

## § 25.142

either certify that the proposed operation has been coordinated with the operator of the co-frequency space station or 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.

(5) In addition to the requirements of paragraphs (b)(3) and (4) of this section, the link budget for any satellite in the 17.3–17.8 GHz band (space-to-Earth) must take into account longitudinal stationkeeping 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 § 25.208(c) or § 25.208(w), 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 Ka-band 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 Com-

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mission. 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]

### § 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 use 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 licensee's 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]