft. It must be turned off at all times while on board such an aircraft.'' This subsection shall not apply to transceiver units whose receivers are incapable of radiating in the 108–137 MHz frequency bands.

(c) Transceiver units in this service are authorized to communicate with and through U.S. authorized space stations only. No person without an FCC license for such operation may transmit to a space station in this service from anywhere in the United States except to receive service from the holder of a pertinent FCC blanket license or from another party with the permission of such a blanket licensee.

(d) The holder of an FCC blanket license for operation of transceivers for communication via a non-voice, non-geostationary mobile-satellite system shall be responsible for operation of any such transceiver to receive service provided by the blanket licensee or provided by another party with the blanket licensee's consent. Operators of non-voice, non-geostationary mobile-satellite systems shall not transmit communications to or from user transceivers in the United States unless such communications are authorized under a service contract with the holder of a pertinent FCC blanket license or under a service contract another party with authority for such transceiver operation delegated by such a blanket licensee.

[58 FR 68059, Dec. 23, 1993, as amended at 69 FR 5710, Feb. 6, 2004]

§ 25.136 Licensing provisions for user transceivers in the 1.6/2.4 GHz, 1.5/1.6 GHz, and 2 GHz Mobile Satellite Services.

In addition to the technical requirements specified in §25.213, earth stations operating in the 1.6/2.4 GHz and 1.5/1.6 GHz Mobile Satellite Services are subject to the following operating conditions:

(a) User transceiver units associated with the 1.6/2.4 GHz Mobile-Satellite Service or 2 GHz Mobile-Satellite Service may not be operated on civil aircraft unless the earth station has a direct physical connection to the aircraft cabin or cockpit communication system.

(b) No person without an FCC license for such operation may transmit to a space station in this 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.

(c) The holder of an FCC blanket license for operation of transceivers for communication via a 1.6/2.4 GHz, 1.5/1.6 GHz, or 2 GHz Mobile Satellite Service system shall be responsible for operation of any such transceiver to receive service provided by that licensee or provided by another party with the blanket licensee's consent. Operators of such satellite systems shall not transmit communications to or from user transceivers in the United States unless such communications are authorized under a service contract with the holder of a pertinent FCC blanket license for transceiver operation or under a service contract with another

party with authority for such transmission delegated by such a blanket licensee.

(d) Any mobile earth station (MES) associated with the Mobile Satellite Service operating in the 1530–1544 MHz and 1626.5–1645.5 MHz bands shall have the following minimum set of capabilities to ensure compliance with Footnote S5.353A and the priority and real-time preemption requirements imposed by Footnote US315.

(1) All MES transmissions shall 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 shall 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 shall 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 shall be under control of a LES and shall obtain all channel assignments from it.

(5) All MESs that do not continuously monitor a separate signalling channel or signalling within the communications channel shall monitor the signalling channel at the end of each transmission.

(6) Each MES shall automatically inhibit its transmissions if it is not correctly receiving separate signalling channel or signalling within the communications channel from its associated LES.

(7) Each MES shall automatically inhibit its transmissions on any or all channels upon receiving a channel-shut-off command on a signalling or communications channel it is receiving from its associated LES.

(8) Each MES with a requirement to handle maritime distress and safety communications shall have the capability within the station to automatically preempt lower precedence traffic.

(e) Any Land Earth Station (LES) associated with the Mobile Satellite Service operating in the 1530–1544 MHz and 1626.5–1645.5 MHz bands shall have the following minimum set of capabilities to ensure that the MSS system complies with Footnote S5.353A and the priority and real-time preemption requirements imposed by Footnote US315. It should be noted that the LES operates in the Fixed-Satellite Service (''FSS'') as a feeder-link for the MSS (Radio Regulations 71) and that the following capabilities are to facilitate the priority and preemption requirements. The FSS feeder-link stations fulfilling these MSS requirements shall not have any additional priority with respect to FSS stations operating with other FSS systems.

(1) All LES transmissions to mobile earth stations (MESs) shall have a priority assigned to them that preserves the priority and preemptive access given to maritime distress and safety communications.

(2) The LES shall recognize the priority of calls to and from MES and make channel assignments taking into account the priority access that is given to maritime distress and safety communications.

(3) The LES shall 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 shall 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 signalling within the voice/data channel, for an MES, which does not continuously monitor the LES signalling channel during the time of a call.

(6) The LES shall transmit periodic control signalling signals to MES, which do not continuously monitor the LES signalling channel.

(7) The LES shall automatically inhibit all transmissions to MESs to

which it is not transmitting a signalling channel or signalling within the communications channel.

(8) The LES shall be capable of transmitting channel-shut-off commands to the MESs on signalling or communications channels.

(9) Each LES shall 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 particular MES.

(10) Each LES shall be capable of automatically turning off one or more of its associated channels in order to complete a maritime distress, urgency or safety call.

(f) *Incorporation of ancillary terrestrial component base station into an L-band mobile-satellite service system.* Any licensee authorized to construct and launch an L-band mobile-satellite system may construct ancillary terrestrial component (ATC) base stations as defined in §25.201 at its own risk and subject to the conditions specified in this subpart any time after commencing construction of the mobile-satellite service system.

(g) *Pre-operational build-out and testing.* An MSS licensee may, without further authority from the Commission and at its own risk engage in pre-operational build-out and, conduct equipment tests for the purpose of making such adjustments and measurements as may be necessary to assure compliance with the terms of the technical provisions of its MSS license, ATC operation requirements, the rules and regulations in this Part and the applicable engineering standards. Prior to engaging in such pre-operational build-out and testing, an MSS licensee must notify the Commission concerning the initiation of MSS system satellite construction and the MSS operator's intent to construct and test ATC facilities. This notification must take the form of a letter formally filed with the Commission in the appropriate MSS license docket. Such letter shall specify the frequencies on which the MSS licensee proposes to engage in pre-operational testing and shall specify the name, address, telephone number and other such information as may be necessary to contact a MSS licensee representative for the reporting and mitigation of any interference that may occur as a result of such pre-operational testing and build-out. MSS licensees engaging in pre-operational build-out and testing must also comply with §§5.83, 5.85(c), 5.111, and 5.117 of this chapter relating to experimental operations. An MSS licensee may not offer ATC service to the public for compensation during pre-operational testing. In order to operate any ATC base stations, such a licensee must meet all the requirements set forth in §25.147 and must have been granted ATC authority.

(h) *Aircraft.* All portable or hand-held transceiver units (including transceiver units installed in other devices that are themselves portable or handheld) having operating capabilities in the 1626.5–1660.5 MHz and 1525–1559 MHz bands shall bear the following statement in a conspicuous location on the device: ''This device may not be operated while on board aircraft. It must be turned off at all times while on board aircraft.''

[65 FR 59142, Oct. 4, 2000, as amended at 67 FR 46604, July 16, 2002; 67 FR 51110, Aug. 7, 2002; 68 FR 43645, July 24, 2003; 68 FR 47858, Aug. 12, 2003; 69 FR 5710, Feb. 6, 2004]

§25.137 Application requirements for earth stations operating with non-U.S. licensed space stations.

(a) Earth station applicants or entities filing a ''letter of intent'' or ''Petition for Declaratory Ruling'' requesting authority to operate with a non-U.S. licensed space station to serve the United States must attach an exhibit with their FCC Form 312 application with information demonstrating that U.S.-licensed satellite systems have effective competitive opportunities to provide analogous services in:

(1) The country in which the non-U.S. licensed space station is licensed; and

(2) All countries in which communications with the U.S. earth station will originate or terminate. The applicant bears the burden of showing that there are no practical or legal constraints that limit or prevent access of the U.S. satellite system in the relevant foreign markets. The exhibit required by this paragraph must also include a statement of why grant of the

application is in the public interest. This paragraph shall not apply with respect to requests for authority to operate using a non-U.S. licensed satellite that is licensed by or seeking a license from a country that is a member of the World Trade Organization for services covered under the World Trade Organization Basic Telecommunications Agreement.

(b) Earth station applicants, or entities filing a ''letter of intent,'' or ''Petition for Declaratory Ruling,'' requesting authority to operate with a non-U.S. licensed space station must attach to their FCC Form 312 an exhibit providing legal and technical information for the non-U.S. licensed space station in accordance with part 25. Applications addressed in this paragraph must be filed electronically through the International Bureau Filing System (IBFS).

(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 system 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 is:

(1) In orbit and operating;

(2) Has a license from another administration; or

(3) Has been submitted for coordination to the International Telecommunication Union.

(d) Earth station applicants requesting authority to operate with a non-U.S.-licensed space station and non-U.S.-licensed satellite operators filing letters of intent or petitions for declaratory ruling to access the U.S. market must demonstrate that the non-U.S.-licensed space station has complied with all applicable Commission requirements for non-U.S. licensed systems to operate in the United States, including but not limited to the following:

(1) Milestones;

(2) Reporting requirements;

(3) Any other applicable service rules;

(4) For non-U.S.-licensed satellites that are not in orbit and operating, a bond must be posted. This bond must be in the amount of $5 million for NGSO satellite systems, or $3 million for GSO satellites, denominated in U.S. dollars, and compliant with the terms of §25.165 of this chapter. The party posting the bond will be permitted to reduce the amount of the bond upon a showing that a milestone has been met, in accordance with the terms of §25.165(d) of this chapter.

(5) Non-U.S. licensed GSO-like space station operators with a total of five requests for access to the U.S. market in a particular frequency band, or a total of five previously granted requests for access to the U.S. market with unbuilt GSO-like space stations in a particular frequency band, or a combination of pending GSO-like requests and granted requests for unbuilt GSO-like space stations in a particular frequency band that equals five, will not be permitted to request access to the U.S. market with another GSO-like space station license in that frequency band. In addition, non-U.S.-licensed NGSO-like satellite system operators with one request on file with the Commission in a particular frequency band, or one granted request for an unbuilt NGSO-like satellite system in a particular frequency band, will not be permitted to request access to the U.S. market with another NGSO-like satellite system in that frequency band.

(e) A non-U.S.-licensed satellite operator that is seeking to serve the United States pursuant to a Letter of Intent may amend its request by submitting an additional Letter of Intent. Such additional Letters of Intent will be treated as amendments filed by U.S. space station applicants for purposes of determining the order in which the Letters of Intent will be considered relative to other pending applications.

(f) A non-U.S.-licensed satellite operator that has been permitted to serve the United States pursuant to a Letter of Intent or Petition for Declaratory Ruling, may modify its U.S. operations under the procedures set forth in §25.117(d). In addition, a non-U.S.-licensed satellite operator that has been permitted to serve the United States pursuant to a Petition for Declaratory

Ruling, may modify its U.S. operations under the procedures set forth in § 25.118(e).

(g) A non-U.S.-licensed satellite operator that has been permitted to serve the United States pursuant to a Petition for Declaratory Ruling must notify the Commission if it plans to transfer control or assign its license to another party, so that the Commission can afford interested parties an opportunity to comment on whether the proposed transaction affects any of the considerations we made when we allowed the satellite operator to enter the U.S. market. If the transferee or assignee is not licensed by or seeking a license from a country that is a member of the World Trade Organization for services covered under the World Trade Organization Basic Telecommunications Agreement, the non-U.S.-licensed satellite operator will be required to make the showing described in paragraph (a) of this section.

[62 FR 64172, Dec. 4, 1997, as amended at 64 FR 61792, Nov. 15, 1999; 65 FR 16327, Mar. 28, 2000; 65 FR 59143, Oct. 4, 2000; 68 FR 51503, Aug. 27, 2003; 68 FR 62249, Nov. 3, 2003; 69 FR 51587, Aug. 20, 2004]

§ 25.138 Blanket Licensing provisions of GSO FSS Earth Stations in the 18.3–18.8 GHz (space-to-Earth), 19.7–20.2 GHz (space-to-Earth), 28.35–28.6 GHz (Earth-to-space), and 29.25–30.0 GHz (Earth-to-space) bands.

(a) All applications for a blanket earth station license in the GSO FSS in the 18.3–18.8 GHz, 19.7–20.2 GHz, 28.35–28.6 GHz, and 29.25–30.0 GHz bands that meet the following requirements shall be routinely processed:

(1) GSO FSS earth station antenna off-axis EIRP spectral density for co-polarized signals shall not exceed the following values, within ±3° of the GSO arc, under clear sky conditions:

$18.5–25\log(\theta)–10\log(N)$	dBW/40kHz	for $2.0° \le \theta \le 7°$
$-2.63–10\log(N)$	dBW/40kHz	for $7° \le \theta \le 9.23°$
$21.5–25\log(\theta)–10\log(N)$	dBW/40kHz	for $9.23° \le \theta \le 48°$
$-10.5–10\log(N)$	dBW/40kHz	for $48° < \theta \le 180°$

Where:

θ is the angle in degrees from the axis of the main lobe; for systems where more than one earth station is expected to transmit simultaneously in the same bandwidth, *e.g.*, CDMA systems,

N is the likely maximum number of simultaneously transmitting co-frequency earth stations in the receive beam of the satellite; N=1 for TDMA and FDMA systems.

(2) GSO FSS earth station antenna off-axis EIRP spectral density for co-polarized signals shall not exceed the following values, for all directions other than within ±3° of the GSO arc, under clear sky conditions:

$21.5–25\log(\theta)–10\log(N)$	dBW/40kHz	for $3.5° \le \theta \le 7°$
$0.37–10\log(N)$	dBW/40kHz	for $7° < \theta \le 9.23°$
$24.5–25\log(\theta)–10\log(N)$	dBW/40kHz	for $9.23° < \theta \le 48°$
$-7.5–10\log(N)$	dBW/40kHz	for $48° < \theta \le 180°$

Where:

θ: is the angle in degrees from the axis of the main lobe; for systems where more than one earth station is expected to transmit simultaneously in the same bandwidth, *e.g.*, CDMA systems.

N: is the likely maximum number of simultaneously transmitting co-frequency earth stations in the receive beam of the satellite; N=1 for TDMA and FDMA systems.

(3) The values given in paragraphs (a)(1) and (2) of this section may be exceeded by 3 dB, for values of $\theta > 10°$, provided that the total angular range over which this occurs does not exceed 20°

when measured along both sides of the GSO arc.

(4) GSO FSS earth station antenna off-axis EIRP spectral density for cross-polarized signals shall not exceed the following values, in all directions relative to the GSO arc, under clear sky conditions:

8.5–25log(θ)–10log(N)	dBW/40kHz	for $2.0° \le \theta \le 7°$
12.63–10log(N)	dBW/40kHz	for $7° < \theta \le 9.23°$

Where:

θ: is the angle in degrees from the axis of the main lobe; for systems where more than one earth station is expected to transmit simultaneously in the same bandwidth, *e.g.*, CDMA systems.

N: is the likely maximum number of simultaneously transmitting co-frequency earth stations in the receive beam of the satellite; N=1 for TDMA and FDMA systems.

(5) For earth stations employing uplink power control, the values in paragraphs (a) (1), (2), and (4) of this section 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 shall not exceed 1.5 dB or 15 % 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% of the time during which the excess is no more than 4.0 dB.

(6) Power flux-density (PFD) at the Earth's surface produced by emissions from a space station for all conditions, including clear sky, and for all methods of modulation shall not exceed a level of −118 dBW/m²/MHz, in addition to the limits specified in § 25.208 (d).

(b) Each applicant for earth station license(s) that proposes levels in excess of those defined in paragraph (a) of this section shall submit link budget analyses of the operations proposed along with a detailed written explanation of how each uplink and each transmitted satellite carrier density figure is derived. Applicants shall also submit a narrative summary which must indicate whether there are margin shortfalls in any of the current baseline services as a result of the addition of the applicant's higher power service, and if so, how the applicant intends to resolve those margin short falls. Applicants shall certify that all potentially affected parties (i.e., those GSO FSS satellite networks that are 2, 4, and 6 degrees apart) acknowledge and do not object to the use of the applicant's higher power densities.

(c) Licensees authorized pursuant to paragraph (b) of this section shall bear the burden of coordinating with any future applicants or licensees whose proposed compliant operations at 6 degrees or smaller orbital spacing, as defined by paragraph (a) of this section, is potentially or actually adversely affected by the operation of the non-compliant licensee. If no good faith agreement can be reached, however, the non-compliant licensee shall reduce its earth station and space station power density levels to be compliant with those specified in paragraph (a) of this section.

(d) The applicant shall provide for each earth station antenna type, a series of radiation patterns measured on a production antenna performed on a calibrated antenna range and, as a minimum, shall be made at the bottom, middle, and top frequencies of the 30 GHz band. The radiation patterns are:

(1) Co-polarized patterns for each of two orthogonal senses of polarizations in two orthogonal planes of the antenna.

(i) In the azimuth plane, plus and minus 10 degrees and plus and minus 180 degrees.

(ii) In the elevation plane, zero to 30 degrees.

(2) Cross-polarization patterns in the E- and H-planes, plus and minus 10 degrees.

(3) Main beam gain.

(e) Protection of receive earth stations from adjacent satellite interference is based on either the antenna

performance specified in § 25.209 (a) and (b), or the actual receiving earth station antenna performance, if actual performance provides greater isolation from adjacent satellite interference. For purposes of insuring the correct level of protection, the applicant shall provide, for each earth station antenna type, the antenna performance plots for the 20 GHz band, including the format specified in paragraph (d) of this section.

(f) The earth station licensee shall not transmit towards a GSO FSS satellite unless it has prior authorization from the satellite operator or a space segment vendor authorized by the satellite operator. The specific transmission shall be conducted in accordance with the operating protocol specified by the satellite operator. The holder of an FCC blanket license pursuant to this section shall be responsible for operation of any transceiver to receive GSO FSS service provided by that licensee or provided by another party with the blanket licensee's consent. Operators of GSO FSS systems shall not transmit communications to or from user transceivers in the United States unless such communications are authorized under a service contract with the holder of a pertinent FCC blanket license or under a service contract with another party with authority for such transceiver operation delegated by such a blanket licensee.

(g) A licensee applying to renew its license must include on FCC Form 405 the number of constructed earth stations.

[65 FR 54169, Sept. 7, 2000, as amended at 66 FR 63515, Dec. 7, 2001; 68 FR 16966, Apr. 8, 2003; 69 FR 5710, Feb. 6, 2004]

§ 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 Qualifications of fixed-satellite space station licensees.

(a) New fixed-satellites shall comply with the requirements established in Report and Order, CC Docket No. 81–704 (available at address in § 0.445 of this chapter.) Applications must also meet the requirements in paragraphs (b) through (d) of this section. The Commission may require additional or different information in the case of any individual application. Applications will be unacceptable for filing and will be returned to the applicant if they do not meet the requirements referred to in this paragraph.

(b) Each applicant for a space station authorization in the fixed-satellite service must demonstrate, on the basis of the documentation contained in its