

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

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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]

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§ 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