bands specified in these rule provisions: §§ 25.142(d), 25.143(b)(2)(iv), 25.204(e), 25.210(d), 25.210(f), 25.210(i), and 25.210(j).

(2) In addition to the requirements set forth in paragraph (c)(1) of this section, the Commission will coordinate with the National Telecommunications and Information Administration (NTIA) regarding the operations of any licensees authorized to operate in a shared government/non-government frequency band, pursuant to the procedure set forth in § 25.142(b)(2)(ii).

(3) Earth station licensees authorized to operate with one or more space stations described in paragraph (c)(1) of this section shall comply with the earth station antenna performance verification requirements in § 25.132, and the antenna gain pattern requirements in § 25.209(a) and (b). In addition, earth station licensees authorized to operate with one or more space stations described in paragraph (c)(1) of this paragraph in frequency bands shared with terrestrial wireless services shall comply with the requirements in § 25.203(c).

(4) In addition to the requirements set forth in paragraph (c)(3) of this section, earth station licensees with a gain equivalent or higher than the gain of a 1.2 meter antenna operating in the 14.0–14.5 GHz band, authorized to operate with one or more space stations described in paragraph (c)(1) of this paragraph in frequency bands greater than 14.5 GHz shall be required to comply with the antenna input power density requirements set forth in § 25.212(c).

(d) [Reserved]

(e) In the event that the Commission adopts frequency band-specific service rules for a particular frequency band after it has granted one or more space station or earth station licenses for operations in that frequency band, those licensees will be required to come into compliance with the frequency band-specific service rules within 30 days of the effective date of those rules, unless otherwise specified by either Commission or Bureau Order.

[68 FR 51508, Aug. 27, 2003, as amended at 70 FR 59277, Oct. 12, 2005; 79 FR 8323, Feb. 12, 2014]

§ 25.218 Off-axis EIRP density envelopes for FSS earth stations transmitting in certain frequency bands.

(a) This section applies to applications for FSS earth stations transmitting to GSO space stations in the conventional C-band, extended C-band, conventional Ku-band, or extended Ku-band, with the following exceptions:

(1) ESV, VMES, and ESAA applications and

(2) 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) 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 $3° \leq \theta \leq 48°$.
-9.5	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:

$19.5–25\log_{10}\theta$	dBW/4 kHz	for $1.5° \leq \theta \leq 7°$.

Where θ is as defined in paragraph (c)(1) of this section.

(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 $1.5° \leq \theta \leq 7°$.
5.3	dBW/4 kHz	for $7° < \theta \leq 9.2°$.
$29.3–25\log_{10}\theta$	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 $\theta > 7°$ 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:

$29.3–25\log_{10}\theta$	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 $1.5° \le \theta \le 7°$.
0	dBW/4 kHz	for $7° < \theta \le 9.2°$.
$24–25\log_{10}\theta$	dBW/4 kHz	for $9.2° < \theta \le 19.1°$.
−8	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:

$24–25\log_{10}\theta$	dBW/4 kHz	for $3° \le \theta \le 19.1°$.
−8	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:

$11–25\log_{10}\theta$	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 $1.5° \leq \theta \leq 7°$.

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 (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 $1.5° \leq \theta \leq 7°$.
0	dBW/4 kHz	for $7° < \theta \leq 9.2°$.
$24–25\log_{10}\theta$	dBW/4 kHz	for $9.2° < \theta \leq 48°$.
−18	dBW/4 kHz	for $48° < \theta \leq 180°$.

Where θ 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 $\theta > 7°$ 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:

$24–25\log_{10}\theta$	dBW/4 kHz	for $3° \leq \theta \leq 48°$.
−18	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:

$11–25\log_{10}\theta$	dBW/4 kHz	for $1.5° \leq \theta \leq 7°$.

Where θ is as defined in paragraph (c)(1) of this section.

(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 $1.5° \leq \theta \leq 7°$.
−6	dBW/4 kHz	for $7° < \theta \leq 9.2°$.
$18–25\log_{10}\theta$	dBW/4 kHz	for $9.2° < \theta \leq 48°$.
−24	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 $\theta > 7°$ 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 $3° \leq \theta \leq 48°$.
−24	dBW/4 kHz	for $48° < \theta \leq 85°$.

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 $1.5° \leq \theta \leq 7°$.

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 (h)(1) through (h)(3) of this section.

(i) Applications for authority for fixed earth station operation in the 5925–6425 MHz or 14.0–14.5 GHz band 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]

§ 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 Ka-band that do not qualify for routine licensing under relevant criteria in § 25.138, § 25.211, § 25.212, § 25.218, § 25.221(a)(1) or (a)(3), § 25.222(a)(1) or (a)(3), § 25.226(a)(1) or (a)(3), or § 25.227(a)(1) or (a)(3).

(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